UNIVERSITY OF GHANA

ON THE DETERMINANTS OF FOREIGN DIRECT INVESTMENT TO AFRICA: ARE THERE DIFFERENCES BETWEEN CONFLICT AND NON-CONFLICT COUNTRIES?

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DECLARATION

I declare that this work is the result of my own research. This work has neither been presented by anyone nor I, for an academic award in this or any other university. Any shortcomings in this report are entirely mine.

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CERTIFICATION

We hereby certify that this thesis was supervised in accordance with procedures laid down by the University.

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(SUPERVISOR)

DEDICATION

This thesis is dedicated to

The Almighty God

My dear parents: Soter and Cecilia

My Siblings: Agartha, Patrick and Lawrencia

My Husband, Gabriel.

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ABSTRACT

Global flows of Foreign Direct Investment (FDI) have seen a boom in the last two decades. This is evident in the annual United Nations' Conference on Trade and Development (UNCTAD) investment reports. Notwithstanding this, Africa remains the least recipient of global FDI and its share continues to decline. Africa's predicament has been explained variously. One reason is that Africa is considered unsafe for foreign investments. Proponents of this conjecture base their arguments on the fact that there are widespread incidences of violent conflicts and civil wars in Africa. We, however, believe that the main shortcoming of this explanation stems from failure to recognize the fact that there are countries in Africa that can be said to be "safe". We take the argument further by examining the heterogeneity of countries based on whether the country has been in conflict. We defined a conflict country to be a country that has recorded at least 1000 battle related deaths in any one given year between 1996 and 2010. We examined variables that are universal in the literature for the two sub-samples and the full sample. Consequently, our objective was to establish whether there is reason for investors to regard countries differently or all countries were the same. We achieved our objective using a panel of 46 countries in Sub-Saharan Africa; 13 of these were classified as conflict and 33 as non-conflict countries. The fixed effects (FE) method was employed in analysing the data because the Hausman test favoured it. Our data showed that conflict countries received more FDI on average than non-conflict countries. Another argument is that foreign investors who come to Africa have been interested in natural resources. The data showed that conflict countries also had more natural resources on average but the regression results showed an inverse and significant relationship with FDI. This relationship is positive for non-conflict countries suggesting that investors who are interested in natural resources prefer non-conflict countries. Overall, our regression results showed that there is indeed a difference in the factors that determined the destination of FDI in Africa. For the full sample, we obtained positive coefficients for natural resources and institutions but these were not statistically significant.

Financial development and infrastructure had positive and significant effect on FDI while trade openness and market size had significant but negative relationship with FDI. In the sub-samples, natural resources, institutions, trade openness, infrastructure and financial development had positive and significant coefficients but market size had negative and significant coefficients in all the six models for non-conflict countries. For the conflict sample, there was an adverse impact of natural resources, trade openness and market size on FDI inflows whereas institutions and financial development did not have any significant impact on FDI. What these results suggest is that the factors that attract investors to conflict countries are different from those for non-conflict countries. Consequently, there was heterogeneity among countries in Africa. We confirmed this by conducting a Chow test.

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LIST OF ABBREVIATIONS

FDI	Foreign Direct Investment
FE	Fixed Effects
RE	Random Effects
UNCTAD	United Nations' Conference On Trade And Development
MNCs	Multinational Corporations
MNEs	Multinational Enterprises
WIR	World Investment Report
GDP	Gross Domestic Product
GLS	Generalized Least Square
IPA	Investment Promotion Agency
WTR	World Trade Report
SSA	Sub-Saharan Africa
COW	Correlates Of War
US	United States
TNCs	Transnational Corporations
NEPAD	New Partnership For African Development
OECD	Organization Of Economic Cooperation And Development
UCDP	Uppsala Conflict Data Program
PRIO	Peace Research Institute Oslo
OLI	Ownership (O), Location (L) And Internalization (I)
IMF	International Monetary Fund
ICT	Information And Communication Technology

GCC	Gulf Cooperation Council
BRICS	Brazil, Russia, India, China And South Africa
GMM	Generalized Method Of Moments
MENA	Middle East North Africa
WDI	World Development Indicators
WGI	World Government Indicators
ADI	African Development Indicators
CC	Control Of Corruption
VA	Voice And Accountability
PV	Political Stability And Absence Of Violence Or Terrorism
RQ	Regulatory Quality
RL	Rule Of Law
GE	Government Effectiveness
FPI	Foreign Portfolio Investment
LDCs	Least Developed Countries
DR Congo	Democratic Republic Of Congo
UN	United Nations
MINURCAT	United Nations Mission In Central African Republic And Chad
UNMEE	United Nations Mission In Ethiopia And Eritrea
CIA	Central Intelligence Agency
VIF	Variance Inflation Factor
ECOWAS	Economic Community Of West African States

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Foreign Direct Investment is an important driver of economic growth and an important nexus in globalisation (Anyanwu, 2012; Ngowi, Pienaar, Akindele, & Iwisi, 2006). This means that FDI is among other factors, crucial for third world countries since they are the least developed. Firstly, developing countries need these investments to grow as new investments will result in new production as well as form the basis of future production through the establishment of new businesses and expansion of existing ones. Moreover, there are technology spill overs, capital support and improvement in managerial skills that often accompany FDI and are crucial for developing countries to improve. It appears however, that recent FDI flows have been highly selective in their destinations with Africa being the least selected.

