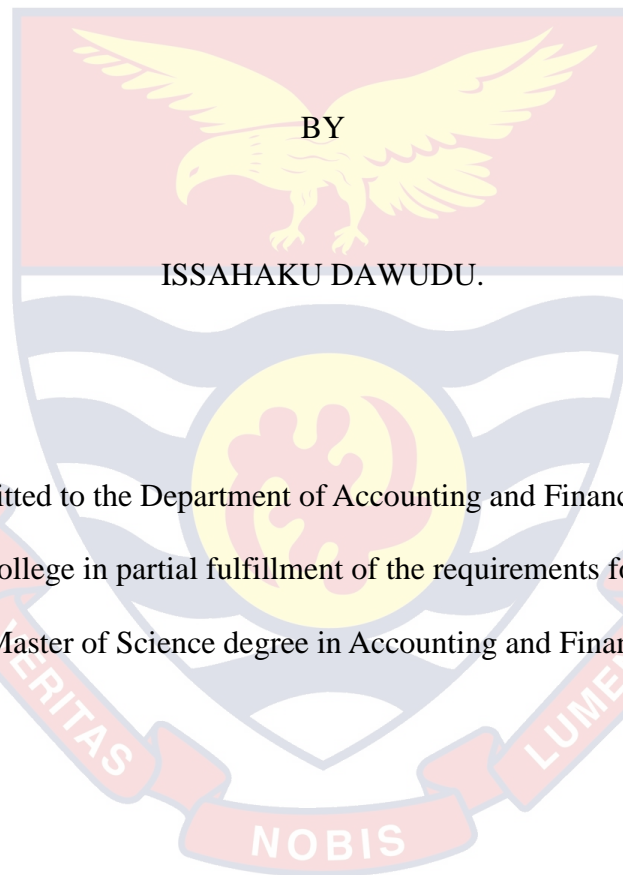**CHRISTIAN SERVICE UNIVERSITY COLLEGE**

ASSESSMENT OF FOREIGN DIRECT INVESTMENT (FDI) AND ECONOMIC

GROWTH IN GHANA

BY

ISSAHAKU DAWUDU.

Dissertation submitted to the Department of Accounting and Finance, Christian Service

University College in partial fulfillment of the requirements for the award of

Master of Science degree in Accounting and Finance.

JULY, 2019

DECLARATION

CANDIDATE'S DECLARATION

I hereby declare that this dissertation is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's signature………………….. Date…………………………………………

Name: ……………………………………………………………………………..
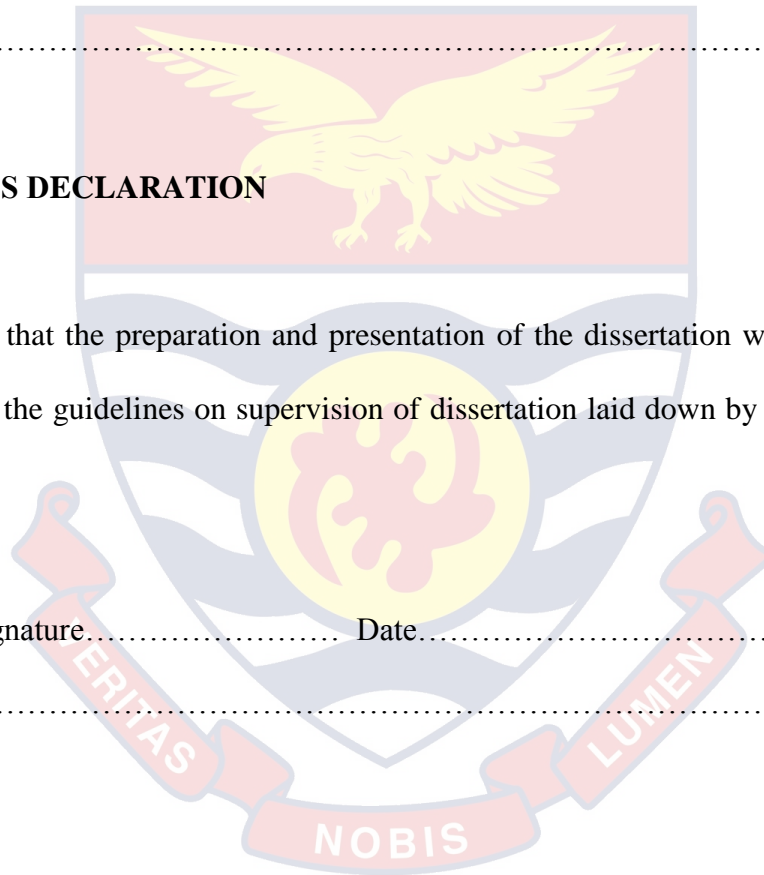
SUPERVISOR'S DECLARATION

I hereby declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Cape Coast.

Supervisor's Signature…………………. Date……………………………………

Name: ……………………………………………………………………………

ABSTRACT

Foreign direct investment (FDI) is an integral part of an open and effective international economic system and a major catalyst to development. Yet, the benefits of FDI do not accrue automatically and evenly across countries, sectors and local communities. This study assesses the impact of foreign direct investment on economic growth in Ghana. The study used quantitative approach. The study used secondary data from World Bank's World Development indicators and the International Monetary Fund's international financial statistics for a period of Thirty-Two years (1985 to 2017). The source of data was secondary data. Statistical package for Social Science (SPSS) and R-software were used in analyzing the data. The study established that, from 1988 to 2000, FDI inflow was sluggish, vacillated from 2000 to 2003 and increased sharply from 2013 to 2014. Thus, from 2014 to 2017, foreign direct investment inflows in Ghana generally follow an upward trend reflecting the decline in inflation and an upward real GDP growth trend. According to the regression model, FDI has a positive impact on the GDP growth given that the regression coefficient was positive. The R^2 (coefficient of determination) explained 53% variation in the occurrence of GDP growth which was adequate. This implies that FDI was a major determinant that causes a variation in the GDP growth. The model was significant at a significant level of 0.05%. The forecasts also show that FDI will increase continuously in the next 20 years [*all things being equal*]. The study finally recommended that, improvement in the transportation system and industry, provision of sustainable energy and water, waste management, improvement in communication technology, building and rehabilitation of ports and harbor's must be encouraged since these facilities are important in attracting foreign direct investment into Ghana.

KEY WORDS:

Domestic Investment

Economic Growth

Econometric Model

Economic Programme

Foreign Direct Investment

Government

Gross Domestic Product

Inflation Rate

Interest Rate

Interest Rate

Infrastructure

Research

Study

Technology

iv

ACKNOWLEDGEMENTS

I would like to render my sincere thanks to the Almighty God for His guidance and protection in seeing me through my entire education.

The successful completion of this work was the result of the criticism, suggestions and comments of well-meaning people.

First and foremost, I am greatly indebted to Dr. Joseph Akwasi Agyemang, my supervisor whose experience, patience and guidance as supervisor saw the completion of this work and consequently boosted my confidence to carry out this study.

I owe an appreciation to Mrs. Jamila Dawud for her prayers and support for me.

Lastly, I also render my profound gratitude to DR. John Bosco Dramani for his encouragement and support throughout the course.

May the Almighty God bless you all.
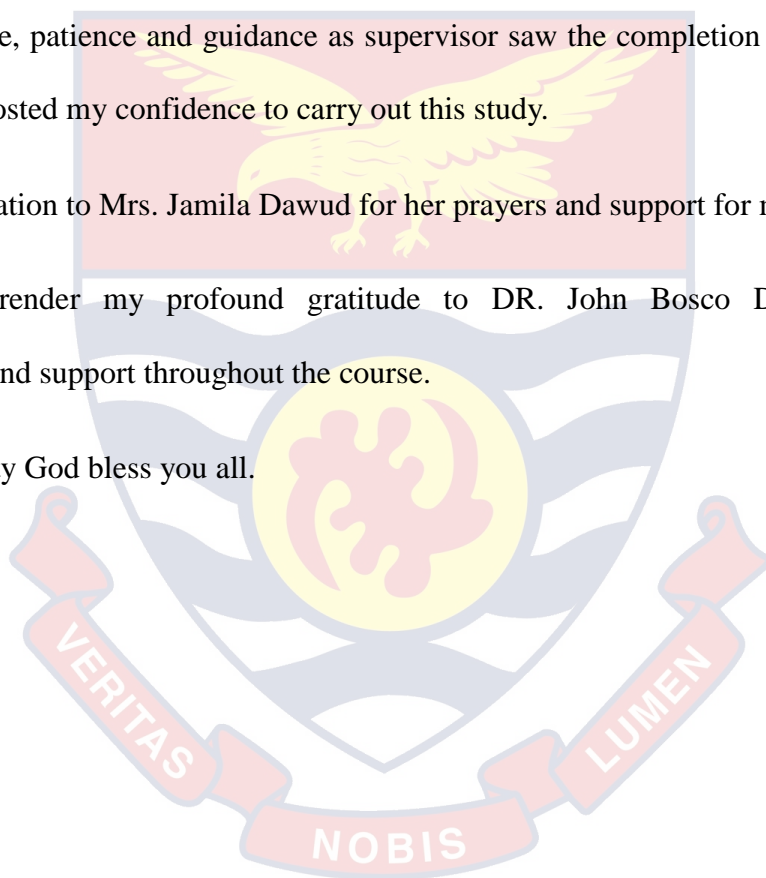
DEDICATION

I dedicate this project work to the Almighty God, my family and friends who encouraged me from the start to finish and whose encouragement has ensured that I give off my best to finish what I have started and to all the people who supported me in one way or the other through my education. May the Almighty God bless you all.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS:

FDI   Foreign Direct Investment

DI   Domestic Investment

ER   Exchange Rate

CHAPTER ONE

1.0   INTRODUCTION

Theoretically, FDI can promote economic growth in several ways (Herzer et al. 2013). Some investigators argue that the effects of FDI on economic growth are expected to be twofold (De Mello 2013; Kim and Seo 2003). Firstly, FDI can affect economic growth through capital accumulation by introducing new goods and foreign technology. This view comes from exogenous growth theory view. Secondly, FDI can enhance economic growth through augmenting a stock of knowledge in the host country by knowledge transfer. This view comes from the viewpoint of endogenous growth theory. Therefore, FDI, theoretically, can play a crucial role in economic growth through raising capital accumulation and technological spillovers for progress (Herzer et al. 2013).

Researchers such as Findlay, Lall (2010), Loungani (2012) and Razin, and Romer (2011) among others, have noted that FDI brings much needed physical capital, new technology, managerial and marketing talents and expertise, international best practices of doing business as well as increased competition. These resources may have the potential to be diffused into indigenous firms thereby creating more innovation and productivity growth. FDI contributes more jobs to the local economy by directly adding new jobs and indirectly when local spending increases due to purchases of goods and services by the new increase in employees. All of these in turn are expected to have positive multiplier effects on an economy.

1.1 Background of the study

Global competition for FDI has intensified, against the backdrop of continued global economic and financial fragilities and inadequacy of domestic resources to meet investment needs of most economies. Consistently, investment promotion strategies employed by countries to attract FDI have also changed in a bolder, smarter and innovative manner. Notwithstanding this, Ghana is facing an economic challenge featured by inadequate

resources for long term development, high unemployment and poverty level, low human resource development, healthcare and others (Chowdhury and Mavrotas, 2014).

Promoting and facilitating technology transfer through Foreign Direct Investment (FDI) has assumed a prominent place in the strategies of economic transformation and growth by policy makers at national, regional and international levels because it is considered the key factor to economic transformation and an engine of growth and avoiding further buildup of debt (Sacerdoti, 2014). Recognizing the importance and significance of FDI in providing technical know-how, capital management and Marketing skills, facilitating access to foreign markets and generating technical efficiency to local industries and businesses, FDI is expected to improve the integration of the Ghana's economy into global economy, and thereby promoting economic growth and transformation (Chowdhury and Mavrotas, 2014).

From the numerous existing studies, there is a causal link between FDI and economic growth as an empirical evidence, it seems to be dependent upon the set of conditions in the specific host country economy. Chowdhury and Mavrotas (2014) have suggested that individual country studies be done to examine the causal links between FDI and economic growth since it is country specific. Foreign direct investment results from globalization, which involves the emergence of the domestic economic system with global markets. This manifests in the form of companies and individuals in other countries with business interests in another country in the form of either establishing business operations or acquiring business assets such as ownership or controlling interest in foreign companies. These lead to the movement of investors and managers beyond political boundaries. Even after nations acquired independence, globalization continued to influence trade between investors and foreign countries, whereby the less developed countries were supported by the developed nations to acquire materials and equipment to extract and utilize the available natural resources for economic development (Sacerdoti, 2014). This equipment needed the appropriate skills and

know-how to ensure maximum utilization and this phenomenon leads to technology transfer and management controls. FDI as defined above creates a long term relationship between the investor and the investment enterprise and usually gives the investor a right and an effective voice in the management of the investment enterprise. FDI involves the establishment of manufacturing facilities, financial houses (banks), warehouses, factories and other long term organizations overseas (Chowdhury and Mavrotas, 2014).

This may manifest the creation of new establishment (Greenfield), partnership, acquisition of existing firms abroad through mergers and acquisitions. Direct investment comprises not only the initial transaction establishing the FDI relationship between the direct investors and the direct investment enterprise, but all subsequent transactions between them and among affiliated enterprises. This makes the direct investment relationship extends beyond the original investor and all foreign subsidiaries and affiliations of the direct investment that are part of the group (Sacerdoti, 2014). Economic growth can be described as an increase in a country's productive capacity as measured by comparing gross national product (GNP) in a year with the GNP in the previous year. The process takes into consideration the input of certain factors which operate over a reasonable period of time. Economic growth is a dynamic interrelated process that manifests in changes in resource distribution, rate of capital formation, demographic composition, technology, skills and efficiency in institutional and organizational formation.

1.2 Statement of the Problem

It is believed that there is a positive correlation between FDI and economic growth as the evidence can be seen on FDI and aggregate growth of countries like Malaysia, Indonesia, Mexico, Brazil, China, India etc. But unlike Ghana, not much has been studied or researched on the topic of FDI and its impact on economic growth (Funke and Nsouli, 2003). Though successive regimes or governments have propagated the message of economic transformation

and growth. One key economic drive agenda of developing countries is encouragement of cross-border investments by multinational companies (MNCs) (Funke and Nsouli, 2003). Additionally, the introduction of New Partnership for Africa's Development (NEPAD) was launched in 2001 to increase available capital to US$ 64 billion through a combination of reforms, resource mobilization and creation of a conducive environment for FDI (Funke and Nsouli, 2003). But so many years down the line, the efforts of many African countries like Ghana to attract FDI still seem not to be very successful. Furthermore, evidence on the link between FDI and economic growth has been inconclusive. For instance, Bosworth and Collins (2009), Blomstromet et al (2010)., Borenszteinet et al (2011), Zhang, De Mello (2010), Balasubramanyamet et al, (2011) and Obwona (2012) provide evidence on the positive effects of FDI on economic growth. Growth enhancing effect of FDI is not, however, automatic, but depends on various country specific factors. Considering the decline in growth of Ghana's economy in recent years, coupled with high level of inflation and interest rates, the assertion that FDI leads to economic growth still needs to be looked at very well. Hence the forecast of FDI have not been given much attention creating a gap for this study to fill.

1.3 Objectives of the Study

The main objective of the study is to assess how foreign direct investment (FDI) affects economic growth in Ghana.

Specifically, I wish to address the following objectives:

1. To examine the trend of foreign direct investments in Ghana.

2. To determine the correlation between foreign direct investment and economic growth in Ghana.

3. To establish a 20 years FDI forecast in Ghana.

1.4 Research Questions:

In view of this research, the following key questions will be addressed:

1. What is the trend of foreign direct investments in Ghana?

2. What is the correlation between foreign direct investment and economic growth in Ghana?

3. What is the expected nature of FDI inflow for the next 20 years in Ghana?

1.5 Significance of the Study

This study will be significant in the sense that Ghana has experienced more injection of foreign direct investment in the area of oil and gas, banking and finance, insurance, communication, health and pharmaceuticals, real estates, manufacturing and trade during the last two decades and yet, the Gross Domestic Product growth over the last few years has also experienced a downward growth coupled with high unemployment and others which the FDI is supposed to address. The findings of this study will benefit both policy makers and academicians. In as much as it will add knowledge to the field of study, it will also serve as a point of reference to both policy makers and academicians.

Given the relation between the contribution of the banking sector and the growth of the economy, knowledge of the underlying factors that influence GDP is therefore essential not only for the managers of the banks, but also for numerous stakeholders such as the central banks, bankers' associations, governments, and other financial authorities. Knowledge of these factors would be useful in helping the regulatory authorities and bank managers formulate future policies aimed at improving the financial stability of the Ghanaian banking sector. Apart from contributing to the existing literature on bank operation and to the body of academic knowledge for financial and accounting students, the study will also identify other areas that need further research for researchers to pursue further studies in the area.