The United Nations' Conference on Trade reported that global FDI flows increased by 38 % in 2015 (UNCTAD, 2016). This marked growth, followed more than half a decade of low and faltering growth. Recent trends show that FDI flows are surging up and developing countries continue to receive a significant share of the flow. That notwithstanding, the UNCTAD report further reveals that in the recent decade, inflows to Africa and Latin America have fallen significantly while developing Asia has experienced a marked boost in inflows. For instance, in the presence of the FDI "boom" to developing countries, Africa recorded a 7% decline in FDI flows in 2015. Meanwhile, developing countries generally recorded a 9% increase and developing Asia alone recorded an all-time regional high increase of 16%. The foregoing pattern, unfortunately for Africa, is against the background that, historically, Africa has remained the least

recipient of foreign direct investments (Dupasquier & Osakwe, 2006). It is important also to observe that according to UNCTAD (2016), this trend is peculiar to sub-Sahara Africa; as North Africa continues to receive increasing inflows. This has been partially explained by the report to be as a result of the well-known fact that Africa is overly dependent on its primary sector; coupled with constantly declining commodity prices in the world market.

Moreover, it is an open secret that Asia's manufacturing and services sectors are continuously receiving significant foreign investor patronage. This can be partly explained to mean that investors are no longer interested in the primary sector of Africa due to a bleak outlook for primary exports in favour of the industrial boom in the developing east. Though several studies in the past have attempted to explain factors that account for the observed heterogeneity in the distribution of FDI on the continent, few studies exist on the element of conflict and how it influences FDI destinations.

According to Collier & Hoeffler (2002), about 60% of countries in sub-Sahara Africa have been involved in some form of armed conflict since 1980. They further indicated that Africa's characteristics make it more susceptible to conflict. Whereas conflict was declining in other regions, it was rising in Africa. We immediately recall political, ethnic and religious conflicts in Sudan, Somalia, the Central African Republic, Chad and Ivory Coast which have since led to multimillion-dollar losses and loss of large human resources (Ezeoha & Ugwu, 2015). Notwithstanding these conflicts, UNCTAD (2015) reports that two out of three executives, who were sampled, of MNCs with about $1 billion in annual revenues, indicated that they anticipated FDI inflows to Africa to expand. This represents the highest optimism the survey had recorded

and it was attributed to the fact that the slow global growth that had been observed previously was expected to make emerging markets more attractive. Unfortunately, however, UNCTAD (2016) reported that this did not happen in 2015 and is not expected to happen in 2016 either.

As many African governments continue to implement policies that are intended to attract FDI, it is important to observe that existing studies have mainly considered all countries together with little attempt to examine the heterogeneity of countries in the region as well as the different factors that attract FDI to these countries. An important factor that can be used to distinguish among sub-Sahara African countries is the countries' history of armed conflicts. This factor had been variously ignored by many existing studies and this has left important questions unanswered as to whether there is any impact of armed conflict on decisions of investors in the continent and also, whether investors consider certain factors peculiar to conflict countries as compared to the non-conflict ones before they invest in such environments.

Inspired by these ideas, this study was motivated to ask whether there are differences in the factors that attract FDI to countries that are in armed conflict and those that are not in conflict. We succeed in showing that countries that have been in conflict within the period of study have received more FDI on average than countries that have not been in conflict. Additionally, we show that there are differences in the factors that investors consider before investing in SSA based on whether the country had been in conflict in the last two decades or not. Contrary to expectations however, we do not find evidence that the investors were particularly interested in natural resources in conflict countries but were interested in natural resources in non-conflict countries. This can be attributable to the FDI-resource curse explanation offered by Asiedu (2013).

1.2 Problem Statement

FDI flows have generally been unstable over the last two decades (Adams, 2009; Adams, Evans, & Opoku, 2015). That notwithstanding, inward flows to developing countries have grown year after year. Africa has however continued to be the least recipient of inflows (Alsan, Bloom, & Canning, 2006; Anyanwu, 2012; Dupasquier & Osakwe, 2006). Adams (2009) noted that inflows to Africa accounted for less than 3% of total global FDI inflows in the year 2007. The causes for the disparity in the FDI distribution across continents and countries are checkered (Blanton & Apodaca, 2007). Onyeiwu & Shrestha (2004) argue that Africa receives the least FDI in the world because it is seen as an unsafe zone to conduct business since it is emaciated by political disorders, violence, severe poverty, diseases and the breakdown of law and order. Also, the political uproar discourages investments in real sectors which make it unattractive to foreign investors. All these are regardless of the fact that potential returns to investments are high in Africa. For example, Asiedu (2002) found that though SSA countries had a higher rate of return on investments for US firms, they are less likely to draw investors.

African governments are increasingly focusing on the formulation and implementation of policies that will be effective in drawing new foreign capital inflows (Asiedu & Lien, 2011). The observed trend has proven in no uncertain terms that these policies have failed in achieving their goal of attracting foreign investments. This can be explained by the fact that those policies are not appropriately targeted (Adams, 2009). This could further be explained to be as a result of the fact that research on the factors that are important for inflows into the continent has not sufficiently segregated and accounted for the heterogeneity of the countries within the continent; therefore

treating all countries alike (Gohou & Soumaré, 2012; Kinuthia & Murshed, 2014; Okafor, Piesse, & Webster, 2015). The result of this is that, contrary to the counsel of Adams (2009), policies are mis-targeted. The problem, therefore, is that previous studies have not established whether or not there are any differences between factors that determine FDI inflows into conflict and non-conflict countries; and if there are, what they are.

Previous studies on the factors that attract FDI into Africa have provided mixed results (Onyeiwu & Shrestha, 2004; Anyanwu, 2012). Among those that considered the question of conflict, Garriga & Phillips (2013) concluded that FDI inflows to post-conflict developing states do not react to the same factors as FDI inflows to other developing countries. In other words, investors may not consider the same indicators when choosing between, conflict and post-conflict countries as they would for other countries.

Additionally, there is an incomplete explanation on why some Multinational Enterprises (MNEs) would want to invest in developing economies which are usually associated with weak institutions and poor policies (Buckley, Chen, Clegg, & Voss, 2016; Lien, Piesse, Strange, & Filatotchev, 2005; Morrissey et al., 2016). What these studies tell us is that the policies that are put in place to attract FDI into relatively peaceful and politically stable countries might not be instrumental in drawing FDI into conflict or unstable countries. There is, therefore, the need to identify the determinants that are peculiar to each category. Beyond Africa, Henisz, Mansfield, & Von Glinow (2010) have observed that little research has been done on the link between conflict and international trade as a whole. These factors give rise to an issue and context gap in the Foreign Direct Investment literature. We fill this issue gap in the context of sub-Sahara Africa (Tsen, 2005).

1.3 Research Purpose

The purpose of this study is to determine the factors that influence FDI inflows to Africa. We also seek to bring to the fore the differences in the factors that matter in determining the destination of FDI in Africa according to whether or not a country has ever been in conflict during the period of study (that is, 1996-2010).

1.4 Research Objectives

1. To determine which factors are important in attracting inward FDI to sub-Sahara Africa.
2. To determine the factors that attracts FDI to conflict countries.
3. To determine the factors that attracts FDI to non-conflict countries.

1.5 Research Questions

1. What are the factors that are important in determining FDI inflows to Sub-Sahara Africa?
2. What factors attract FDI to conflict countries in Sub-Sahara Africa?
3. What factors attracts FDI to non-conflict countries Sub-Sahara Africa?

1.6 Significance of Study

The significance of this research is in two major strands: research and policy. This paper has implications for the broad study of the determinants of FDI in the following ways. First, the focus on countries with similar social, economic and political conditions will aid in reducing any sample selection bias. Secondly, several researchers have examined various determinants of FDI but few have researched on those for Africa, especially with regards to conflict and non-conflict regions and to ascertain the extent to which they draw FDI flows. Moreover, since conflict countries

receive more FDI on average than non-conflict countries, it is essential to know some of the factors that investors look out for in the former.

In addition, since FDI is known to have a long term positive effect on growth and development, identifying the factors that draw FDI into these countries would enable them strategize in order to attract more inflows. Furthermore, this study has provided reasons for policy makers to establish vibrant investment policies which are targeted at attracting FDI flows in order to unleash the economic potentials of countries in Africa. The global community profits when these economies become politically and economically stable as well as developed in the long run. Improved FDI offers a pathway to these outcomes (Garriga & Phillips, 2013).

1.7 Limitation

We would have preferred to have more recent data than was available. The study was limited to the 15years; from 1996 to 2010 due to unavailability of up to date data from the Africa Development Indicators. This constituted the key limitation of the study. This did not however limit the validity and relevance of the findings and conclusion of the study. Moreover, recent reports of UNCTAD have shown that the trend that existed during the period the study covered has not changed.

1.8 Outline of Research Report

This study consists of five chapters. In this chapter, we have provided a background to the study and stated the research problem. The chapter also states the objectives of the study and the questions the study intends to address and the significance of the findings to policy. Chapter 2

performs an exposé of literature on FDI. Chapter 3 discusses the methodology in detail and presents the determinants that are selected for the study, the study sample as well as the estimation techniques adopted for the study. We present the estimation results and their interpretations in chapter 4 and discuss the implication of these findings in that chapter. The report concludes with chapter 5 where we present a summary of the report and recommendations for policy and research.