1.6   Purpose of the Study

The main purpose of the study is to assess the impact of foreign direct investment on economic growth in Ghana so as to identify the obstacles hindering the foreign direct investment and with the necessary interventions aid in reducing or eradicate these obstacles and also the extent to which FDI inflows affect GDP across a period of time.

1.7 Scope of the Study

The study encompasses the assessment of the impact of foreign direct investment on the economic growth in Ghana. The study makes use of secondary data from World Bank's World Development Indicators and the International Monetary Fund's international financial statistics for a period of thirty-two years (33), (1985 to 2017) ,1985 inclusive. The variables used to get the results expected include Gross Domestic Product (GDP), Foreign Direct Investment (FDI), Inflation (IFL) and Exchange Rate (ER). GDP was used as a proxy for measuring economic growth where inflation and exchange rate were used as control variables.

1.8   Limitations of the Study

Limitations are the constraints that may impede the progress and restrict the research scope. These may include the availability of data, time of the research and integrity of the data. I made use of thirty-two years (33) financial review data from 1985 to 2017. Because the data is for a reasonable length of time, and different political regimes and dispensations, there is the tendency of fluctuations in the data that can impede the integrity of the results. The data sample up to 2017 is also not most current and for that reason may also not reflect the current situation on the ground and for that reason, using it to forecast may have a greater proportion of variations. This study may also include some biases due to time to submit the report and

for that reason there was the tendency to eliminate or ignore some variables in order to achieve certain result for the interpretation and submission of my report.

1.9   Organization of the Study

The research is organized into five chapters. Chapter one presents the introduction into the topic. It covers the background of the study, problem statement, research objectives and questions, significance of the study, scope of the study, brief methodology and limitations of the study. Chapter two presents the literature review of previous studies conducted in the area of foreign direct investment. The methodology and accompanying profile are presented in the third chapter. The chapter comprises the research design, the research approach, population, sample size, sample technique, sources of data, data collection instrument, data analysis procedure and the study area. The fourth chapter presents the research findings and discussions of data. The chapter presents the models that were used to analyse the research data. Finally, Chapter Five presents a summary of research findings, conclusions, recommendations and suggestions for   future research.
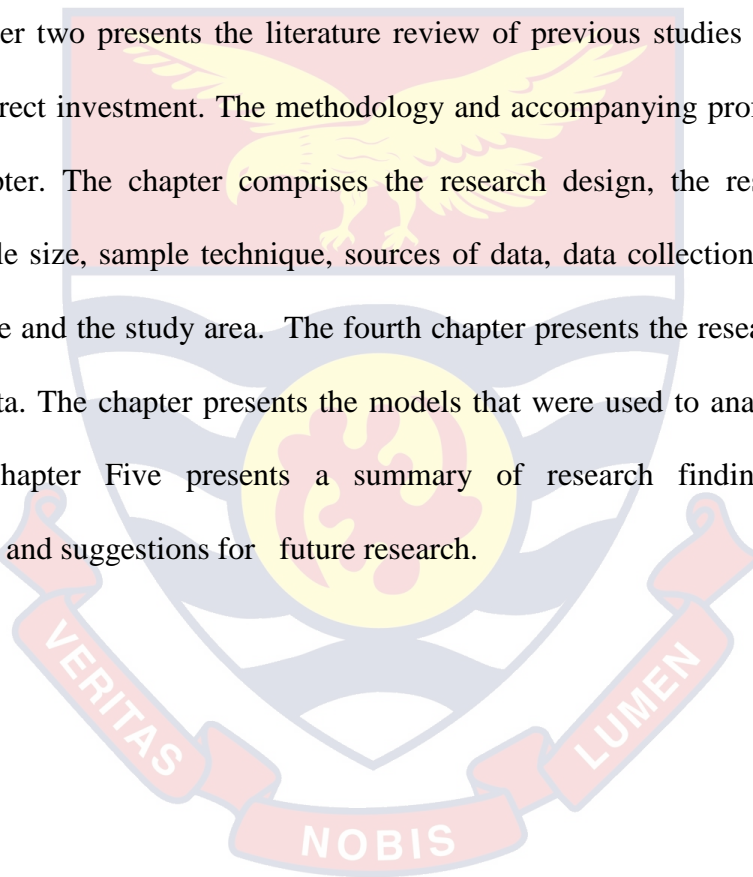
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review of previous studies conducted in the area of foreign direct investment and economic growth. Additionally, the theoretical framework, concepts of FDI and economic growth and the empirical review of the Impact of FDI on Economic Growth have been presented. Again growth theories have also been presented.

2.2   Theoretical Framework

Theoretical arguments assign a key role for FDI in economic growth. While these theoretical arguments are quite straightforward and widely accepted, the empirical evidence is much more ambiguous. Whether FDI can be deemed to be a catalyst for output growth, capital accumulation, and technological progress, seems to be a less controversial hypothesis in theory than in practice (De Mello, 2014)

The main idea underlying the FDI liberalization policies of many developing countries and the FDI promotion efforts by international organizations and agencies such as the World Bank and the IMF is the belief that, FDI inflows foster economic growth. As FDI is a composite bundle of capital stocks, know-how, and technology, its impact on economic growth is expected to be manifold (De Mello, 2014; Dunning, 2014). FDI can affect economic growth either directly or indirectly. The empirical macro-economic literature shows a clear link between FDI and GDP growth but the direction of causality is not always clear (Carkovic and Levine, 2002); Nunnenkamp, (2014). Economic theory predicts FDI to create growth multiplier effects through vertical and horizontal spillover effects; including the transfer of technology and know-how to domestic firms, the formation of human capital, etc. The empirical evidence casts doubt on the intensity of horizontal (or intra-industry)

spillover effects but provides overall convincing evidence on the existence and the importance of vertical (or inter-industry) spillover effects, in the manufacturing as well as the agricultural sectors Liesbeth et al., (2013). The consensus in the literature seems to be that FDI increases growth through productivity and efficiency gains by local firms. The empirical evidence is not unanimous; however, available evidence for developed countries seems to support the idea that the productivity of domestic firms is positively related to the presence of foreign firms Globeram, (1979).

2.3   Concepts of Foreign Direct Investment (FDI)

Since the 1980s, foreign direct investment inflow (FDI) has grown significantly in most developing countries. This is because many developing countries have made extensive policies aimed at reducing barriers to international trade and offering tax incentives and subsidies to attract FDI. The overall theory is that FDI inflow enhances and sustains economic growth in the host country Herzer et al. (2013).

Therefore, this chapter focuses on how and to what extent FDI affects economic growth in Ghana. However, this chapter will assess the effects of FDI on economic growth. This will be achieved by focusing on recent economic growth theories and related empirical studies. They will provide the explanation for how the channels of FDI inflows affect economic growth in Ghana.

2.4   Growth Theories.

Growth theory provides a theoretical opportunity to observe and interpret economic growth in the global economy. Growth theory is a means of understanding the factors that induce economic growth within a country through providing models, mechanisms, explanations and a predictive framework. Many theoretical and empirical attempts have identified the factors that can enhance economic growth and performance in order to provide suggestions for

policymakers to fill the gap between developed and developing countries, and to create sustainable development, De Jager (2014). Therefore, this section is focused on the growth theories, namely the exogenous growth theory and the endogenous growth theory. These closely explore the recent developments in economic growth theories, and investigate the crucial key drivers of economic growth in the short-run and in the long-run, and how they work.

2.4.1. Exogenous Growth Theory.

The exogenous growth theory, commonly known as the neo-classical growth model or Solow- Swan growth model, was pioneered by Solow (1956). This theory assumes that economic growth is generated through exogenous factors of production functions such as the stock of capital accumulation and labour. Barro and Sala-I-Martin, (2014) demonstrate that there is a positive relationship between economic growth and capital accumulation over time. According to this theory, an increase in the stock of investment accumulation will result in an increase in growth assuming that the amount of labour and the level of technology remain constant, Barro and Sala-I-Martin, (2014); De Jager , (2014). Therefore, economic growth is affected only in the short-run, determined by the stock of capital accumulation, which is determined by the saving rate and the rate of capital depreciation.

On the other hand, economic growth is determined by exogenous factors such as technological progress, which takes the form of labour augmentation, in the long-run Barro and Sala-I-Martin, (2014). So, the growth of the economy depends on the stock of capital accumulation and the augmentation of labour force by technological progress. As a result, if new FDI introduced technology which leads to increased labour and capital stock productivity this will lead further to more consistent returns of investment, and labour will grow exogenously, De Jager , (2014).

In general, this theory argues that FDI enhances the capital stock in the host country and then promotes economic growth towards a new steady state by this accumulation of capital formation. The argument of exogenous growth theory is that FDI affects economic growth in the short-run through diminishing returns to capital; hence FDI promotes economic growth through raising domestic investment (DI), Herzer et al. (2013).

The main limitations of this theory are that it considers labour as human capital or knowledge. Economically, labour is a human capital because knowledge accumulates within a firm and is stored within the system of firms. Additionally, this theory does not sufficiently explain production and the diffusion of technology, knowledge and the information that becomes gradually apparent in economic analysis, Ho et al. (2014). Also this theory does not provide the economic explanation about long-run growth and technological progress. It does however include a time trend to reflect technical progress in the long-run rate of economic growt ,Barro and Sala-I-Martin (2014); De Jager (2014).

2.4.2. Endogenous Growth Theory.

In the mid-1980s, the exogenous growth theory became theoretically unsatisfactory in explaining the determinants of long-run growth, Barro and Sala-I-Martin (2014). Therefore, endogenous growth theory was pioneered by Romer in his 1986's article, which concentrated on two factors. Economic growth is derived from the stock of human capital and then from technological changes, De Jager (2014). The mechanism of this theory regarding the stock of human capital is that labour grows as a share of population. This means that growth is promoted endogenously at constant rate. Afterwards, this growth is stimulated by a labour augmenting technology multiplier, which means that this growth is promoted endogenously through labour augmenting technological change, De Jager (2014). However, the main feature of this theory is the absence of diminishing returns to capital, Ho et al. (2014). Therefore, technological progress in the form of the generation of new ideas is a crucial

11

factor in passing to diminishing returns to capital in the long-run. The theory argues that technological progress is improved endogenously by taking knowledge from research and development (R and D) as an example and that the development of this knowledge can create positive externalities and positive growth spillover effects Barro and Sala-I-Martin (2014) ; Ho et al. (2014). As a result, R and D, human capital accumulation and spillovers are considered as determinants of long-run   economic growth, Meyer (2003). Spillover effects occur as knowledge generated by R and D in one country creates positive effects in other countries De Mello (2014).

Endogenous growth theory identifies economic growth as promoted in the long- run by the introduction of new technological production processes in the host country, and that the FDI is assumed to be more productive than DI, De Mello (2013) ; Herzer et al. (2013). Thus, FDI enhances economic growth through technological spillovers. These offset the diminishing capital return effects by boosting the present stock of knowledge through labour mobility, training and skills, and through managerial skills and organizational arrangements, Romer (2014); Barro and Sala-I-Martin (2014); De Jager (2014). Moreover, FDI is expected to enhance the existing stock of knowledge in the recipient economy, through labour training and skill acquisition and technology diffusion; and also through the introduction of alternative management practices and organizational arrangements. Overall, the existence of various forms of externalities prevent the unrestrained decline of the marginal productivity of capital. As a result, foreign investors may increase productivity in the host economy and then FDI can be considered as a catalyst of DI and technological progress. Also, the most important mechanism through which FDI promotes growth in the host country is expected to be the FDI externality effects great potentia , De Mello (2014) ; Borensztein et al. (2014). Thus, economic growth can increase unlimitedly over time, De Jager (2014). Although, the greatest limitation of this theory is that of its invalid predictive ability in growth convergence

to allow for the heterogeneity of economies and their different growth patterns, Ho et al. (2014).

2.4.3 Solow Growth Theory.

The role of foreign direct investment (FDI) in stimulating economic growth is one of the controversial issues in the development literature. In the standard Solow type growth model, FDI enables host countries to achieve investment that exceeds their own domestic savings and enhances capital formation. According to this theory, the potential beneficial impact of FDI on output growth is confined to the short run. In the long run, given the diminishing marginal returns to physical capital, the recipient economy could converge to the steady state growth rate as if FDI had never taken place leaving no permanent impact on the growth of the economy, De Mello (2014).

Mankiw (2003) applying the Solow growth model argues that private businesses invest in traditional types of capital such as bulldozers and steel plants and newer types of capital such as computers and robots. On the other hand, governments invest in various forms of public capital, called infrastructure, such as roads, bridges and sewerage systems. Mankiw further argues that policy makers trying to stimulate growth must confront the issue of what kinds of capital the economy needs most. In other words, what kind of capital yields the highest marginal products?

2.4.4 Neo -Classical Theory.

According to neo-classical theory, FDI influences income growth by increasing the amount of capital per person. It spurs long-run growth through such variables as research and development (R and D) and human capital. Through technology transfer to their affiliates and technological spillovers to unaffiliated firms in the host economy, MNCs can speed up the

13

development of new intermediate product varieties, raise product quality, facilitate international collaboration on R and D, and introduce new forms of human capital Ikiara, (2003). Bajonaand Kehoe (2006), discussed explanations of multinational production based on Neo-classical theories of capital movement and trade within the Hecksher-Ohlin framework.

However, they criticize these theories on the basis that they were founded on the assumption of existence of perfect factors and good markets and were therefore unable to provide satisfactory explanation of the nature and pattern of FDI. In the absence of market imperfections, these theories presumed that FDI would not take place. Nevertheless, they argue that the presence of risks in investing abroad implies that there must be distinct advantages to locating in a particular host country.

2.4.5 Economic Geography Theory.

Yarbrough and Yarbrough (2002) discuss recent theoretical models of economic geography that attempts to explain the spatial location of FDI. They assume that the decision of a Trans National Corporation (TNC) on which province to locate investment depends on a set of characteristics of the host province affecting firm's revenue or costs such as factor endowments, market size, income per capita, skilled labour and availability of public infrastructure, among others. Aiello et al. (2009) argue that other things being equal, a change in infrastructure expenditure influences the cost faced by the firm in adjusting its current capital stock to the target level.

They argue that this is a reasonable assumption, given that the adjustment costs depend not only on the firm's internal characteristics, but also on external factors, such as the provision of public infrastructure.

14

2.4.6 The Eclectic Paradigm Theory.

The eclectic paradigm of Dunning (1988) provides a framework of three sets of advantages to analyze why, and where, MNEs would invest abroad. This is the famous ownership, location and internalization (OLI) paradigm (or eclectic paradigm). In this context, investment could be; natural (resource) seeking, market seeking, efficiency seeking or strategic asset seeking.

The ownership advantages refer to firm-specific features sometimes called competitive or monopolistic advantages which must be sufficient to compensate for the costs of setting up and operating a foreign value-adding operation, in addition to those faced by indigenous producers. Such features include things like brand, patents, market access, research and development, trademarks and superior technology. These may be deficient in the host country. When foreign firms use such features in exploiting host country opportunities, they employ adverse selection in an imperfect market situation in fostering their activities.

Consequently, due to information asymmetry and limitation of the features possessed by host country firms, competition with MNCs is difficult. The ownership specific advantages, being superior, to home country firms, may make foreign investors to crowd out domestic investments, Miberg (2014).

The Location advantage stand of the eclectic paradigm is concerned with the "where" of production. These include host country-specific characteristics that can influence MNCs to locate an economic activity in that country. They include economic factors such competitive transportation and communication costs, investment incentives, availability of comparatively cheaper factors of production, policy issues such tariff barriers, tax regimes, access to local and foreign markets, among other factor , Buckley and Casson (2014).

The third factor is the internalization advantage which explains 'why' an MNE would want to exploit its assets abroad by opening or acquiring a subsidiary versus simply selling or licensing the rights to exploit those assets to a foreign firm. Yarbrough and Yarbrough (2002)

report that though this theory has been criticized for only listing the conditions necessary for FDI without explaining its phenomenon, it has widely contributed to international production theory.

2.5 Empirical Review of FDI On Economic Growth

Macro-economic level studies confirm the effect of FDI on economic growth. These studies used aggregate FDI flows for a cross-section of countries. And they establish that FDI inflows contribute positively to economic growth in the host economy, Balasubramanyam et al. (2014), relying on particular conditions, such as the level of income, human capital development, the degree of openness, financial development, infrastructure development, and institution development, Blomstrom et al. (2014); Borensztein et al. (2014); Makki and Somwaru (2014); Chowdhury and Mavrotas (2006); Colen et al. (2013).

For example, the impact of FDI may perhaps be higher in export promoting (EP) countries than in import substituting (IS) countries. Following Bhagwati (1978), Balasubramanyam et al. (2014), investigated the role of FDI inflow in the economic growth process. This was for 46 developing countries and tested the hypothesis that outwardly and inwardly oriented trade policies have significant consequences in attracting FDI inflow and in the impact of FDI on economic growth. They found that the countries that adopt IS are likely to be less attractive to FDI inflow. And the impact of FDI on economic growth is not as great. In contrast the countries that adopted export promoting are probably highly attractive to FDI and the influences of FDI are larger than the effects of Domestic investment on economic growth.

They point out that since openness is crucial in determining the effect of FDI on economic growth and efficiency, more honest countries benefit more. According to Alfaro et al. (2014), the impact of FDI on economic growth is favorable for countries that have excellently developed financial markets. Another study by Alfaro (2003) argues that the effect of FDI on economic growth relies on the FDI operations.

16

FDI contributes positively to economic growth, if FDI operates in the manufacturing sector, negatively in the primary sector and unclearly in the service sector. Razin (2003) argues that the effect of FDI on economic growth depends on the nature of foreign capital inflows into the host country, and the degree of development in the host country.

Agosin and Mayer (2000) illustrate that FDI in the form of mergers and acquisitions (Ms and As) leads, in some way, to the transference of the existing assets from domestic to foreign investors. FDI, therefore, has not contributed to the accumulation of capital formation, and subsequently to economic growth of the host economy. Blomstrom et al. (2014), for 78 developing countries, found that FDI has to be beneficial to high-income developing countries rather than low-income developing countries. Thus, the host country should have a certain threshold level of development to absorb the benefits of FDI.

A study by Borensztein et al. (2014), on one hand, tested the effect of FDI on economic growth for 69 developing countries over two periods (1970-1979 and 1980-1989), based on the endogenous growth model. The results show that FDI is economic growth enhancing if the country has a high level of human capital development exceeding a given threshold. They argue that the impact of FDI depends on the level of human capital development in the host country, and that FDI contributes relatively more to growth than DI. On the other hand, Makki and Somwaru (2014) found that FDI and the interaction of DI with trade openness, made a positive impression on economic growth for 66 developing countries over three periods (1971-1980, 1981-2014, and 2014-2000).

Certainly, cross-country techniques may be making the effect of FDI on economic growth different between studies, because the production functions, such as technological techniques, are absolutely different from one country to another. Statistically, cross-country studies may suffer from serious endogeneity problems and unobserved heterogeneity.

Theoretically, rapid economic growth usually produces higher demand and enhanced returns prospects for FDI. The positive impact of FDI is outcome of positive correlation between them and may be accompanied by causality between growth and FDI Nair-Reichert and Weinhold (2001). Other types of studies apply traditional panel techniques. Panel data techniques are used to escape the problems associated with cross-country studies, such as unobserved country specific effects. This is done by controlling the endogeneity problem by including lagged explanatory variables in regression equations, and allowing for testing the Granger causality Herzer et al. (2013). For instance, Nair-Reichert and Weinhold (2001), for 24 developing countries over the period (1971-2014), found that FDI has had a positive impact on economic growth. Carkovic and Levine (2002), for 68 countries over seven 5-year periods (1960-2014), found that FDI does not exert a positive impact on economic growth. Changyuan (2014) examined the direct and indirect effects of FDI on economic growth in the 29 mainland provinces in China for the period 1987-2001, based on the neo-classical model. The findings indicate that FDI and private investment have no direct effect on economic growth, but state-owned investment has a direct effect on economic growth. The findings also clarify that FDI significantly increases the total factor productivity (TFP) and both private and state-owned investment have no significant effect on TFP. In particular, FDI has a positive effect on economic growth not through its direct effects but through its indirect effects by affecting technological progress and DI.

The problems associated with traditional panel data studies are that; the regression is subjected to the unrealistic homogeneity conditions on coefficients of the lagged dependent variables; the standard cross-country and panel studies on FDI and growth may restrict the relationship between these variables to those in growth rates or first differences; and using first differences and/or growth rates without allowing for the level of relationship may lead to serious misspecification problems (Hansen and Rand 2006).

18

According to co integration panel studies, they used these techniques to avoid the criticisms of traditional panel data estimators. Panel co integration techniques can allow for country level, time-fixed effects, and country-specific co integration vectors (Herzer et al. 2013). Basu et al. (2003), for 23 developing countries over the period (1978-2014), found there is a co integration relationship between FDI and economic growth. Also that there is a bi-directional causality between these two variables in the open economies, and uni-directional causality, mainly the causality runs from GDP to FDI in the closed economies. Their results imply that FDI and GDP are not reinforcing under restrictive trade regimes.

Similarly, Hansen and Rand (2006), for 31 developing countries over the period (1970-2000), found that there is a co integration relationship between FDI and GDP, and between the ratio of FDI to gross capital formation (DI) and GDP. Their findings indicate that FDI inflows have a positive impact on GDP, whereas GDP has no long-run effect on FDI. Additionally, the ratio of FDI to DI has positive consequences on GDP. Their results imply that FDI enhances economic growth through knowledge transfer and implementation of new technologies.

In spite of the advantages of modern panel co integration techniques, the heterogeneity problems remain a serious concern. The refusal of the null hypothesis (that there is no panel co integration) may be driven by a few co integration relationships between variables. In addition, assuming the whole panel is co integrated can create high risks if only a small fraction of the relationships in the panel are actually co integrated (Herzer et al. 2013). Thus, applying co integration techniques if there is a mix of co integration and non-co integration relationships between variables, may lead to serious prejudices in determining causality as well as the short-run and long-run coefficients.

Eventually, in order to avoid the problems associated with using modern panel co integration techniques, numerous studies applied time series for individual countries. These studies

usually apply time series analysis or time series co integration *techniques* to illustrate the causality between FDI and economic growth for country-by-country studies (Ramirez 2000). For example, Bouoiyour (2003) examines the determining factors of FDI in Morocco, using annual data by applying an econometric model for the period from 1960 to 2003. He argues that the instability of Moroccan economy growth leads to obstacles in attracting FDI inflows. Adewumi (2006) examines the contribution of FDI to economic growth in Africa using annual series, by applying time series regression analysis for the period from 1970 to 2003. He finds that FDI contributes positively to economic growth in most of the countries but it is not of statistical significance. Adewumi argues that the impact of FDI on economic growth is through its contributions to other factors in the economy; however, its impact cannot be measured directly. In addition, he expected that the negative impact of FDI on the economic growth was due to the methodology used with a low sample size. Additionally, FDI inflow to Africa is relatively small and this may lead to its contributions as being relatively slight. Besides, the impact of FDI on the economic growth may need a considerable time to be achieved. This is especially so if FDI operates in the non-oil sectors where the profits can take a considerable time to be obtained. Herzer et al. (2013) apply time series techniques over the period (1970-2003) for 28 developing countries (10 countries from Latin America; 9 countries from Asia; 9 countries from Africa). They find weak evidence that FDI enhances either long-run or short-run economic growth (GDP). Also their findings indicate that there is unclear evidence that the impact of FDI on growth (GDP) depends on the level of per capita income, the level of education, the degree of openness and the level of financial market development in the host country.

Despite these results, the majority of time series studies, applying modern co integration techniques developed by Johansen (1988; 2014; 2014) and Johansen and Juselius (2014), may tend to falsely reject the null hypothesis of no co integration in the small samples (Tang

et al. 2013). Thus, the co-integration and the causality between variables are unsupported by the data. And the validity of the findings of these studies, which do not suffer from small samples, may be biased and this needs to be examined (Borensztein et al. 2014; De Mello 2013).

The evidence from a few studies addressing the link between FDI and technology transfer in Africa: Wangwe (ed., 2014) covering firms in six African countries: Zimbabwe, Tanzania, Nigeria, Kenya, Ivory Coast, and Mauritius; Biggs and Srivastava (2014) covering Ghana, Zimbabwe, and Kenya; Lundvall et al. (2013); Gershenberg (2014) on Kenya; Phillips et al. (2000) on Mauritius, Uganda and Kenya suggests that there may be limited technology transfer and spillovers to the domestic firms. Phillips et al. (2000) report that a 1% increase in FDI/GDP leads to a 0.8% increase in future domestic investment in Africa compared to 1.17% in Latin America.

Many exporting firms are found to locate foreign partners and either form joint ventures with them or hire them as agents for specific technology and/or marketing tasks. In Mauritius, foreign investment has played a positive role in building local technological capabilities. In some countries, MNCs bought out the local firms affected by competition and monopolized activities. Previous experience either through trade or association with MNCs and foreign technical assistance contribute to export success. In MNC affiliates and firms in which foreign partners play important technological functions, accumulation of indigenous or local technological capabilities is limited, except in cases where the affiliate is engaged in activities that the parent is not engaged in.

Interactions with foreign partners enhance managerial and technological capabilities but only under certain circumstances: when the top managers and entrepreneurs have some previous experience, when the firms are targeting export markets, and when the top positions are not reserved for expatriates. Evidence on the link between FDI and economic growth is

inconclusive. Bosworth and Collins (2009), Blomstromet al (2010)., Borenszteinet al (2011), Zhang, DeMello (2010), Balasubramanyamet al, (2011) and Obwona(2012) provide evidence on the positive effects of FDI on economic growth. Growth enhancing effect of FDI is not, however, automatic, but depends on various country specific factors. UNCTAD, Blomstromet al, (2010) and DeMello indicate that the positive effect of FDI is stronger the higher the level of development of a host country. Higher level of development allows countries to reap the benefits of productivity fostered by foreign investment.

For similar reasons, Bronsznesteinet al (2011). have found that significant relations between FDI flows and economic growth depend on the level of human capital. Host countries with better endowment of human capital are believed to benefit more from FDI induced technology transfer as spillover-effects than others with less human capital. More recently, Balasubramanyam*et al* (2010) and UNCTAD suggest that the positive effects of FDI also depend on openness to trade. FDI can broaden access to export markets as transnational corporations often serve as channels for the distribution of goods from one country to other markets located in another country. Similarly, Nair-Reichert and Weinhold, using a mixed fixed and random panel data estimation method to allow for cross country heterogeneity in the causal relationship, find some evidence that efficacy of FDI in raising future growth rate, although heterogeneous across countries, is higher for more open economies. Alfaro *et al.* examines the role of financial market in FDI-growth nexus. Their empirical evidence indicates that FDI plays an important role in contributing to economic growth. However, the level of development of local financial markets is crucial for the positive effects to be realized.

In contrast, Aitken and Harrison, and Carkovick and Levine argue that there is no significant positive relation between FDI and economic growth. Even when the relation is positive, the effects tend to be weak. Rodrick for example argues that much of the correlation between

FDI and economic growth is driven by reverse causation. Few studies such as Salz, find a negative relationship between FDI and economic growth. De Mello (2014) surveys the developments in the literature on impact of foreign direct investment (FDI) on growth in developing countries. He asserts that FDI is thought of as a composite bundle of capital stocks, know-how, and technology, and that its impact on growth is manifold and vary a great deal between technologically advanced and developing countries. He concluded that the ultimate impact of FDI on growth in recipient economy depends on the scope of efficiency spillovers to domestic firms. Lahiri and Ono (2014) in their investigation on foreign direct investment (FDI), local content requirement and profit taxation in developing countries posited that host countries must strike a balance between costs and benefits of FDI in formulating appropriate policies. The efficiency level of domestic firms must play a role and that a host country should make use of non-tax instruments such as specification on local content of inputs to enhance benefits from FDI.

In Nigeria, significant scholarly effort has gone into the study of the role of foreign direct investment (FDI) in the Nigerian economy. Such studies include Langley (1968) who posited that FDI has both benefits and costs or repercussions in the context of Nigeria's economic growth and development. He said while FDI could engineer or accelerate gross domestic product growth (GDP) via the infusion of new techniques and managerial efficiency, Langely warns that it could also worsen the balance of payments position (Akinlo, 2014). Oseghale and Amenkhienan (1987) examined the relationship between oil export, foreign borrowing and direct foreign investment in Nigeria on one hand and economic growth on the other hand, and the impact of these on sectoral performance between 1960 and 1984. They concluded that foreign borrowing and FDI impacted negatively on over-all GDP but positively on three principal sectors (manufacturing, transport, communication and finance and insurance).

Caves (2014) observes that the rationale for increased efforts to attract more FDI stems from the belief that FDI has several positive effects. Among these are productivity gains, technology transfers, the introduction of new processes, managerial skills and know-how in the domestic market, employee training, international production networks, and access to markets.

Borensztein et al. (2014) see FDI as an important vehicle for the transfer of technology, contributing to growth in larger measure than domestic investment. Findlay (1978) postulates that FDI increases the rate of technical progress in the host country through a ''contagion'' effect from the more advanced technology, management practices, etc., used by foreign firms. On the basis of these assertions governments have often provided special incentives to foreign firms to set up companies in their countries.

Carkovic and Levine (2002) note that the economic rationale for offering special incentives to attract FDI frequently2014) derives from the belief that foreign investment produces externalities in the form of technology transfers and spillovers. The empirical evidence of these benefits both at the firm level and at the national level remains ambiguous.

De Gregorio (2003), while contributing to the debate on the importance of FDI, notes that FDI may allow a country to bring in technologies and knowledge that are not readily available to domestic investors, and in this way increases productivity growth throughout the economy. FDI may also bring in expertise that the country does not possess, and foreign investors may have access to global markets. In fact, he found that increasing aggregate investment by 1 percentage point of GDP increased economic growth of Latin American countries by 0.1% to 0.2% a year, but increasing FDI by the same amount increased growth by approximately 0.6% a year during the period 1950–1985, thus indicating that FDI is three times more efficient than domestic investment. A lot of research interest has been shown on the relationship between FDI and economic growth, although most of such work is not

situated in Africa. The focus of the research work on FDI and economic growth can be broadly classified into two.

First, FDI is considered to have direct impact on trade through which the growth process is assured (Markussen and Vernables, 2014).

Second, FDI is assumed to augment domestic capital thereby stimulating the productivity of domestic investments (Borensztein et al., 2014; Driffield, 2001). These two arguments are in conformity with endogenous growth theories (Romer, 2014) and cross country models on industrialization (Chenery et al., 1986) in which both the quantity and quality of factors of production as well as the transformation of the production processes are ingredients in developing a competitive advantage.

FDI has empirically been found to stimulate economic growth by a number of researchers (Borensztein et al., 2014; Glass and Saggi, 2013). Dees (2014) submits that FDI has been important in explaining China's economic growth, while De Mello (2014) presents a positive correlation for selected Latin American countries.

Inflows of foreign capital are assumed to boost investment levels. Blomstrom et al. (2014) report that FDI exerts a positive effect on economic growth, but that there seems to be a threshold level of income above which FDI has positive effect on economic growth and below which it does not. The explanation was that only those countries that have reached a certain income level can absorb new technologies and benefit from technology diffusion, and thus reap the extra advantages that FDI can offer. Previous works suggest human capital as one of the reasons for the differential response to FDI at different levels of income. This is because it takes a well-educated population to understand and spread the benefits of new innovations to the whole economy. Borensztein et al. (2014) also found that the interaction of FDI and human capital had important effect on economic growth, and suggest that the differences in the technological absorptive ability may explain the variation in growth effects

25

of FDI across countries. They suggest further that countries may need a minimum threshold stock of human capital in order to experience positive effects of FDI.

Balasubramanyan et al. (2014) report positive interaction between human capital and FDI.They had earlier found significant results supporting the assumption that FDI is more important for economic growth in export-promoting than import-substituting countries. This implies that the impact of FDI varies across countries and that trade policy can affect the role of FDI in economic growth.

In summary, UNCTAD (2013) submits that FDI has either a positive or negative impact on output depending on the variables that are entered alongside it in the test equation. These variables include the initial per capita GDP, education attainment, domestic investment ratio, political instability, terms of trade, black market exchange rate premiums, and the state of financial development. Examining other variables that could explain the interaction between FDI and growth, Olofsdotter (2014) submits that the beneficiary effects of FDI are stronger in those countries with a higher level of institutional capability. He therefore emphasized the importance of bureaucratic efficiency in enabling FDI effects.

The neoclassical economists argue that FDI influences economic growth by increasing the amount of capital per person. However, because of diminishing returns to capital, it does not influence long-run economic growth. Bengos and Sanchez-Robles (2003) assert that even though FDI is positively correlated with economic growth, host countries require minimum human capital, economic stability and liberalized markets in order to benefit from long-term FDI inflows.

Hence, the level of economic development may not be the main enabling factor in FDI growth nexus. On the other hand, the endogenous school of thought opines that FDI also influences long-run variables such as research and development (RandD) and human capital (Romer, 1986; Lucas, 1988). c (Sjoholm, 2013) suggests that through technology transfer to

26

their affiliates and technological spillovers to unaffiliated firms in host economy, transnational corporations (TNCs) can speed up development of new intermediate product varieties, raise the quality of the product, facilitate international collaboration on RandD, and introduce new forms of human capital.

FDI also contributes to economic growth via technology transfer. TNCs can transfertechnology either directly (internally) to their foreign owned enterprises (FOE) or indirectly (externally) to domestically owned and controlled firms in the host country (Blomstrom et al., 2000; UNCTAD, 2000). Spillovers of advanced technology from foreign owned enterprises to domestically owned enterprises can take any of four ways: vertical linkages between affiliates and domestic suppliers and consumers; horizontal linkages between the affiliates and firms in the same industry in the host country (Lim, 2001; Smarzynska, 2002); labour turnover from affiliates to domestic firms; and internationalization of RandD (Hanson, 2001; Blomstrom and Kokko, 2014).