1.9 Chapter Summary

The focus of this chapter has been to give background information on the trends of FDI globally and introduce the conflict nexus in the destination of FDI. We did this, using empirical literature and facts from the monitoring organization, UNCTAD. The chapter also presented the problem that the study seeks to address and the objectives we intend to meet. We emphasized that because FDI needs to be targeted, it is important to understand that countries in Africa is heterogeneous and so factors that attract FDI are expected to vary across the various classifications of countries. We identified that in this regard, there is an issue gap which we addressed in the context of sub-Sahara Africa. We classified countries into conflict and non-conflict countries and examined the differences in the factors that were important in attracting FDI to these countries.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview of Chapter

In this chapter, our goal is to present a detailed review of the on-going conversation in the FDI literature. We do this by examining both theories and empirical studies. By undertaking this review, we situate our study in the literature and show that our study is timely and is within the context of current FDI discourse. Very few studies have focused on the role of conflict in the FDI literature. We discuss these studies and show that our work is different from previous works. The chapter is segmented into sections; one for theoretical reviews, others for empirical issues. We begin the review by providing stylized facts on FDI to Africa. The aim here is to situate this study in the context of sub-Sahara Africa.

2.2 Stylized Facts and Figures on FDI

2.2.1 Global Trends of FDI

Global FDI flows have followed diverse trends over the last four decades as a lot of poor economies have grown at faster rates than relatively richer economies (Buchanan, Le, & Rishi, 2012). There has been a speedy but unstable flow of FDI globally, since the late 1980s (Chakrabarti, 2001). There was a global increase of FDI flows by 39% in 1998 with a total of US$844 billion. It increased further to US$ 1,491 billion in the year 2000 and this marked a significant increase of 49.5%. After the global economic crisis that started in 2007, global FDI flows decreased significantly but in 2010 it recovered by a modest 5% to $1.24 trillion.

Flows have generally increased since this time but they have not been able to rise to the pre-crisis average though industrial output had returned to normal. About 30% of the total FDI inflows were reinvested earnings as a consequence of improved profits of foreign affiliates, remarkably in developing countries. FDI globally surpassed the pre-crisis mean in 2011 by increasing by 16% and reaching a US$1.5 trillion in spite of the global chaos. This was partially due to the increase of flows to transition economies as well as developing countries which accounted for more than half of the worldwide FDI inflows.

Recently, there has been tremendous shift of FDI flows in the global setting from developed countries as major recipients to the developing and transition economies. For instance, developing economies for the first time in 2010 attracted close to half of global inflows and at the same time, had significant outflows which were mostly directed to the South. For example, in 2010, FDI to developing countries increased by about 21% and stood at 29% of FDI. In addition, more than ten of the top recipients of FDI in 2010 were developing countries. This exhibits the increasing significance of developing countries to the world economy. Thus, it is important not to rule out the role played by various countries in FDI growth irrespective of the origin or destination.

2.2.2 Flows to Developing Economies

FDI inflows to the developing world have seen significant improvement since the 1980s (UNCTAD, 2006) and according to Farla et al. (2016), it has become a chief source of external finance for developing countries since the mid-1990s. A third of global inward flows were attributable to developing economies in 1997 compared to the record of one-fifth share in 1990. These economies made the greatest gains over the 1990s since their shares and values of global

flows were extremely rising: there was an increase from US$34 billion (17% of global inflows) in 1990 to US$149 billion (37% of universal inflows) in 1997.

Developing economies received an upsurge of FDI flows in 2004 which accounted for a rise of 40% and thus, led to a 36% share of global FDI, marking the highest since 1997 (UNCTAD, 2005). In 2007, these economies had a significant level of FDI inflows which was US$500 billion, a 21% growth over 2006 whereas the least developed countries (LDCs) attracted US$13 billion in the same year (UNCTAD, 2008). In 2008, there was a surge in investments to developing and transition economies. This increased their share to 43% in global flows that year. According to the World Investment Report (UNCTAD, 2009), half of global FDI inflows was attracted by developing and transition economies in 2009.

According to the 2012 World investment Report (WIR), more than two thirds of the total value of Greenfield investments was hosted by developing and transition economies in 2011 (UNCTAD, 2012). Thus, marking a new record and these economies exceeded expectation by attracting more FDI as shown by the FDI Potential Index during that same period. In that same year, UNCTAD predicted that developing and transition economies will receive about half of the total global FDI flows due to the essential role played by FDI. As reported in the 2013 edition of the WIR, developing economies attracted more FDI than developed economies in 2012, which accounted for 52% and a total of US$142 billion of global flows (UNCTAD, 2013c). In that year, the global rate of return on FDI was 7% and both developing and transition economies had higher returns of 8% and 13% respectively as compared to that of the developed countries (5%). Additionally,

developing countries recorded the highest retained earnings of 40% of FDI income which serves as a vital source of financing.

Weak, vulnerable and small economies had their FDI flows increasing to US$60 billion by a margin of 8% (UNCTAD, 2013b). Vulnerable countries include conflict countries and this makes the current study of great interest since the determining factors of these economies that attract FDI flows are going to be uncovered for SSA in particular. During that same period, FDI flows to least developed countries increased rapidly by 20% and attained a total of US$26 billion with countries like Cambodia, Liberia, DR Congo, Uganda, Mozambique and Mauritania having the highest gains. DR Congo for example has been in severe conflict for a prolonged period but was able to gain enormously from such foreign investments. Thus, conflict only, might not be a major deterrent of FDI for some foreign investors since a significant number of investors still take key interest in investing in such "risky" countries. In 2014, LDCs recorded an increase of 4% to a total amount of US$23 billion.