The pace of technological change in the economy as a whole will depend on the innovative and social capabilities of the host country, together with the absorptive capacity of other enterprises in the country (Carkovic and Levine, 2002). Other than the capital augmenting element, some economists see FDI as having a direct impact on trade in goods and services (Markussen and Vernables, 2014). Trade theory expects FDI inflows to result in improved competitiveness of host countries' exports (Blomstrom and Kokko, 2014). TNCs can have a negative impact on the direct transfer of technology to the FOEs, however, and thereby reduce the spillover from FDI in the host country in several ways. They can provide their affiliate with too few or the wrong kind of technological capabilities, or even limit access to the technology of the parent company. The transfer of technology can be prevented if it is not consistent with the TNC's profit maximizing objective and if the cost of preventing the transfer is low.

Consequently, the production of its affiliates could be restricted to low-level activities and the scope for technical change and technological learning within the affiliate reduced. This would be by limiting downstream producers to low value intermediate products, and in some cases "crowding out" local producers to eliminate competition. They may also limit exports to competitors and confine production to the needs of the TNCs. These may ultimately result in a decline in the overall growth rate of the "host country and worsened balance of payment situation" (Blomstrom and Kokko, 2014).

Researchers such as Findlay, Lall, Loungani and Razin, and Romer, among others, note that FDI brings much needed physical capital, new technology, managerial and marketing talents and expertise, international best practices of doing business as well as increased competition. These resources may have the potential to be diffused into indigenous firms thereby creating more innovation and productivity growth. FDI contributes more jobs to the local economy by directly adding new jobs and indirectly when local spending increases due to purchases of goods and services by the new increase in employees. All of these in turn are expected to have positive multiplier effects for an economy. The benefits from the balance of payments effects include improvement in the capital account due to the inflows of new capital into the host country and improvements in the current account balance because of possible decline in imports of goods and services which would otherwise have been imported. The additional taxes from multinational corporations also have the potential to improve the budget situation of the host country.

Hymer, suggested that the technological transfer benefits included, among other things, the direct benefits from adopting the product, process and organizational innovations initiated by the parent company which he named as "firm-specific assets", and the indirect spillover effects on the rest of the economy. Although economists agree regarding the direct benefits of technological transfer on the host country firms, the measurement of indirect spillover effects

28

is shrouded with difficulties. As a result, the evidence is mixed. For example, an extensive review by Blomstorm, Globerman and Kokko, both at aggregate and cases studies levels, finds no strong consensus on the magnitude of spillover effects.

A study of UK-owned 20 manufacturing industries by Harris and Robinson concludes that "…inter-industry spillovers are just as likely to be negative as positive…. and so there is clear evidence of an overall beneficial effect on UK manufacturing industries resulting from supply side linkages associated with FDI". Using a World Bank survey of 1500 firms in five Chinese cities, Hale and Long found evidence of positive spillover effects for more technologically advanced firms but none or even negative spillover effects for relatively small firms. From this, they concluded that a well-functioning labour market facilitates FDI spillover by creating network externalities among highly skilled workers.

Adjaye (2009) examined the relationship between FDI and GDP growth in Ghana using annual time series data covering 1970 to 2014. The Johansen and Juselius (2014) multivariate maximum likelihood procedure was employed. The study established a positive and significant relationship between FDI and growth. The Granger causality tests confirmed a bidirectional causality running from foreign direct investment to growth. Frimpong et al., (2011) disagreed with Adjaye when they used the Toda and Yamamoto (2014) to explore the causal link between FDI and growth in Ghana using annual tie series data from 1970 to 2002. The results revealed that there is no directional causality between FDI and economic growth for the total sample period and the pre-SAP period. However, they discovered a unidirectional causality from FDI to growth during the post SAP period. The conflicting results could be due to the difference in estimation techniques used. Whereas Adjaye engaged the Johansen and Juselius (2014) multivariate maximum likelihood procedure, Frimpong et al., employed the Toda and Yamamoto (2014) to examine the causal linkage between FDI and growth.

In addition, Sackey et al., (2012) employed various econometric tools such as Augmented Dickey Fuller tests, Vector Auto Regression and Johansen co integration test to study the effect of foreign direct investment on economic growth of Ghana using time series data from 2001 to 2010. They established a positive and significant long run relationship between FDI and growth and a uni-directional causality running only from FDI to GDP growth in Ghana.

Furthermore, Antwi et al. (2013) used annual time series data from Ghana for the period 1980 to 2010. They employed simple ordinary least square regressions and confirmed a positive and statistically significant relationship between FDI and growth. However, the study failed to check for directional causality between the two variables. The literature presents mixed results on the links between inflation, FDI and growth. Most of the empirical studies are based on cross-sectional and panel data. The cross-country and panel data studies normally average the data over the samples used and across countries from different regions. As a result, they may not reveal a true nature of the relationship between Inflation FDI and growth. Such studies are not country specific. Secondly, most of the studies also use a bivariate VAR system to study the links between inflation, FDI and growth. They therefore fall short of a systematic analysis of the impact of host country characteristics as they do not explicitly include control variables into the empirical framework. In a panel study of China, India, South Korea and Indonesia using data for 2014 to 2011, Agrawal and Khan (2011) investigated the impact of FDI on GDP Growth and report that "FDI promotes economic growth, and further provides an estimate that one dollar of FDI adds about 7 dollars to the GDP of each of the five countries".

Similarly, Rabiei and Masoudi (2012) examine FDI growth nexus in D8 countries namely; Bangladesh, Egypt, Indonesia, Iran, Malaysia, Nigeria, Pakistan and Turkey. Results shows FDI have positive effect on growth in D8. Furthermore, Li and Liu (2014)

examines whether FDI affects the economic growth of the host economy. The study utilize data from 84 countries over the period 1970 to 2013 and employ single as well as simultaneous equation techniques in order to test the relationship between FDI and economic growth. In order to achieve the desired result endogeneity is tested using the Durbin-Wu-Hausman (DWH) test, and result show for the sample as whole endogeneity is not significant but when the period is split, 1985 to 2013 show a significant relationship between FDI and Gross Domestic Product (GDP). Further, Phillips Perron (PP) was employed to test for stationary of the variables and the variables were found to be stationary. The study suggests a strong complimentary connection between FDI and economic growth.

Using univariate and panel co integration for 1970- 2014, Pradhan, (2009) study the relationship between foreign direct investment (FDI) and economic growth in the five ASEAN countries namely: Indonesia, Malaysia, Philippines, Singapore and Thailand results reports evidence of positive relationship between FDI and economic growth at both panel and individual level for the countries though with exemption of Indonesia, Malaysia and Philippines at individual level.

In a survey by Ilhan (2014) of over 50 empirical investigations on the relationship between FDI and economic growth, 40 of such studies have showed a positive relationship with only 2 reporting negative and the rest demonstrating no effect. These empirical evidences point to the fact that most FDI's are associated to growth. Furthermore, Lumbila (2014) test a hypothesis whether FDI has an overall effect on economic growth and the results revealed a statistically significant difference that a 10 percent increase in FDI can bring about 0.34 percent growth.

 In another study, Feridun and Sissoko (2006) examines the relationship between FDI and economic growth for the period 1976 to 2002 in Singapore using Granger causality and vector auto regression (VAR). Their findings revealed a unidirectional causation running

31

from FDI to economic growth. Apergis*et al.* (2014) used a panel data set covering 27 transitional economies over the period 2014 to 2000 to investigate the direction of the relationship between FDI and economic growth in transitional economies by applying what they call the "novel methodology of panel co-integration and causality" because of the belief that there is significant heterogeneity in cross country economic growth so as to allow them estimates presence heterogeneity in the parameters and dynamics across countries. Their findings suggest that FDI has a significant positive relationship with economic growth in the case where all countries are included in the sample. On the other hand, when sample were split into high income countries and countries with successful privatization and those without successful privatization program, and the findings are the same.

2.6 Trend Of FDI Growth In Ghana

During the revolution era from 1979, economic growth fell to -3.2% and an FDI inflow of $2.8 million in 1981. The economy experienced a further negative growth rate of 3.7% in 1981 to 6.9% in 1982; however, net inflow of FDI remained constant at $16.3 million (Tsikata et al, 2014). In 1983, the then government initiated the Economic Recovery Program (ERP) and later Structural Adjustment Program (SAP). These policies were introduced to reverse economic decline, reduce the impact of the 1980 debt crisis and, facilitate the attraction of value-added FDI inflows to Ghana.

Since the introduction of the Economic Recovery Program (ERP) in 1983, three historical Phases of FDI flows in Ghana can be distinguished (Tsikata et al. 2000). The first phase which spans from1983 to 1988 had a slow FDI net inflows, averaging US$4.2 million per annum, and the highest and lowest inflows during the period being US$5.6 million in 1984 and US $2.0 million in 1985 respectively. The second period which starts from 1989 to 2014 also recorded moderate inflows averaging US$18.1 million per annum with the highest and lowest inflows being US$22.5 million in 2014 and US$14.8 million in 2014, respectively.

The third period which was between 2014 to 2014 witnessed significant (remaining in three digits) and oscillatory FDI net inflows, which reached a peak of US$233 million in 2014 as the result of privatization of Ashanti Goldfields Company (AGC), but dropped to US$106.5 million in 2014 before coming back to US$120 million in 2014.

2014-2003 saw flows oscillating, decreasing from US$81.8 million in 2014 to US$56 million in 2014 (the lowest over the 2014-2003 period), then peaking at US$267 million in 2013 before falling to US$115 million the following year. FDI decrease further to US$89 million and US$50 million, respectively, in 2001 and 2002 owing to the effect of the September 2001 attack on the United States and the consequent global FDI drop of 41% in 2001 and 21% in 2002(UNCTAD, 2003). In 2003, the FDI recovery to US$137 million was due to a massive boost in FDI with the merger of Ashanti Goldfields and AngloGold and the beginning of a US$400 million gold mine investment by the US firm, Newmont. The period 2011 to 2014 also witnessed significant increases in FDI net inflows, which reached a peak of US$3.2 billion in 2014.

2.7 Trend of Economic Growth in Ghana

 In 1957, Ghana was regarded as one of the better-placed developing countries and its level of economic development was comparable to Thailand and South Korea. Average incomes were higher than Nigeria, Egypt and India. There was also an absence of balance of payments deficits, a sound budgetary situation and a well-functioning public administrative system (Fosu, 2003 and Akoena, et al. 2014).

 External factors which led to the economic decline included the severe drought in the early 1982 to 1983, decline in international commodity prices of traditional exports, repatriation of about one million Ghanaians from Nigeria, high interest rates on international financial markets, price hikes in the early 1980s and political instability (Aryeetey, et al. 2000; Fosu, 2003 and Akoena, et al. 2014). These and other factors contributed to the economy actually

33

recorded an average negative growth rate (-3.6%) between 1980 and 1983. In 1983, strategic measures like Economic Recovery Program (ERP) and the Structural Adjustment Program (SAP) as the first in a series of strategies, aimed at cushioning the economy, with the support of the World Bank and International Monetary Fund (IMF). Following the ERP in 1983, the economy grew from -4.6% in 1983 to an impressive 8.6% in 1984. The economy has since shown consistent growth rates above the 4% level over the period 1984- 2013.

However, in 2014, 2014, 2014 and latter half of 2013, there was slow performance of the Ghanaian economy and occasional fiscal deviations. However, by the beginning of 2000, Ghana 's domestic debt had shot up to almost 20 percent of national output, with interest payments more than the national expenditure on health and education combined. In addition, Ghana had the statutory obligation of servicing its external debt. In that same year (2000), the slow growth was worsened by a downturn in the price of the country 's major exports and crude oil price shocks. As a result, real output growth declined to 3.7% and macroeconomic risk worsened (Databank Economic Analyst Monthly Report, March 24, 2009). The current account-induced balance of payments difficulties intensified in 2001, leaving the country 's foreign exchange market distorted. The cedi underwent huge depreciation affecting all the various sectors of the economy. In the final analysis, the inflationary situation in the country got worse (Sowa, 2002). The large and persistent fiscal and external gaps created heavy debt burden that could not be sustained in the early 2000s.

Consequently, Ghana had to seek debt relief under the HIPC initiative in 2001 which led to significant debt reliefs. By 2006, Ghana's public debt as a percentage of GDP declined to 41% from an estimated 198% of GDP in 2000. However, financing of energy infrastructure and the 50th Anniversary Celebration in 2014, as well as hosting of the African Cup of Nations among others, pushed public debt up to 56% of GDP by the end of 2013. By 2014, Ghana had received a total debt relief of approximately $3.5 billion. This led to improvement

in real output growth since 2001, with sustained increases from 4.0% in 2001 to 8.4% in 2013 (Databank Economic Analyst Monthly Report, 2009). This however contracted in 2009 fiscal year hitting a low of 4.0%. The real GDP growth increased to 14.4% in 2011. The highest growth rate was recorded in 2000-2009 at 5.3% with an average inflation of 18.5%.

2.8 Determinants of FDI Inflows

Akhtar (2000) conducted a study in Pakistan using the FDI inflows as dependent variable and independent variables such as GDP growth rate, Imports, Exports, Exchange rate, Interest rate, political instability and military rule. The study observed that Wang (2009) pinpointed on inward foreign direct investment (FDI) and economic growth in 12 Asian economies referring to data over the period of 1987 to 1997 in the course of empirical investigation. Wang (2009), however, also observed that FDI inflows in nonmanufacturing sectors do not play a significant role in enhancing economic growth. In a recent study Awan (2010) has examined the effect of determinants of FDI in the country analyzing FDI flows during the period 1971-2008. Foreign Direct Investment (FDI) in Pakistan can play a vital source of external capital flows to fulfill the saving-investment gap and increasing the volume of exports and reduce the imports as well.

Awan (2010)'s study has detected that among the determent variables of degree of openness (DOP), Inflation rate (INFRATE) is statistically significant with positive signs with FDI inflows in Pakistan, whereas the Balance of Payment (BOP) also shown statically significant with a negative sign. The independent variable of GDP and Debt servicing is found to be not significant in its impact on FDI inflows in Pakistan. Likewise, Shahzad et al. (2012) also traced the impact of macro variables such as GDP, growth rate, DOP, Infrastructure, rule of laws and labor wages on FDI inflows in Pakistan. The present study considers the FDI

inflows as the dependent variable in relation to several economic determinants as discussed below.

GDP Growth Rate

The GDP growth rate is very important for any country for foreign investor to make decisions for investment. However, GDP growth rate and FDI inflows and vice versa is always a main track of focus assumed by the researches in economic literature. The study of Martinez-Zarzoso (2003) concluded that high levels of growth in the host country indicates a high level of production that enhances the confidence level of investors. On the other hand, the research of Martinez-Zarzoso and Nowak-Lehmann (2004) also suggested that the higher income in home countries attracts the foreign investor interest to invest in that country. The GDP growth rate is considered as the national income growth indicator of the economic performance of the country, which is reflected through production, consumption, and varieties of goods and other economic facilities provided in the country. In Pakistan, however, GDP growth rate has been declining during the period 2001-2011(Qaiser et al., 2011).

Fundamentally, macroeconomic factors conditions are expected to exert influence on FDI. Gross and Trevino (1996) highlighted that countries possessing a higher GDP growth rate are expected to promote a large dose of FDI, inducing future Multinational Companies (MNCs) with high confidence to invest, especially, when growth trend is more consistent. High economic growth rates are likely to lure investors in finding the market potential for higher return values on investments which are confined to higher levels of FDI (Biglaiser & DeRouen, 2011).

Exports

Exports can be regarded as an indicator of the country's export-led growth and improvement in the Balance of Payment and a factor to stabilize the exchange rate. A few researchers have

indicated that the volumes of exports by country tend to attract the FDI inflows (Navaretti, Venables, & Barry, 2004; Markusen & Maskus, 2002). Going through the literature in the case of developing countries such as India in the neighborhood of Pakistan one may come a prominent study of Jayachandran and Seilan (2010) having investigated the relationship between import and exports, FDI and economic growth of India during the period of 1970-2007. The study concludes that import, exports and economic growth posited to have a positive causal relationship with FDI inflows. On the other hand, few researches such as (Liu et al., 2002) have traced the relationship between FDI, exports and imports in China use the methods developed by Hall and Milne (1994) and have detected significant positive impact of foreign trade on FDI inflows. As such, it is proposed to examine the following hypothesis in the context of Pakistan:

Balance of Payment

In the literature, it is well conceived that economic FDI inflows tend to improve the balance of payment position of the host country. The study conducted by Majeed and Eatazaz (2009) highlighted the characteristics of those host countries which are basics in taking decisions regarding the location of Multinational companies (MNs) in developing countries. The study used the panel data from 72 developing countries for the period 1970-2008. The study results reveal that the balance of payment and inflation has negative significant influence on FDI inflows.

Imports

In the economic literature, it is presumed that countries with high imports from abroad tend to attract FDI (Mundell, 1957). The study of Geweke's (1982) found a positive relationship between Imports and FDI inflows in USA. The researchers argued that more imports in the host country considered to be a pointer on the potential market for the intended exports of the

home country firms. In fact, the companies may assume that it is better to produce locally in order to satisfy domestic demand of the host country markets. Indeed, foreign entries might visualize the various routes of servicing the host country's market before undertaking FDI decision ultimately.

Aizenman and Noy (2005) have traced positive relationship between imports and FDI inflows. However, it is necessary but difficult to measure that inflows of FDI have different effects on imports of different types of goods.

Inflation Rate

Inflation rate is an important feature of a country's good economic fundamentals. Rate of inflation is regarded as a crucial factor in influencing the FDI inflows. The high rates of inflation imply economic instability of the country. By and large, high rates of inflation are associated with the lesser FDI inflows. Akinboade et al. (2006) have concluded that low inflation is a sign of internal economic stability in the country. The study of Awan and uzZaman (2010) revealed that inflation rates caused positive significant effect of the FDI inflows in Pakistan.

Similarly, another study of Zaman et al. (2006) also found that inflation rate have positive significant impact on FDI inflows in Pakistan. But the differences between "high" inflation and "low" inflation are not distinct when inflation is just viewed as purely a monetary phenomenon (Ahn & Willett, 1998).

2.9 Literature Gaps

From the literature review, evidence on the link between FDI and economic growth has been inconclusive. For instance, Bosworth and Collins (2014), Blomstrom et al (2010)., Borensztein et al (2011), Zhang, DeMello (2010), Balasubramanyam et al, (2011) and Obwona (2012) provide evidence on the positive effects of FDI on economic growth.

38

However, these studies focused on foreign trade but failed to dissect each of the components effect of FDI on economic growth so as to enable government initiate pragmatic measures towards such a sector. This gap has however necessitated the research work on the effect of FDI on economic growth. Also considering the decline in growth of Ghana's economy in recent years, coupled with high level of inflation and interest rates, the assertion that FDI leads to economic growth still needs to be looked at very well.
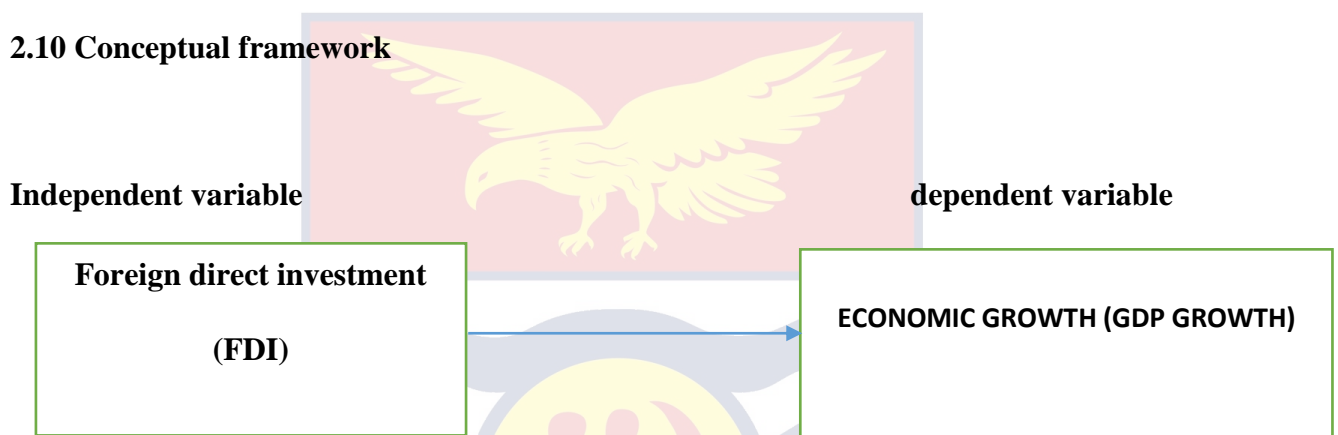
2.10 Conceptual framework

Independent variable   **dependent variable**

Figure 1: Conceptual Framework

Source: Author's Concept

2.11   Conclusions

The impact of FDI on host economies is a complex issue as foreign investors interact with domestic investors in a variety ways, and thus influence, many local individuals, firms and institutions. Local firms benefit potentially in many ways: learning for example from, labour mobility, export market access, improved supply bases, or direct relations as suppliers or customers. However, these effects with the characteristics of the FDI project, in particular its development of local supply networks, its investment in human capital, employee mobility, and the value added in local operations are not automatic.

39

The impact of FDI varies moreover with the ability of local stakeholders to take advantage of the potential benefits of FDI. In particular, the local regulatory framework has to provide for competitive conditions that are conducive to local entrepreneurship, while avoiding undue market power of the foreign investment firm. Moreover, local individuals and firms need to have the ability to learn from foreign partners. Furthermore, the criteria for judging the success of FDI by host governments have changed over the years and these have led to a less confrontational and a more cooperative stance between host countries and foreign investors. More particularly emphasis in evaluating inbound Multinational Corporations (MNCs) over the past three decades has switched from the direct contribution of foreign affiliates to economic growth and development to their wider impact on the upgrading of the competitiveness of host countries' indigenous capabilities and the promotion of their dynamic comparative advantage (Anyanwu, 2014; World Bank, 2003).
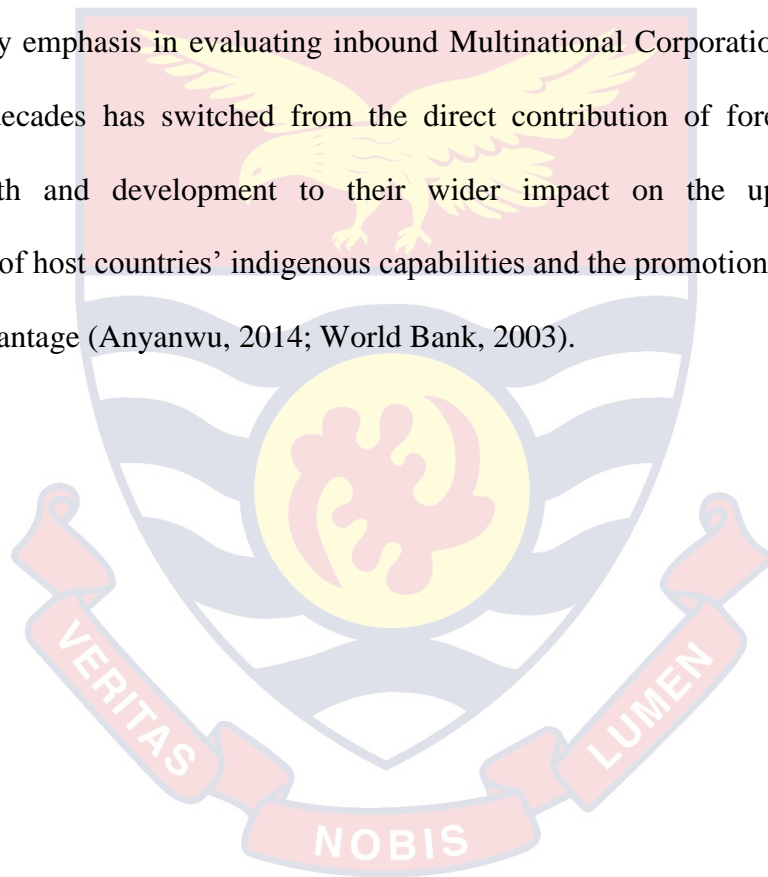
CHARPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the steps that were taken in conducting the research in the area of assessment of foreign direct investment (FDI) and Economic growth in Ghana. The chapter discusses the research design, the target population, data collection instruments, data analysis procedures and the model specification.

3.2 Research Design

Research design is the conceptual structure within which the research will be conducted; it is the overall strategy that interprets the different componets of the study in a coherent and logical way in order to address the research problem. The preparation of which is to facilitate the research as efficient as possible, providing for the collection of relevant evidence at the least cost, time and energy. The design in this study was to explore the casual link between foreign direct investment (FDI) and economic growth in Ghana and these comprise the two main variables of the study. The Gross Domestic product (GDP) is used as proxy for Economic Growth Rate measured in Ghanaian Cedis. The aim was to examine the long term and casual relationship between the level of FDI inflows to Ghana and economic Growth and forecast the inflow of FDI for the next twenty years.

3.3 Population

The population entails all the three sectors of the Ghanaian economy. These sectors show where production takes place in an economy. These sectors include agriculture, industry, and service. The distribution gives the percentage contribution of *agriculture, industry*, and *services* to total GDP, and will equal to 100 percent of GDP if the data are complete.

41

Agriculture includes farming, fishing, and forestry. Industry includes mining, manufacturing, energy production, and construction. Services cover government activities, communication, transportation, finance, and all other private economic activities that do not produce material goods (CIA World Fact book, 2018)

3.4 Sampling Technique and Sample Size

The study applied purposive sampling technique to select the service sector of the economy. These include government activities, communication, transportation, finance, and all other private economic activities that do not produce material goods (CIA World Fact book, 2018). The study selected the service sector based on the fact that the sector contributed to about 57.2% of the Ghanaian economy hence attracting foreign direct investment (FDI), (CIA World Fact book, 2018) and also due to data availability. Data relating to economic growth and foreign direct investment (FDI) in flows was examined within this sector.

3.5 Data Collection Source

Basically, secondary data from the Central Bank of Ghana (BOG), statistical Bulleting and Financial review for the various years, the International Monetary Fund (IMF), the internal financial Statistics and the World Bank's World Development Indicators. Time series data for period 1985 -2017, which represent 32 annual observations, was used to analyze the relationship between FDI and economic growth in Ghana and also to forecast FDI for the next 20 years. The choice period covered by the study, was basically informed by the data available to me, and also developments in the Ghanaian economy over the period of time.

3.6 Data analysis and model specification

The analysis entails a number of equations such as establishment of codes, tabulation and the drawing of statistical inferences. I used R-programing language to estimate the results of relationship between the variables and to forecast the variable of interest (FDI). The research models include ARIMA model and Classical linear regression which are presented below:

3.6.1 ARIMA Model

ARIMA stands for auto-regressive integrated moving average and is specified by these three order parameters: *(p, d, q)*. The process of fitting an ARIMA model is sometimes referred to as the Box-Jenkins method. An **auto regressive (AR(p))** component is referring to the use of past values in the regression equation for the series *Y*. The auto-regressive parameter *p* specifies the number of lags used in the model. The *d* represents the degree of differencing in the **integrated** (*I(d)*) component. Differencing a series involves simply subtracting its current and previous values *d* times. Often, differencing is used to stabilize the series when the stationarity assumption is not met, which we will discuss below. A **moving average (MA(q))** component represents the error of the model as a combination of previous error terms e_t. The order *q* determines the number of terms to include in the model

Differencing, autoregressive, and moving average components make up a non-seasonal ARIMA model which can be written as a linear equation:

$$\hat{y} = u + \varphi_1 y_{t-1} + \ldots + \varphi_p y_{t-p}$$

where $\hat{y}$ is *Y* differenced *d* times and *u* is a constant. The model above assumes non-seasonal series, which means you might need to de-seasonalize the series before modeling. ARIMA models can also be specified through a seasonal structure. In this case, the model is specified by two sets of order parameters: *(p, d, q)* as described above and parameters describing the seasonal component of *m* periods. ARIMA methodology does have its limitations. These models directly rely on past values, and therefore work best on long and stable series. ARIMA simply approximates historical patterns and therefore does not aim to explain the structure of the underlying data mechanism.

3.6.2 Classical Linear Regression (CLR) Model

The functional relationship between the variable and proxies can be expressed as

GDP = f (FDI, INF, ER,) ………………………….. (2)

The CLR model is presented as:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$

That is Y   =   Gross Domestic Product

      X1   =   Foreign Direct Investment

      X2   =   Inflation

      X3   =   Exchange Rate

      ε   =   Error Term

$\beta_1, \beta_2, \beta_3,$ = Slope of the regression equation.

3.6.3 Control Variables

In order to uniquely establish the relationship between GDP and FDI the study controls the variables that are coded as X2 and X3 thus inflation and exchange rates.

3.6.4 Dependent and Independent Variables

In order to achieve the research objectives, the following dependent and independent variables were adopted for the study. The FDI is the independent variable and economic growth is the dependent variable. The dependent variable is the variable of interest; thus the variable the study intends to predict. While the independent variable is the variable used in predicting the dependent variable. Here the GDP was used as the proxy for the measure of economic growth. These two variables have been selected to evaluate the effect of training and development on the performance of supermarket businesses.

3.7 Chapter Summary

This research is purely quantitative and makes use of secondary data from the Central Bank of Ghana (BOG), statistical Bulletin and the financial reviews for the various years, the International Monetary Fund (IMF) and the World Bank. The research made use of thirty-two years (33) financial review data from 1985 to 2017 with 1985 inclusive. Because the data is for a reasonable length of time, and different political regimes and dispensations, there is the tendency of fluctuations in the data that can impede the integrity of the results. The data sample up to 2017 is also not most current and for that reason may also not reflect the current situation on the ground and for that reason, using it to forecast may have a greater proportion of variations.
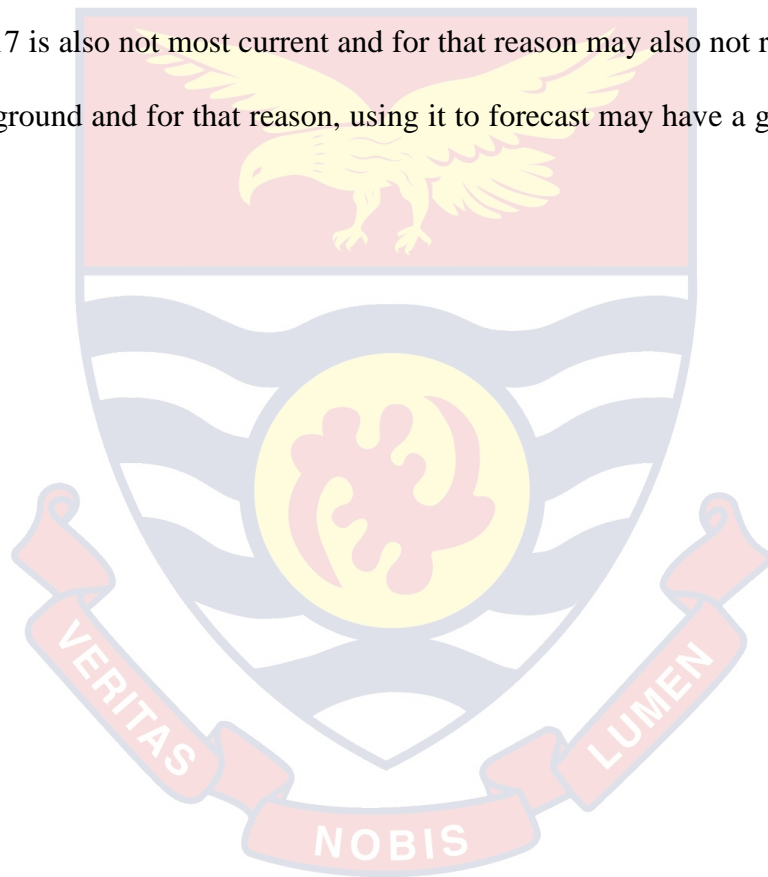
CHAPTER FOUR

DATA PRESENTATION ANALYSIS AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter presents the results of the econometric techniques that were applied to examine the relationship between inflation, FDI and economic growth in Ghana, (1985-2017). The chapter is organized into three sections. Section 4.1 presents the reliability and validity of the data, section 4.2 presents summary of descriptive statistics on variables understudy. Then Section 4.3 presents the trend analysis of FDI and results of regression analysis of the relationship between FDI and economic growth respectively and lastly analysis of a 20 year forecast of FDI.

4.1 Diagnostics of Data

According to Table 4.1 below, validity test of the data on the four variables used the Mahalanobis Distance (MD). The most common use for the Mahalanobis Distance is to find multivariate outliers, which indicate unusual combinations of two or more variables. The Mahalanobis Distance measures distance relative to the centroid base or central point which can be thought of as an overall mean for multivariate data. The centroid is a point in multivariate space where all means from all variables intersect. The larger the MD, the further away from the centroid data point is, (Varmuzaand Filzmoser, 2016,). The test showed that only two outliers had their probability values below $0.001(p<0.001)$, hence these outliers were examined and corrected.

Table 4.1 Validity Test Using Mahalanobis Distance

| Mahalanobis Distance	Probaility MD	Outliers
19.1948	0.00025	1
18.71368	0.00031	1
15.77841	0.00126	0
13.67133	0.00339	0
12.11919	0.00699	0
11.52214	0.00921	0
11.20883	0.0107	0
11.16973	0.0108	0
10.5789	0.0142	0
10.5731	0.0143	0
7.24538	0.0644	0
7.02436	0.0711	0
6.93232	0.0741	0
6.7792	0.0793	0
6.59092	0.0861	0
6.4288	0.0925	0

4.2 Descriptive Statistics of Variables

Descriptive statistics is the term given to the analysis of data that helps describe, show or summarize data in a meaningful way such that, for example, patterns might emerge from the data. Descriptive statistics do not, however, allow us to make conclusions beyond the data we have analyzed or reach conclusions regarding any hypotheses we might have made (Saounders et al., 2010).