2.2.3 Flows to Africa

There has been a stabilization in Africa's FDI inflows at markedly higher levels relative to the start of the 1990s; improved flows of US$5.2 billion during 1994-1996 as compared to US$3.2 billion during 1991-1993. In the 1997 period, inflows were significantly high with seven exceptional African countries contributing to this rise especially during the 1992-1996 period; Ghana, Namibia, Uganda, Equatorial Guinea, Botswana, Tunisia and Mozambique (UNCTAD, 1998b). These countries as indicated by the report were not only comparable to other African countries but

also to other developing economies at large due to their outstanding inward FDI flows and progress.

Due principally to extraction of natural resources and improved policy environments, FDI inflows increased to US$53 billion and US$88 billion in 2007 and 2008 respectively (UNCTAD, 2008). Major investors in Africa were from Europe and the United States followed by African investors principally from South Africa. The oil and gas extraction as well as infrastructure was done mainly by Transnational Corporations (TNCs) from Asia. Amidst this influx of inflows, Africa's share of FDI was just about 3%. Despite the risky nature of Africa due to conflicts and other macroeconomic issues, a survey by UNCTAD in 2008, showed that almost all TNCs either maintained or increased their levels of investment in the region. In 2008, inflows to the continent rose to a record level with West Africa attaining highest increase of 63% over 2007 (UNCTAD, 2009). Nigeria was the only African country which was among the top twenty counties recipients of FDI inflows as indicated by UNCTAD (2009) though it had also had some terrorist attacks at some point in time.

Due to the continuing rise in commodity price and the positive economic outlook, SSA attracted US$37 billion in 2011 as compared to US$29 billion in 2010 (UNCTAD, 2012). This surge occurred during the same time of the Boko Haram insurgency in Nigeria which consequently spread to its neighbouring countries like Chad, thus, making it a regional issue. In 2012, Africa experienced a year on year increase in FDI inflows. This is because inflows increased by 5% to US$50 billion therefore making it one of the few regions that made significant progress in that year. This was largely driven by the extraction industry in Uganda, Mozambique, Democratic

Republic of Congo and Mauritania. Moreover, FDI outflows also tripled to US$14 billion during the same period. From the year 2008 to 2012, there was massive growth of Greenfield investments from 7% to 23% in the region. Africa is experiencing the rise in new sources of foreign investments and has had stable inflows of US$54 billion with SSA increasing by 5% to US$42 billion (UNCTAD, 2015b).

The growing concern of FDI in Africa is primarily due to its potency in contributing to economic growth and development (Cleeve, Debrah, & Yiheyis, 2015). For SSA, FDI inflows rose significantly in the years 2004, 2005 and 2006 and have since 1996, increased more than six times (Buchanan et al., 2012). Some countries within Africa have undertaken certain initiatives and various reforms in order to improve FDI flows into the continent. Notable among them is the New Partnership for African Development (NEPAD) which has one of its objectives to be to integrate Africa fully into the global economy.

The World Investment Prospects Survey (2010-2012) discovered that TNCs viewed developing countries as attractive locations for their investments and that, they will prefer them over developed economies in choosing places for investments. Further, the survey found that the primary sector or extractive industries are considered to be better and profitable for FDI purposes globally than the manufacturing and others. This still somehow favours developing economies, especially Africa. Deductions can be made that Africa is among the locations where FDI is likely to experience high inflows.

According to KPMG's report in 2015, there have been several attractive aspects of Africa that draw FDI into the continent relative to other destinations. These include *inter alia* its increasing consumption of foreign goods, its massive tracts of unused land, the presence of precious minerals and other resources, improved access to the judiciary system and it is now seen by foreign investors as more matured politically. The availability of minerals and other precious resources in Africa play diverse roles in various countries in Africa's trade with the rest of the world.

For example as at 2014, these were some of the contributions of various resources to the growth of some countries in the continent. The diamond sector of Botswana contributed 91% of total exports. Crude petroleum oil, cobalt, copper and diamonds constituted 90% of DR Congo's exports. Oil contributed 90% to Angola's total exports while natural gas and oil constituted about 82% of Nigeria's exports. Zambia has copper as its principal mineral and it comprise of 80% of its total exports. Also, tin and coltan contributed about 12% and 17% respectively to Rwanda's total exports. Uranium, copper and diamonds also constituted about 9%, 12% and 29% of Namibia's total exports respectively.

Moreover, oil and gas comprised about 41% of Egypt's exports. Oil also made up of about 80% of Gabon's total exports, Ghana had crude oil and gold contributing 26% and 32% respectively to its total exports while petroleum products constituted 35% of Cote d'Ivoire's exports. Base and precious metals, mineral products, stones and jewellery jointly constitute 40% of South Africa's total exports and Mozambique had coal and aluminium constituting 11% and 26% respectively of total exports.

Overall, there was a 260% change in Greenfield FDI projects in petroleum, quarrying and mining which was as a result of a significant increase from US$6.1 billion to US$22.0 billion. FDI inflows into Southern Africa increased by 209% over the past five years, East Africa increased by 50% within the same period while Central Africa increased by 33%. Within these regions are countries that have experienced conflicts in their lifetime and these include; Angola, DR Congo, Central African Republic, Rwanda, Ethiopia among others. Angola, despite its conflict record, served as a destination for a huge greenfield investment of US$16.1 billion in the Southern Africa region (KPMG, 2015).