Table 4.2 below presents descriptive statistics on the variables understudy. In the descriptive statistics output presented below, the information   for each of the variables is summarized using the mean and the standard deviation. The mean of the data is the average of the data points for a particular variable understudy. The standard deviation is the spread of the data below and above the mean of the variable understudy. The standard deviation describes the way the data points are cluster or deviates from the mean.   According to the table above, the variables inflation (INF) has a mean of 30.093 and standard deviation of 26.757. This

47

indicates that the data of the inflation is closer to the mean. Thus there is a low variation in the data. Also the variable GDP has a mean of 4.348 and standard deviation of 3.826 this indicates that the data of the sample size is closer to the mean. Thus there is a low variation in the data. Again, the variable FDI has a mean of 2.289 and standard deviation of 2.807 this indicates that the data of the inflation is closer to the mean. Thus the variables data are considered reliable for the analysis. Exchange rate also averaged 9.1 with a standard deviation of 10.1. Over the period under study, GDP growth averaged 4.35%. By a developing country standard, this figure is considered moderate. The rate of flow of foreign direct investment into Ghana was on the average 2.29%. Inflation, on the other hand, averaged 30.09% over this period. The average rate of inflation was very high. This might have accounted for the moderate growth of GDP and foreign direct investment.
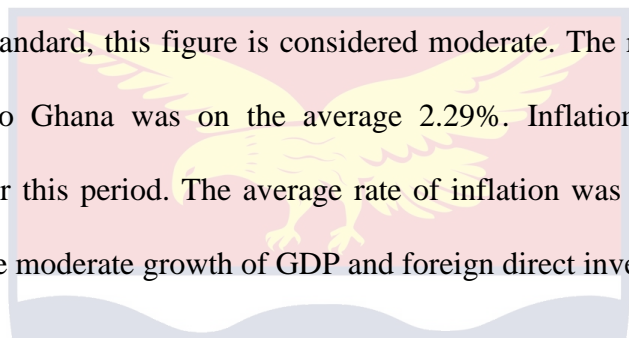
Table: 4.2 Descriptive Statistics of Variables

|	N	Minimum	Maximum	Mean	Std. Deviation
GDP	31	6.923	14.386	4.348	3.826
INFLATION		8.726	122.874	30.093	26.757
FDI	31	0.045	9.516	2.289	2.807
EXCHANGE RATE	31	7.726	11.874	9.093	10.757
Valid N (list wise)	31				

Source: field data, 2019

4.3 **Trend of Foreign Direct Investment inflows**

Trend analysis

Trend analysis is a technique used in technical analysis that attempts to predict the future stock price movements based on recently observed trend data. Trend analysis is based on the

idea that what has happened in the past gives traders an idea of what will happen in the future (DeMello, 2010). Below is the trend analysis of FDI inflow in Ghana.
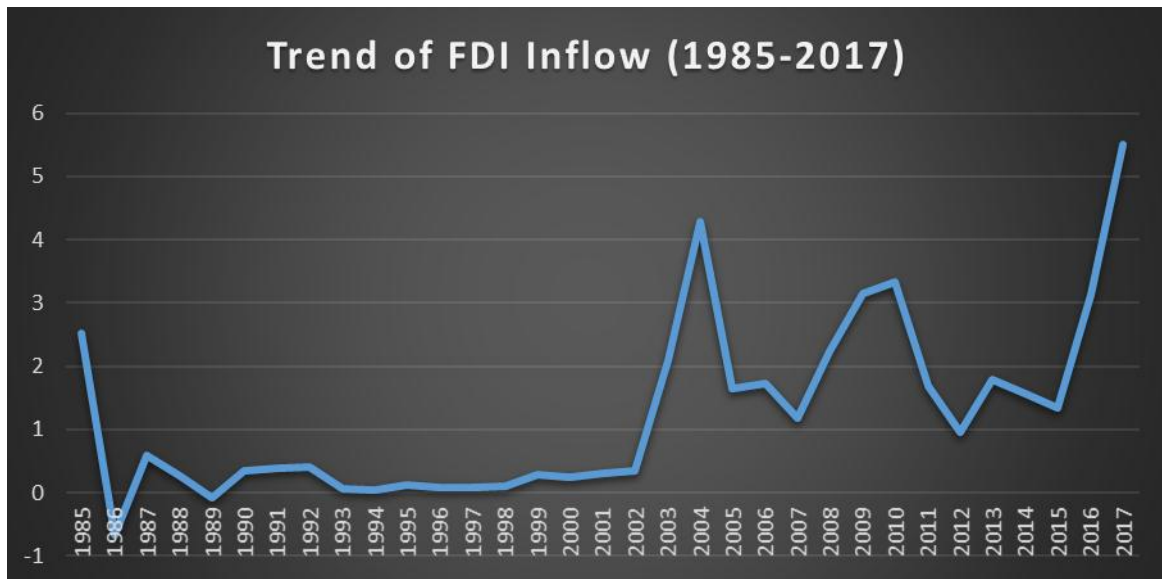
Figure 1.1:*Trend of Foreign Direct Investment inflows*

In examining the Trend of Foreign Direct Investment inflows, Figure 1.1 above revealed that during the 1970s the FDI was up but in the 80s regime, the FDI growth was down to 3.2%. The Government of Ghana initiated the Economic Recovery Program (ERP) and later Structural Adjustment Program (SAP). These policies were adopted primarily to reverse the post-independence economic decline, reduce the impact of the 1980 debt crisis and, facilitate the attraction of value-added FDI inflows to Ghana. The ERP has been described as being generally successful at stimulating more FDI inflow through the lowering of inflation, the removal of tariff barriers which were greater impediments to FDI inflow and the abolishing of exchange rate controls.

Furthermore, since the advent of the Economic Recovery Program (ERP) in 1983, three historical phases of FDI flows in Ghana can be distinguished. The first period which spans from1980s to 2014s had a sluggish FDI net inflows, averaging US$4.2 million per annum, and the steady rise from lowest inflows during the period being US$5.6 million in 2013 to 2014 and a high steady rise from 2014 and beyond. The high FDI inflow in 2002 and beyond

49

was as a result of the establishment of a new investment code (PNDCL 116) that was to serve as the central Investment promotion Agency. Under this investment code were several incentives including tax holidays, exemption for import duties on capital and accelerated depreciation allowances.

The second period which starts from 2000 to 2014 also recorded moderate inflows averaging US$18.1 million per annum with the highest and lowest inflows being US$22.5 million in 2014 and US$14.8 million in 2014, respectively. In addition, the period 2013 to 2010 witnessed significant (remaining in three digits) and oscillatory FDI net inflows, which reached a peak of US$233 million in 2012 (with the privatization of Ashanti Goldfields Company AGC), but dropped to US$106.5 million in 2013 before coming back to US$120 million in 2015.

The government also established the Ghana Investment Promotion Council (GIPC) not only to encourage and promote investment in the country but also to coordinate investment in the country. The Gateway project was also initiated, along with all its incentives to make the country attractive to foreign investors   2000-2003 saw steady flows of FDI from US$81.8 million in 2013 to US$56 million in 2000 (the lowest over the 2014-2003 period), then peaking at US$267 million in 2013 before falling to US$115 million the following year. FDI dropped further to US$89 million and US$50 million, respectively, in 2001 and 2002 owing to the effect of the September 2001 attack on the United States and the consequent global FDI drop of 41% in 2001 and 21% in 2002 (UNCTAD, 2003). In 2016, the FDI recovery to US$137 million was due to a massive boost in FDI with the change of new government. The period 2016 to 2017 also witnessed significant and increasing FDI net inflows, which reached a peak of US$1.3 billion in 2017 with the relieve of importation duties from certain commodities within the Ghanaian economy investment in Ghana became attractive.

4.4 Hierarchical Multiple Regression Model of the Effect of FDI on the Economic Growth of Ghana.

To examine the effect of FDI on the economic growth of Ghana, the hierarchical multiple regression analysis (HRM) procedure was used to estimate the effect of FDI on the economic growth and control variables on the economic growth. The use of HMR was justified on the grounds that it can simultaneously allow for the exploration of each independent variables effect on the dependent variable at various stages of the analysis. It is also used when you want to control for other variables. The HRM involves two interconnected models which have been presented in the model summary in Table 4.3 coupled with the ANOVA and the coefficient table. These models in connection with the ANOVA and coefficient table have been discussed below;

Table 4.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.388[a]	0.151	0.102	11.14652
2 V	0.437[b]	0.191	0.128	10.98359

a. Predictors: (Constant), INFLATION, EXCHANGE RATE

b. Predictors: (Constant), INFLATION, EXCHANGE RATE, FDI

Table 4.3 provides the model summary of regression. The model indicates the degree to which the independent variable predicts the dependent variable using the R^2 (coefficient of determination) value. The R^2 value indicates how much of the dependent variable economic growth can be explained by the independent variables.

Table 4.4 below presents the ANOVA of regression. The ANOVA indicates how well the independent variables significantly predict the outcome variable which is the economic growth (GDP). The Sig. value on the regression row indicated that the p-value of 0.00 was

51

less than the confident interval of 0.05 IN MODEL 1 and MODEL 2 indicates that, the model applied is significantly good enough in predicting the outcome variable (economic growth). Thus there is 95% confidence that economic growth of Ghana is based on the FDI.

Table 4.4: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1144.842	3	381.614	3.071	0.036[b]
	Residual	6460.736	52	124.245		
	Total	7605.578	55			
2	Regression	1452.980	4	363.245	3.011	0.026[c]
	Total	7605.578	55			
	Residual	6127.279	49	125.047		
	Total	7605.578	55			

a. Dependent Variable: GDP

b. Predictors: (Constant), INFLATION, EXCHANGE RATE,

c. Predictors: (Constant), INFLATION, EXCHANGE RATE, FDI

Table 4.5: Coefficients Of Regression [a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-60.018	74.558		-0.805	0.036		
	EXCHANGE RATE	0.013	0.390	-0.009	-0.032	0.005	0.975	1.026
	INFLATION	4.525	5.274	0.299	0.858	0.008	0.618	1.617
2	(Constant)	18.393	83.177		0.221	0.029		1.026
	EXCHANGE RATE	-0.101	0.366	-0.072	-0.276	0.018	0.955	1.047
	INFLATION	0.697	5.391	0.046	0.129	0.029	0.511	1.957
	FDI	0.160	0.094	-0.487	-1.703	0.011	0.792	1.263

a. Dependent Variable: economic growth (GDP)

Table 4.5 above also presents the coefficient of regression. It indicates the path to which the independent variables influence the dependent variable thus the GDP. It highlights the beta (B), the variance inflation factor and the significant level of the variables understudy. indicates ANOVA of regression. The ANOVA indicates how well the independent variables significantly predict the outcome variable which is the economic growth (GDP). The Sig.

52

value on the regression row indicated that the p-value of 0.00 was less than the confident interval of 0.05 IN MODEL 1 and MODEL 2 indicates that, the model applied is significantly good enough in predicting the outcome variable (economic growth).

4.4.1 Interpretations of HRM.

4.4.1.1 Model 1: Effect of Control Variables on Economic Growth (GDP)

Model 1 indicates a regression between economic growth (GDP) and control variables namely inflation and exchange rate. The model indicates that, exchange rate and inflation influence GDP with an influential power of 15percent. According to table 4.4 ban and exchange rate negatively and significantly influence the economic growth (GDP) whiles inflation negatively and significantly influence the economic growth (GDP). However, table 4.4 indicates that inflation showed a higher influence on the economic growth ($\beta = 4.5$, Sig<0.05).

4.4.1.2 Model 2: Effect of FDI on GDP

Model 2 indicates a regression between economic growth (GDP), control variables and the introduction of the variables of interest that is FDI. The result indicates that; the model predicts economic growth with a predictive power of (R-squared-model 1 R-squared) (0.19-0.15) 4percent. Again, table 4.4 indicates that FDI positively and significantly influence the economic growth of Ghana. The FDI explains (model 2 R-squared-model 1 R-squared) (0.19-0.15) 4% of the occurrence of the economic growth. However, FDI showed a lower influence on the economic growth. This is consistent with Blomstrom et al. (2014) which states that FDI improved the coefficient of determination which was impressive.Blomstrom et al. (2014) report that FDI exerts a positive effect on economic growth, but that there seems to be a threshold level of income above which FDI has positive effect on economic growth and below which it does not. The explanation was that only those countries that have reached a

certain income level can absorb new technologies and benefit from technology diffusion, and thus reap the extra advantages that FDI can offer

4.4.1.3 Test of Multi-Collinearity

According to the regression model adopted in the HRM, a problem occurs when the explanatory variables are very highly correlated with each other, and this problem is known as multi-collinearity.:. Multi-collinearity introduces a problem because the estimates of the sample parameters become inefficient and cause large standard errors, which makes the coefficient values and signs unreliable. Furthermore, multiple independent variables with high correlation add no additional information to the model. It also conceals the real impact of each variable on the dependent variable. Cooper and Schindler (2009) suggested that a correlation above 0.8 should be considered as a problem of multi-collinearity. In addition, Hair (2006) concluded that correlation coefficient below 0.9 may not cause serious multi-collinearity problem.

According to coefficient of regression table above, the variance inflation factor (VIF) was used to detect whether one predictor has a strong linear association with the remaining predictors (the presence of Multi-collinearity among the predictors) VIF measured how much the variance of an estimated regression coefficient increases if the predictors are correlated. The largest VIF among all predictors was used as an indicator of severe Multi-collinearity. Montgomery and Peck (1982) suggest that when VIF is greater than 10, then the regression coefficients are poorly estimated. Again when the tolerance value is less than 0.10 there is a presence of multi-collinearity. The Multi-collinearity test for this study shows that the variance inflation factor (VIF) on the independent variables were below 10 thereby demonstrating that, no Multi-collinearity existed between the independent variables in the regression model. Again the tolerance values were above 0.10 indicating non-existence of multi-collinearity.

4.4.1.4 Impact of FDI on GDP Growth

From the coefficients Table above, the impact of FDI on GDP growth can be established using the specified variable (FDI) coefficient highlighted in the coefficient table above. In estimating the impact of FDI on GDP growth: predicted Level of GDP growth = 40.84 +296.5x (FDI). Thus, if the FDI increases by 1% GDP growth will increase by 296.5 of a margin which is impressive. This implies that FDI was a major determinant that causes a variation in the GDP growth. According to the regression model, FDI has a positive impact on the GDP growth given that the regression coefficient was positive.

4.5 Analysis of   20 Years FDI Forecast In Ghana

4.5.1 Behavior of Time Series Data of FDI

Figure 1.1 above shows the Time plot of FDI data from 1985 − 2017. There is a systematic change in the time plot in Figure 1.1 which is periodically known as the trend, it shows the pattern of FDI whether it is decreasing or not. FDI increased by a small amount from 1985 to 2014. A gradual increase in FDI was observed from 2014 to around 2010 followed by a regular pattern in FDI (i.e. increasing movement of the FDI trend) to 2015. In general, the trend in Ghana's FDI is increasing but not always the case. The annual FDI time plot in Figure 1.1 does not exhibit seasonal variation and it is not stationary due to the trend component. To have an accurate forecast, the test for stationarity must be fulfilled. Test of stationarity of time series data was conducted using autocorrelation function of FDI. The autocorrelation function of FDI describes the correlation between values of the FDI at different points in time, as a function of the two times or of the time difference. The autocorrelation function was decreasing gradually and that shows that there is a trend in the FDI data. Hence data is not stationary. This requires trend differencing.