2.3 Definitions

2.3.1 Foreign Direct Investment (FDI)

Foreign direct investment (FDI) is described as a form of investment where a firm, residing in one country holds ownership stake in a firm in another country through acquisition, merger, licensing or building of new facility. In other words, FDI is an investment in a business by an investor from another country for which the foreign investor has control over the company purchased. The Organization of Economic Cooperation and Development (OECD) defines control as owning 10% or more of the business.

Firms that undertake FDIs are known as Multinational Corporations (MNCs) or Multinational Enterprises (MNEs). Firms usually invest abroad when they possess some assets that compliments host-countries' attributes and results in significant profits which hitherto would not have been accumulated if the firm had operated domestically (Li & Vashchilko, 2010). FDI is an example of

international factor movements and thus, serve as a channel through which various factors of production flow from countries of origin to host countries.

In our context, FDI is distinguished from Foreign Portfolio Investment (FPI) since the latter involves a passive investment in stocks and other financial assets and are usually short term whereas FDI is a long term investment in physical assets like buildings and machineries, with the main aim of undertaking business that gives a better opportunity for economic development (Al-Khouri & Khalik, 2013).

2.3.2 Conflict

Correlates of War (COW) defines civil wars as violent conflicts that result in at least 1000 battle-related deaths per annum (Collier, Hoeffler, & Söderbom, 2004). According to Getz & Oetzel (2010), armed conflicts consist of wars, terrorism, insurgency, revolution, rebellion and sustained campaigns of violence. In UCDP/PRIO Armed Conflict Dataset codebook, armed conflict is defined as "a contested incompatibility that concerns government or territory or both where the use of armed force between two parties results in at least 25 battle-related deaths". Conflicts can occur within members of a particular group or between different groups and sometimes involve violence and interpersonal disagreements. In this study, the focus is on wars.

2.4 Characteristics of Foreign Direct Investments

2.4.1 Categories of Foreign Direct Investments

FDI can broadly be categorized into mergers and acquisitions and greenfield investments. Majority of FDIs in LDCs comprise greenfield investments (UNCTAD, 2010). Greenfield investment involves direct establishment of new facilities or expanding existing ones. It is noted as a principal channel through which many multinationals invest in developing countries. It is more preferred, if not the most desired by host countries because they have the tendency of creating new jobs, providing technological know-how and serving as linkages to the global marketplace.

Mergers and acquisitions on the other hand involve the transfer of existing assets from local firms to foreign firms. They are seen as major modes of investing in developed countries. Cross-border mergers constitute the coming together of two or more firms in different countries to operate a business with a common goal whereas a cross-border acquisition occurs when the control of assets and operations of the local firm is transferred to a foreign affiliate. According to a survey by the Investment Promotion Agency (IPA), firms in developed countries prefer undertaking greenfield investment to mergers and acquisitions in the African continent (UNCTAD, 2015a).

2.4.2 Forms of Foreign Direct Investments

FDI can be in the form of inflows referred to as Inward Direct investment which constitute the value of investment made by non-resident investors in the reporting economy whereas outflows which is known as the outward direct investment, involving the transfer of assets and liabilities by resident investors to other countries. Some likely questions that some managers of MNCs might ask before establishing their companies abroad are; where exactly to locate their businesses and

how to control them. Little attention has been given to locational decisions in literature (Buckley, Devinney, & Louviere, 2007). Locational decisions can be effected in two ways; some firms would want to invest at places where they are familiar with, while others would prefer less of destinations that are closer, familiar or have similar markets. Foreign investors deliberately choose to invest outside their home countries for several purposes. They include but not limited to; acquiring natural resources, cheap labour and gaining access to new markets that cannot be gotten domestically.

As pointed by Dunning (1993), four types of FDI can be identified with regards to the eclectic paradigm; resource seeking or supply oriented FDI which looks out for the extraction of natural resources like minerals, oil and even unskilled labour; market seeking or demand oriented focuses on meeting the needs of a specific foreign market, strategic asset seeking which tends to augment the Ownership advantages while minimizing those of competing firms and finally, efficiency or rationalized seeking FDI is designed to promote a more effective specialization of resources available in host and domestic countries (Alcantara & Mitsuhashi, 2012; Dunning, 2000). The resource and market seeking FDIs are mostly associated with first-time investments especially in developing economies.

According to Dunning (2000), strategic asset seeking is dependent on the intellectual endowment in host countries which when tapped into, will be of immense benefit to foreign firms. He further stated that efficiency seeking FDI will be worthwhile if the foreign firm is already producing in at least one country. Inward FDI is the focus of this research. According to Slangen & Beugelsdijk (2010), horizontal FDI is referred to as market-seeking activity whereas vertical FDI is related to

the extraction of natural resources or further production of intermediate goods by interlinked affiliates. Therefore, vertical activity can comprise of both natural resource seeking and efficiency seeking. These are among the influences for most developed countries. The opportunities existing in host countries determine the level of attractiveness of these countries. Host countries with low production cost, abundant resources, large market size and/ or high technology would attract efficiency seeking, resource seeking, market seeking and strategic seeking respectively. Also, Asiedu (2002) indicated that market seeking primarily serves the local market and sometimes include the neighbouring countries and non-market seeking FDI involves producing domestically and exporting these produce to serve the market abroad.