4.5.2 Trend Differencing

A transformation of the FDI data using the first and second differencing method was performed to remove the trend component in the original FDI data which is shown in Figure 1.2 and Figure 1.3. The observations move irregularly but revert to its mean value and the variability is also approximately constant. The FDI data now looks to be approximately stable.
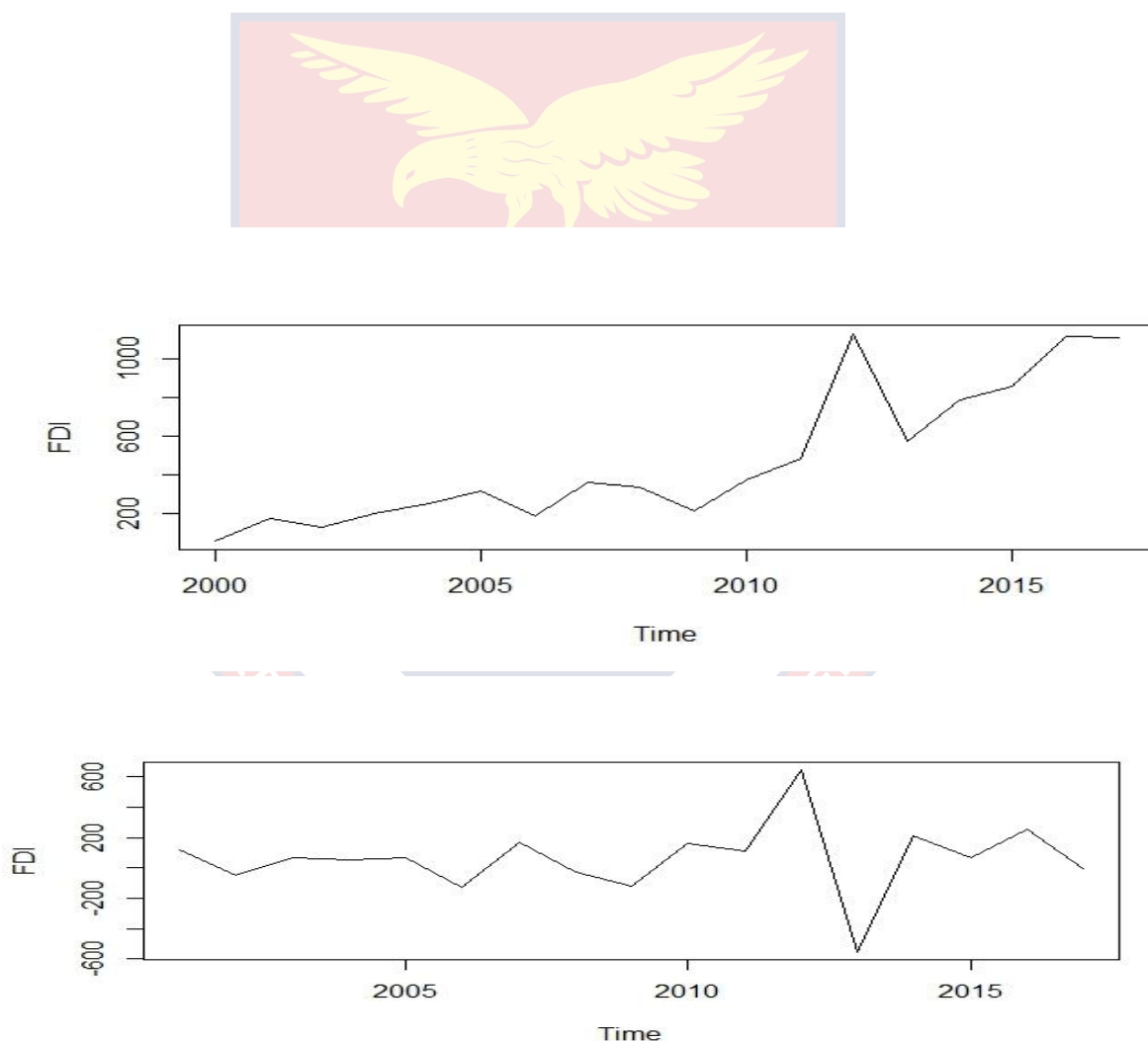

Figure 1.2: First Difference of the FDI Data

4.5.3 ACF and PACF of the Second Differencing of FDI Data

The autocorrelation function of the second differencing of the FDI data at various lags and the bottom part is the partial autocorrelation function of the second differencing of the FDI data also at different lags. Inspecting both the ACF and the PACF of the first differencing of the FDI data, the following models are suggested: $SARIMA\ (1,0,0), SARIMA\ (0,0,1)$ and $SARIMA\ (1,0,1)$

4.5.4 Diagnostics of S$ARIMA(1,0,0)$

Diagnostics of the residuals from $ARIMA(1,0,0)$ is shown in Figure 3.1 above. The top part is the time plot of the standardized residuals of $SARIMA(1,0,0)$. The standardized residuals plot shows no obvious pattern and look like an i.i.d. sequence of mean zero with some few outliers. The middle part of the Diagnostics is the plot of the ACF of the residuals. There is no evidence of significant correlation in the residuals at any positive lag. At the right side of the middle of the Diagnostics is the normal Q-Q plot of the standardized residuals. Most of the residuals are located on the straight line except some few residuals deviating from normality. Therefore, the normality assumption looks to be satisfied and so the residuals appear to be normally distributed. The bottom part of the Diagnostics is the time plot of the L jung-Box statistics. It is observed that the L jung-Box statistics plot is significant at one positive lag.
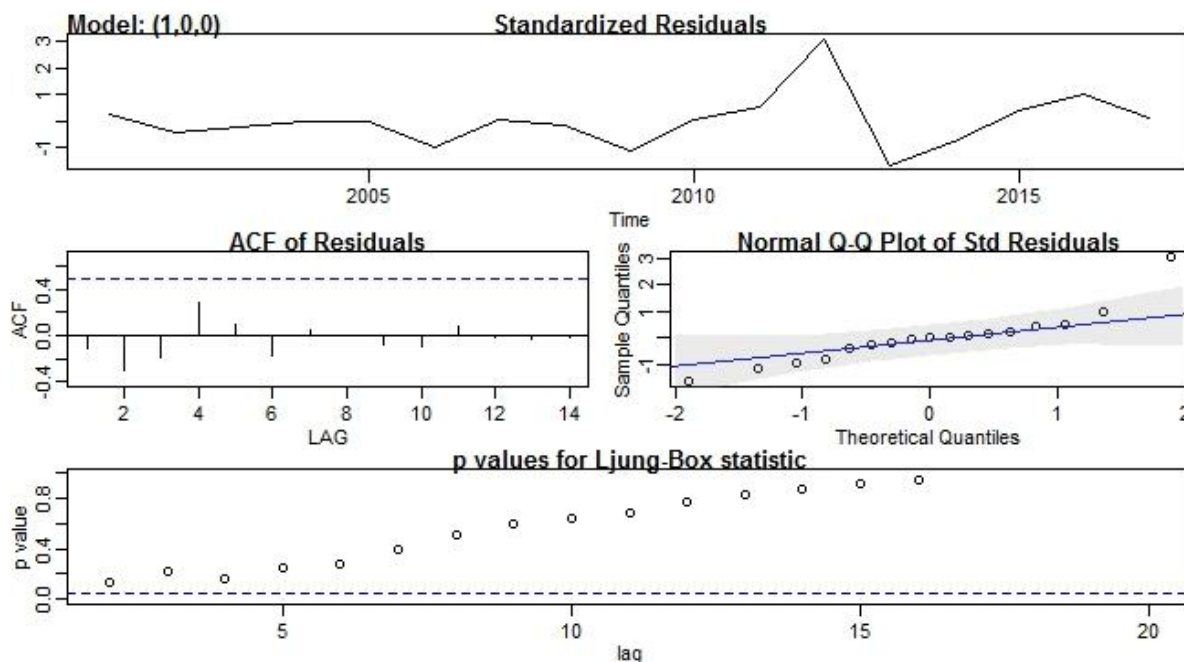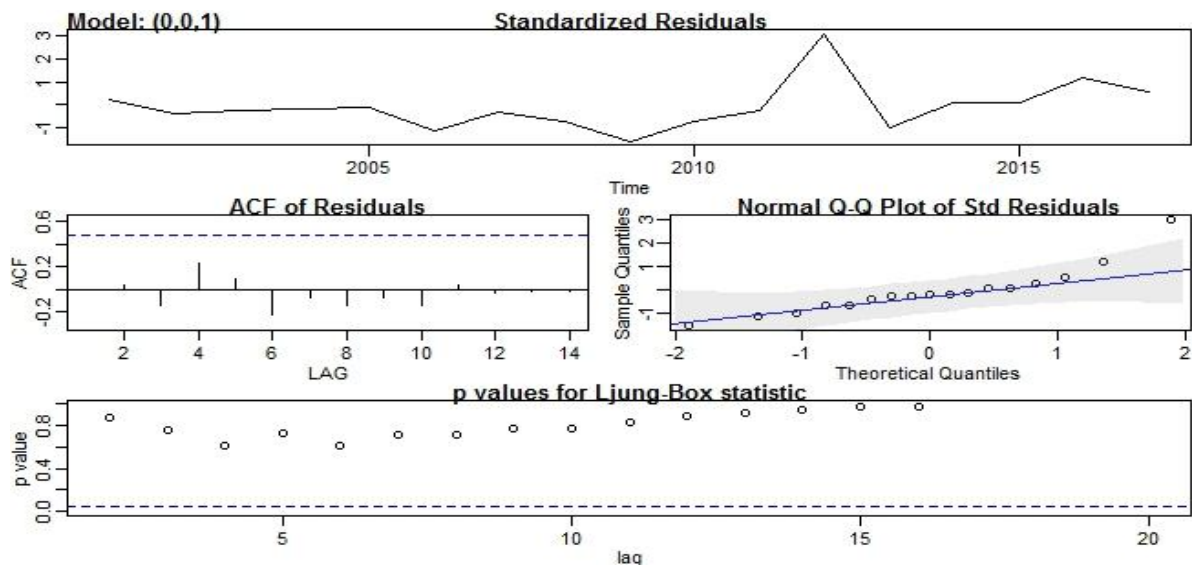
Figure 1.4 Diagnostics of $SARIMA(1, 0, 0)$

4.5.5 Diagnostics of $SARIMA(0, 0, 1)$

Diagnostics of the residuals from $SARIMA(0,0,1)$ is shown in Figure 3.2 above. The top part is the time plot of the standardized residuals of $SARIMA(0,0,1)$. The standardized residuals plot shows no obvious pattern and look like an i.i.d. sequence of mean zero with some few outliers. The middle part of the Diagnostics is the plot of the ACF of the residuals. There is no evidence of significant correlation in the residuals at any positive lag. At the right side of the middle of the Diagnostics is the normal Q-Q plot of the standardized residuals. Most of the residuals are located on the straight line except some few residuals deviating from normality. Therefore, the normality assumption looks to be satisfied and so the residuals appear to be normally distributed. The bottom part of the Diagnostics is the time plot of the

58

Ljung-Box statistics. It is observed that the Ljung-Box statistics plot is not significant at any positive lag.
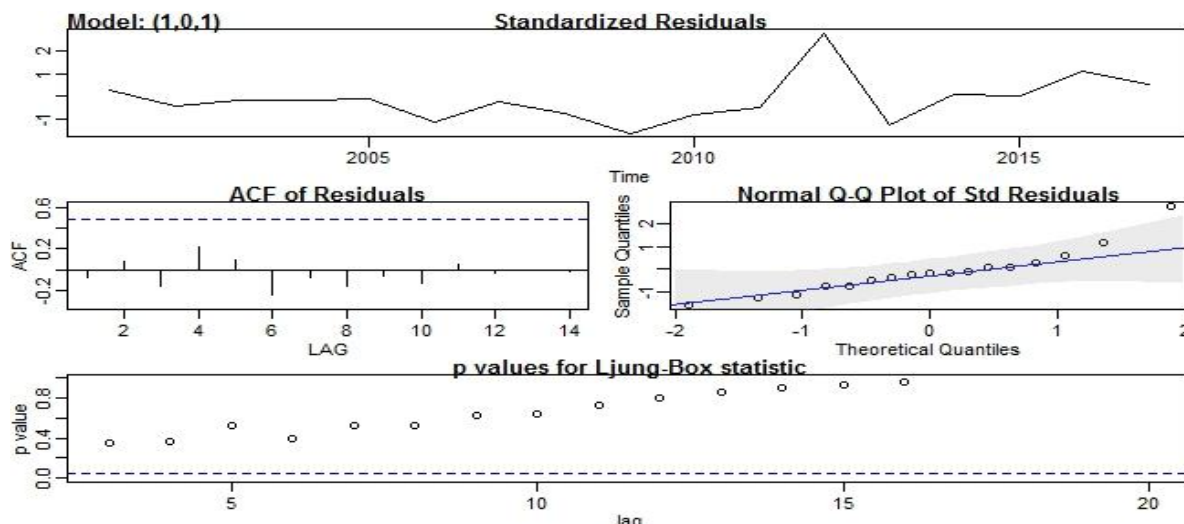

Figure 1.6 Diagnostics of SARIMA (1,0,1)

4.5.6 Diagnostics of $SARIMA(1,0,1)$

Diagnostics of the residuals from $SARIMA(1,0,1)$ is shown in Figure 3.3 above. The top part is the time plot of the standardized residuals of $SARIMA(1,0,1)$. The standardized residuals plot shows no obvious pattern and look like an i.i.d. sequence of mean zero with some few outliers. The middle part of the Diagnostics is the plot of the ACF of the residuals. There is no evidence of significant correlation in the residuals at one positive lag. At the right side of the middle of the Diagnostics is the normal Q-Q plot of the standardized residuals. Most of the residuals are located on the straight line except some few residuals deviating from normality. Therefore, the normality assumption looks to be satisfied and so the residuals appear to be normally distributed. The bottom part of the Diagnostics is the time plot of the Ljung-Box statistics. It is observed that the Ljung-Box statistics plot is significant at some positive lag.

59

Figure 1.6 Diagnostics of SARIMA (1,0,1)

4.5.7 Selection of Best Model for Forecasting

The standardized residual plots of all the models are independently and identically distributed with mean zero and some few outliers. There is are no evidence of significance in the autocorrelation functions of the residuals of models. The Ljung-Box statistics are no significant at any positive lag for the model. The $AIC, AICc$ and the BIC are good for all the models but they favor $SARIMA(0,0,1)$ model. From the above discussion it is clear that $SARIMA(0,0,1)$ model is the best model for forecasting since it has smallest AIC.

4.5.8 Forecasting
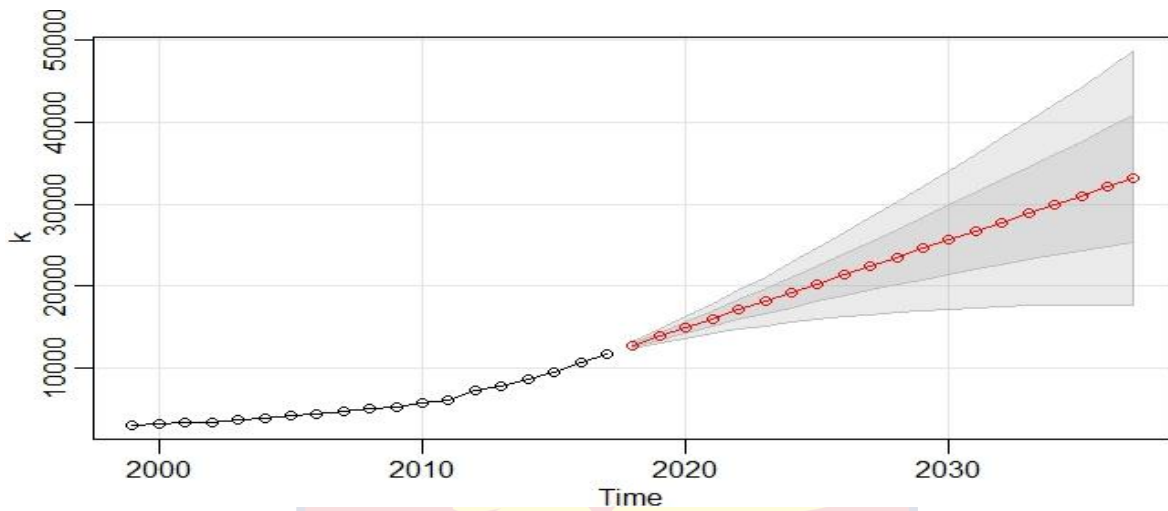
Figure 1.7 Graph of FDI, its Forecasts and Confidence Intervals

Figure 4.1 gives the visual representation of the original FDI data (black line), its forecasts (red line) and confidence interval (blue cover). 20 steps into the future forecasts is shown in Figure 4.1 by the red line showing that the FDI will continue to increase in the next 20 years.
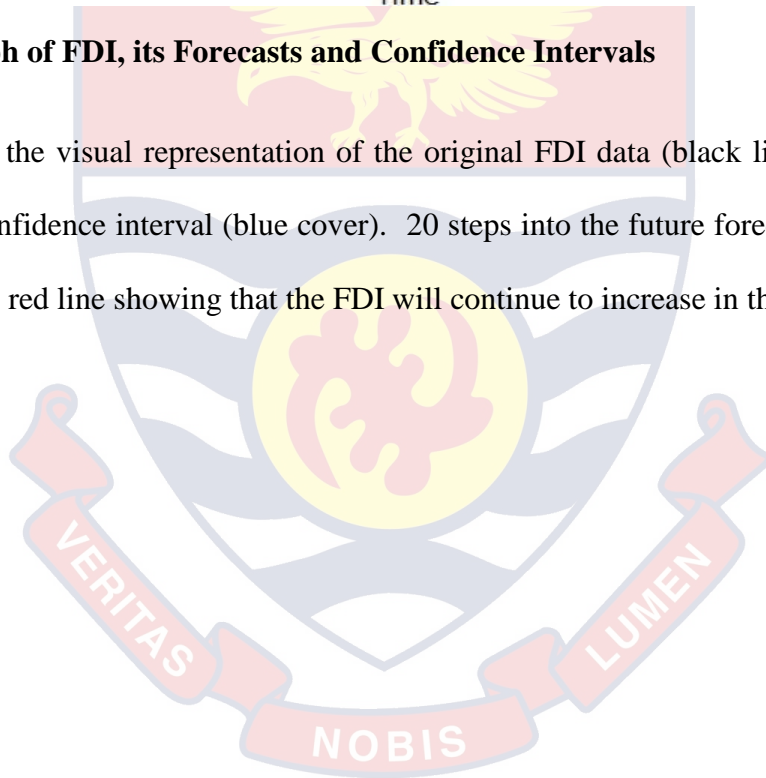
CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The chapter presents the summary of the main findings of the study with special focus on the three objectives. The chapter ends with conclusions and recommendations which have been made based on the findings of the study.

5.1 Summary of Key Findings

5.1.1 Trend of Foreign Direct Investment Inflows

The study revealed that in 1970s the FDI was up however, from 1980 to 2014, FDI inflow was sluggish, oscillated from 2014 to 2003 and increased sharply from 2014 to 2011. Thus, from1980 to 2011, Foreign direct investment inflows in Ghana generally follow an upward trend reflecting the decline in inflation and an upward real GDP growth trend. Thus the The worst inflationary episode in Ghana occurred between 1980 and 1983 with inflation hitting its apogee in 1983. This experience, among other things provoked serious policy reforms, which were initially enshrined in the Economic Recovery Programme, to deal with the high and volatile inflation in Ghana. The fight against inflation assumed greater momentum in 2014, when the Bank of Ghana formally adopted inflation targeting as monetary policy to ensure price stability in order to attract FDI to stimulate growth. This is consistent with (Anyanwu, 2014; World Bank, 2003) and Aryeetey, et al. (2000); Fosu, (2003) and Akoena, et al. (2014) study.

62

5.1.2 The Impact of Foreign Direct Investment (FDI) On the Growth of GDP

The R^2 (coefficient of determination) explained 53% variation in the occurrence of GDP growth which was moderate. Thus GDP GROWTH does not occur by chance but rather based on the FDI. The model was significant at a significant level of 0.05%. The Multi-collinearity test for this study shows that the variance inflation factor (VIF) on the independent variables were below 10 thereby demonstrating that, no Multi-collinearity existed between the independent variables in the regression model. Again the tolerance values were above 0.10 indicating non-existence of multi-collinearity. Additionally, the Predicted Level of GDP growth = 40.84 +296.5x (FDI). Thus, if the FDI increases by 1% GDP growth will increase by 296.5 of a margin which is impressive. This implies that FDI was a major determinant that causes a variation in the GDP growth. According to the regression model, FDI has a positive impact on the GDP growth given that the regression coefficient was positive. This is consistence with the Feridun and Sissoko (2006) study on the relationship between FDI and economic growth for the period 1976 to 2002 in Singapore using Granger causality and vector auto regression (VAR).

5.1.3 20 Years FDI Forecast in Ghana

Sequence of observations of foreign direct investment (FDI) from 1985 to 2017 was collected and analyzed using statistical technique known as time series and forecasting for making predictions about the number of FDI inflows in the future. Descriptive analysis of the observed FDI data showed a systematic change over time which was not periodic. An autoregressive integrated moving average (ARIMA) models were fitted to the data of which the best model was selected based on diagnostics of the residuals of each model and other criteria. A 5 years forecast were estimated using the best model and the forecasts show that

FDI will increase continuously in the next 20 years. This is consistent with (Aryeetey, et al. 2000; Fosu, 2003 and Akoena, et al. 2014) study.

5.2 Conclusions

The study concluded that from 1980 to 2014, FDI inflow was sluggish, oscillated from 2014 to 2003 and increased sharply from 2014 to 2011. Thus, from1980 to 2011, Foreign direct investment inflows in Ghana generally follow an upward trend reflecting the decline in inflation and an upward real GDP growth trend. According to the regression model, FDI has a positive impact on the GDP growth given that the regression coefficient was positive. The R^2(coefficient of determination) explained 53% variation in the occurrence of GDP growth which was moderate. This implies that FDI was a major determinant that causes a variation in the GDP growth. The model was significant at a significant level of 0.05%. The Multi-collinearity test for this study shows that the variance inflation factor (VIF) on the independent variables were below 10 thereby demonstrating that, no Multi-collinearity existed between the independent variables in the regression model. The forecasts also show that FDI will increase continuously in the next 20 years.

5.3 Recommendations

Based on the above conclusions, the following policy recommendations are worth noting:

First, the negative relationship between inflation and economic growth means that high inflation may present deleterious effects to growth in Ghana. However, higher level of output growth is very crucial to ensure price stability in Ghana because of the unidirectional causality running from real GDP growth to inflation. Therefore, for the fight against inflation to be won, policies should be geared towards addressing the real economic factors that hinder GDP growth in Ghana.

Secondly, price stability may not attract FDI because of the unidirectional causality from FDI to inflation. High FDI is central to low levels of inflation in Ghana. Therefore, both fiscal and monetary policies geared towards encouraging FDI in Ghana would enable Ghana witness high and sustainable growth. A policy recommendation is to attract export-oriented FDI into the industrial sector and more especially agricultural sector of the economy since agriculture is the backbone of the Ghanaian economy. Government must also create the necessary environment to attract foreign direct investment into the economy.

For instance, improvement in the transportation system and industry, provision of sustainable energy and water, waste management, improvement in communication technology, building and rehabilitation of ports and harbor's must be encouraged since these facilities are important in attracting foreign direct investment into Ghana. It is therefore very important to pay increased attention to the overall role and the quality of growth as a vital determinant of FDI along with the quality of human capital

5.3.1 Recommendation for Further Research

Future research in this area should analyze the moderation effect of inflation, FDI and growth in a multivariate system to take account of other crucial determinants of these variables. This is likely to improve upon my results and may even provide more study conclusions.

REFERENCE

Abdul S. 2009. Does Foreign Direct Investment come from Economic growth:

Evidence from   South-Eastern Asia and Latin America, Wooldbury School of

Business Working Paper, 1-9. Ade

Agyire-Tettey, F.K., and Mawutor, G.   2014. Energy Consumption and Economic Growth:

Evidence from Ghana, West Journal of Monetary and Economic Integration, 7 2 :

97-11

Aiken, B.J., and Harrison, A.E.   2013. Do Domestic Firms Benefit from Foreign Direct

Investment Evidence from Venezuela, American Economic Review, 89: 605-

618,

Aryeetey, E., and Fosu, A.K.   2014. Economic Growth in Ghana: 1960-2000, AERC Growth

Project Workshop, Cambridge.

Aryeetey, E., Jane H and Machiko N 2014. Economic Re-forms in Ghana:

The Miracle and the Mirage , Oxford: James Currey and Woeli Publishers.

Asiedu, E., 2002 . On the Determinants of Foreign Direct Investment to Developing

Countries: Is Africa Different? World Department, 30 1 : 107-119. Pp4-7

Atish G. and Steven P. 1988 . Inflation may be harmful to your growth ,

IHIF Staff Papers Vol.45,No.4 1988

Balasubramanyam, V. N., M. A. Salisu, and D. Sapsford 2014 . Foreign Direct Investment

and Growth in EP and IS Countries. Economic Journal 106: 434,92-105.

Banerjee, A., Juan D., John G., and David F. Hendry 2014 . Cointegration, Error

Correction,and the Econometric Analysis of Non-Stationary Data ,

Oxford:Oxford University Press. Pp44-55

Beck, N   2014 . The Methodology of Cointegration. Political Analysis4:p237–248.

Borensztein, E. J., De Gregorio, and J.W.Lee. 2014 . How Does Foreign Direct Investment

affect Economic Growth , Journal of International Economics, 34 1 , 115

Boyd, J.H, Levine, R., and Smith, B.D., 2001 . The Impact of Inflation on Financial Sector

Performance, Journal of Monetary Economics 47, pp221-248.

Bruno, M. and W. Easterly. 2014 . ―Inflation Crises and Long-Run Growth , World Bank

Policy Research Working Paper No.1517

Chih-Chuanyeh, 2009 . the simultaneous Evolution of Growth and inflation , International

Conference on Applied Economics-ICOAE 2009 Databank Group Research

Economic Analysis Monthly Report, 2009.

Djokoto Justice G 2012 . The effect of Investment Promotion on Foreign Direct Investment

Inflow into Ghana , International Business Research, Vol5, No3.

Douthwaite,R. 2014 . The Problem with Economic Growth ,www.feasta.com

Elias H, Bikash C, Chosh and Khairul I. 2012 . Inflation and Economic Growth in

Bngladesh,

International Refereed Reseacrh Journal ,Vol3,Issue4 2

67

Elijah U and Festus .E 2013 . Exchange Rate Volatility, Inflation Uncertainty and Foreign

Direct Investment in Nigeria , Bostwana Journal of Economics, Vol5. No7.

Enders, W 2014 , ―Applied Econometric Times Series , Wiley: New York

ErmanErbaykal and H. Aydin Okuyan 2013 . Does Inflation Depress Economic Growth;

Evidence from Turkey , International Research Journal of Finance and

Economics, Vol2.Iss17. pp34-44

Faiza S, Anish Z and Bisma S, 2009 . Imact of Inflation and Economic Growth and Foreign

Direct Investment: Evidence from Pakistan, Interdisciplinary Journal of

Contemporay Research in Business, Vol4, No9

Fischer, S. 2014 . The Role of Macroeconomic Factors in Growth , NBER Working Paper

No. 4565.

Frimpong J M and Oteng-Abayie E. O 2011 . Bivariate Causality between Foreign Direct

Investment and Economic growth in Ghana , Journal of African Economics

and Finance, Vo1.No2 G.S.K

G.M. and Helpman, E. 2014 , ―Innovation and Growth in the Global Economy, Cambridge,

Mass; and London England: MIT Press, 2nd Edition.

 Ghosh, A. 2000 . Inflation and Growth , IMF Research Bulletin,Vol. 1,pp. 1-3. Ghosh, A.

and S. Phillips. 2014 . Warning: Inflation may be Harmful to your Growth ,

IMF Staff Papers Vol. 45, No.4.

Ghosh, A and S. Philips. 2014 . Inflation, Disinflation, and Growth , IMF Working Paper.48

Girijasankar M and Chowdhury 2001 . Inflation and economic growth: Evidence from South

Asian Countries , Asian-Pacific Development Journal, Vol8, No1. Pp33-45

Gomme, P. 1983 . Money and Growth Revisited: Measuring the Costs of Inflation in an

Endogenous Growth Model , Journal of Monetary Economics, Vol. 32, pp.

51-77.

Government of Ghana 2006 Growth and Poverty Redution Strategy GPRS II   2006-2009

volume 1: Policy FrameWork, National Development Planning Commission,

Accra, Ghana, pp147 . Grossman,

Gupta, K. 1975 , ―Foreign Capital Inflows, Dependency Burden and Saving Rates in

Developing Countries: A Simultaneous Equation Model, Kyklos, 28: 358-

374.

 Gyimah-Brempong 1989 . Defence spending and economic growth in sub-Saharan Africa,

Journal of Peace Research vol.30.no.1. 2014. pp.95-99.

Gylfason, T., and Herbertson, T.T. 2001 , ―Does Inflation matter for Growth? Japan and the

World Economy,13: 405-428. Pp90-95

Hansen, H., and rand, J. 2006 . On the Causal Links between FDI and Growth in Developing

Countries, World Development, 29: 21-41.

Henri N T and Atangana O 2011 . Inflation, Monetary and Economic growth in Cameroon,

International Journal of Finacial Research, Vol2,NO1.pp55-67

Naizi, S R and Muhammad A N and Ramiz Ur R   2014 .. Does and Inflation and Growth of a

country affect its FDI , Journal of Management, Economics and Finance, Vol1.

Issue1 Ghana Poverty Reduction Strategy II Annual Progress Report.

Omankhanlein 2011 . The Effect of Exchange Rate and Inflation on Foreign Direct

Investment

and its relationship with Economic Growth in Nigeria, Economics and Applied

Information Isue1 pp5-16

Oyedigo A, Babatunde H and Awoniyi M.A 2011 . Corruption, Foreign Direct Investment and

Growth in Nigeria, Journal of Research in International Business Management

,Vol1,No9 page 33-55
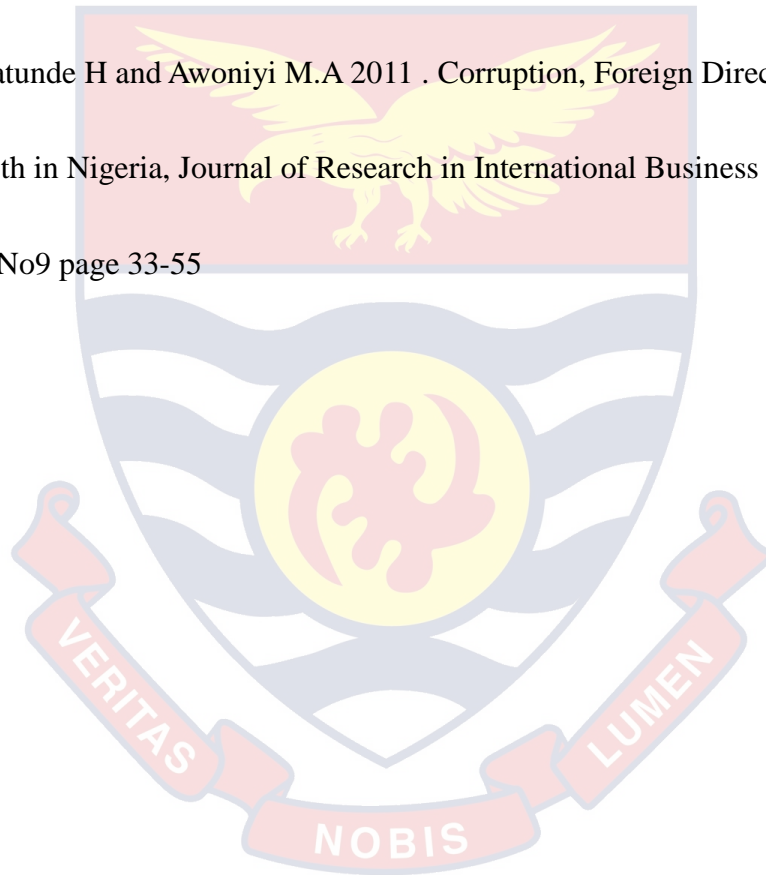
APPENDIX: DATA

FDI				YEAR	FDI	GDP	INFLATION	EXCHANGE RATE	
2.521967				1975	2.52	-12.43	29.8	0	
-0.66037				1976	-0.66	-3.53	56.1	0	
0.602537				1977	0.6	2.27	116.5	0	
0.264745				1978	0.26	8.48	73.1	0	
-0.06965				1979	-0.07	-2.51	54.4	0	
0.350938				1980	0.35	0.47	50.01	0	
0.385174				1981	0.39	-3.5	116.5	0	
0.403866				1982	0.4	-6.92	22.49	0	
0.059153				1983	0.06	-4.56	122.25	0	
0.045328				1984	0.05	8.65	40.03	0	
0.124324				1985	0.12	5.09	10.3	0.01	
0.075075				1986	0.08	5.2	24.54	0.01	
0.092614				1987	0.09	4.79	39.76	0.02	
0.096194				1988	0.1	5.63	31.37	0.02	
0.285618				1989	0.29	5.09	25.24	0.03	
0.251309				1990	0.25	3.33	37.24	0.03	
0.303189				1991	0.3	5.28	18.1	0.04	
0.350801				1992	0.35	3.88	10.05	0.04	
2.095116				1993	2.1	4.85	24.94	0.06	
4.2795				1994	4.28	3.3	24.87	0.1	
1.647297				1995	1.65	4.11	59.32	0.12	
1.730357				1996	1.73	4.6	44.49	0.16	
1.187002				1997	1.19	4.2	24.83	0.2	
2.237678				1998	2.24	4.7	19.21	0.23	
3.157				1999	3.16	4.4	12.47	0.27	
3.329303				2000	3.33	3.7	25.11	0.54	
1.680555				2001	1.68	4	32.93	0.72	
0.955674				2002	0.96	4.5	14.85	0.79	
1.791715				2003	1.79	5.2	26.63	0.87	
1.568114				2004	1.57	5.6	12.67	0.9	
1.350866				2005	1.35	5.9	15.1	0.91	
3.116219				2006	3.12	6.4	11.68	0.92	
5.586607				2007	5.59	4.35	10.73	0.94	
9.517043				2008	9.52	9.15	16.51	1.06	
9.132935				2009	9.13	4.84	13.14	1.41	
7.855067				2010	7.86	7.9	6.7	1.43	
8.207966				2011	8.21	14.05	7.68	1.51	
7.855368				2012	7.86	9.29	7.07	18.78	
6.75033				2013	6.75	7.31	11.67	8.81	
8.604963				2014	8.6	3.99	15.49	48.4	
8.549691				2015	8.55	3.84	17	26.49	
8.142621				2016	8.14	3.72	17.5	6.59	
6.877221				2017	6.88	8.51	11.8	11.28	

Source: Bank of Ghana (2018)