Furthermore, Musila & Sigué, (2006) added a category of FDI (same as the vertical type) which is the extractive type which involves the derivation of natural resources in host countries. They indicated that this type of FDI give rise to conflicts in the domestic countries therefore many developing countries prefer the export-oriented FDI since it is less likely to result in conflicts.

2.4.3 Source of Capital for Economic Growth

The ability of developing countries to attract foreign investments is of great importance especially when lack of capital formation has become a major hindrance to economic development (Amendolagine, Boly, Coniglio, Prota, & Seric, 2013). Sirr, Garvey, & Gallagher (2012) indicated that FDI is an integral part of economic development for every emerging economy and Gohou & Soumaré (2012) also emphasized that FDI is a relevant source of capital investments. Many emerging economies acknowledge the importance of FDI in their economic growth and therefore

are using every means possible to attract foreign inflows (Al-Khouri, 2015). Some grant tax rebates and others create enabling legal environments in order to gain such flows into their economies.

2.5 A Review of Theories on Foreign Direct Investments

Many theories have evolved over the years to explain the motivations behind investing across borders rather than in a firm's domestic economy. FDI theories are mostly based on imperfect market conditions which arise in varying cases like; proprietary technology, managerial skills, product differentiation, better access to capital, marketing skills and economies of scale. They also signify that firms go abroad in order to reap the benefits of the advantages in host countries or better still, to earn higher returns on their investments. Below are some theories that are related to this research.

2.5.1 Dunning's Eclectic Paradigm (the OLI Theory)

This theory was developed by Dunning in 1980 (and further updated in 1981, 1986 and 1988) and it is one of the most reliable and complete theories (Dunning, 1988; Dunning & Rugman, 1985; Stoian, 2013; Stoian & Filippaios, 2008; Wadhwa & Reddy, 2011). It envelopes a wide range of economic theories regarding the operations of MNCs and the determinants of FDI across countries. It asserts the industrial and geographic composition as well as the extent of foreign activities undertaken by MNCs which is built on three sets of variables (Seyoum, 2009). These are; Ownership (O), Location (L) and Internalization (I) advantages which is also known in short as the OLI theory. They are the three likely sources of advantages that would inform a firm's decision to become multinational by going abroad.

2.5.1.1 The Ownership Advantage: O

The Ownership advantage which is a key component of conventional FDI theory, encapsulates intangible assets that are possessed by companies which enables them to overcome the cost of operating in foreign countries and subsequently resulting in higher incomes (Moon & Roehl, 2001). In other words, they are the competitive advantages that a firm possesses compared to competing foreign firms. The ability for an MNE to develop and build on its ownership advantage is itself a competitive advantage over other firms. These advantages usually mirror the abilities and possessions of the countries of origin. The higher a firm's competitive advantage, the more likely it will engage, establish, expand and thrive in foreign environments *ceteris paribus* (Dunning, 2000).

Foreign firms will invest in host countries when the benefits of exploring the L advantages using their O advantages exceed the cost of doing so. The peculiar advantages the MNCs possess should be adequate enough to cover all the cost in undertaking business in foreign countries. This category of the theory (sub-paradigm) is in three-fold: those advantages that are exclusive privileges or possession of monopoly power, those obtained by having unique, scarce and sustainable resources that exhibit the technical superiority efficiency of such firms and the managerial expertise that is utilized in identifying and using resources available world-wide. In this case, companies are able to easily access, exploit and export certain natural resources (Anyanwu, 2012). This answers why MNCs engage in FDI.

2.5.1.2 The Locational Advantage: L

The Locational advantages which answers the where question are important factors (such as labour and strategic advantages) that determine the countries that would host the activities of a transnational corporation. The advantages possessed by host countries can be political, economic or social. The L component of the OLI paradigm has become an increasingly salient feature of the form, scope, growth and pattern of MNEs due to changes in the global economy (Dai, Eden, & Beamish, 2013) and this component will be our main focus for the current study. Dunning (1998) posited that the L advantage is of great essence when MNEs are deciding which countries to invest. McCann (2010) identified that the location can be decomposed into; place (location-specific characteristics) and space (geographic distance and network features).

This sub-paradigm asserts that firms would invest in areas where there are more immovable, natural or created endowments which complement the O advantages in order to maximize their potential benefits. Dunning (1993) indicated that the location advantage originates from two sides; the supply side (corporate taxation, labour skills and costs) and the demand side (market size and growth). Since this study focuses on the locational advantages of conflict and non-conflict countries in Africa, here are some categories of L advantages – political, sociocultural and economic (Villaverde & Maza, 2015).

2.5.1.3 The Internationalisation Advantage: I

Internalization involves the exploitation of imperfections in external markets. This aspect of the OLI tripod provides a framework for assessing alternative means through which MNCs can fully use their competencies to exploit the various opportunities available in the foreign markets. It is

of more value of adopting economic activities as compared to coordinating them externally through other means like licensing. It also offers a framework for assessing different ways in which the company chooses to operate in a foreign country. These activities consist but not limited to hold-up and monitoring cost of wholly-owned subsidiary, trading off savings in transactions as against other mode of entry like licensing and exports. This answers the how question.

2.5.1.4 The OLI Parameters are Firm Specific

The OLI parameters vary from company to company and are also dependent on various opportunities and challenges offered by different host countries. The O and I advantages are firm-specific while L advantages are host country-specific (Mina, 2007). Based on the eclectic paradigm, four types of FDI activities have been identified; resource seeking or supply oriented FDI, market seeking or demand oriented, strategic seeking and efficiency or rationalized seeking FDI (Alcantara & Mitsuhashi, 2012; Dunning, 2000).

The motive underlying a particular production in a specific country informs the exact constituents of the OLI parameters to capitalize on (Dunning, 1988). For instance, an MNE that want to undertake mining in Ghana would consider different factors from wanting to invest in agriculture. So long as factor endowments vary across countries, foreign direct investment and international trade will exist. This is because MNCs have different preferences and would want to tap into the resources of several economies. Also, market failures are another motivation for FDI (Dunning, 1988).

2.5.2 Imbalance Theory

This theory was introduced by Moon & Roehl (2001). They argue that an imbalance among the strategic assets of a firm, whether it is caused by advantages or mishaps, will make the firm go abroad if the firm cannot effectively balance its assets strategically in the home country. This, they indicated is a follow up on a suggestion made by Brouthers, Brouthers, & Werner (1996). They further explained that it is fundamentally about imbalances that propel unconventional FDI due to some disadvantages of MNCs and/ or host countries' locational drawbacks (high tariffs, political instability, and small market size among others). They added that some of these challenges (those mentioned above) actually motivate firms to invest abroad in order to reap higher returns than they would have had if they invested in their home countries.

2.5.3 Prospect Theory

Firms would take on more risk when they anticipate an improvement in their general performance. An MNC may lose money in the course of investing in such risky environments but would have gained certain benefits that can be transferred to other sub units of the company worldwide. It might also gain some competitive advantages to the fact that other firms might not want to invest there due to the risky nature of these locations.

2.6 Empirical Evidence

2.6.1 Determinants of Foreign Direct Investments

2.6.1.1 An Overview and Broad Issues

This sub-section presents the various factors that determine FDI inflows and they are expounded based on existing literature. UNCTAD (1998b) have categorized determinants of FDI into three

major groups which are; economic, political and business factors whereas Fedderke & Romm (2006) stated that the determinants of FDI is dependent on whether it is horizontal or vertical FDI. Horizontal FDI is when a MNC establishes same business or assets abroad as it is in the country of origin. Some investors undertake this type of investment in order to gain access to a larger market. Vertical FDI on the other hand happens when MNCs fragment different resources and machinery in different foreign countries that produce variety of goods. The reason for this option is to expand their activities in other counties. The vertical FDI can be a forward one where the MNC serves as the distributor or a backward type where it is the supplier.

Additionally, De Mello (1997) and Ramírez (2000) categorized the core drivers of FDI into two broad groups- Rate of return determinants and Risk factors. These determinants can serve as attracting and repelling factors of FDI flows respectively. Some scholars have discovered another broad set of factors that affect FDI and they are known as Pull (domestic) and Push (external) factors.

Regarding the determinants of FDI, there has not been a generally accepted theory even though there have been a substantive number of researches on the possible determinants (Villaverde & Maza, 2015). Empirically, established body of literature have identified several factors which are used as determinants of FDI and they include but not limited to; market size, economic policies of host countries, trade openness, taxation, macroeconomic stability, labour cost (seeking cheap labour to supplement intellectual assets), infrastructure quality, exchange rate, government incentive policies, quality of institutions, inflation, level of education of citizens, democracy, natural resources, investment risk and return, interest rate, corruption and political stability.

On the direction of impact of various determinants of FDI, the evidence has been divergent. Some firms prefer stable environments but others through their experiences prefer markets with uncertainties which are mostly less desirable (Buckley et al., 2007). Dunning (1995) posited that while developed economies seek to invest in resource-rich and or low labour cost countries, developing countries would want to invest in countries with advanced technology. This is because countries in each category are comparatively poor, thus, are in sought after these factors. There have been a number of studies on the determinants of FDI across countries, regions and sectors.

For example, Asiedu (2002) discovered that determinants that draw FDI to Africa differ from those in other developing economies. Also, Kolstad & Villanger (2008) found that democracy and institutional quality other than political stability and investment risk play significant roles in attracting FDI into the service sector in developing economies and high income countries respectively. Their study revealed that trade openness did not have any significant effect on FDI inflows due to the market-seeking nature of the service industry. Bevan & Estrin (2004) on the determinants of FDI into European transition economies discovered that market size, labour costs and proximity are major factors and that the risky nature of the host country was insignificant. This implies that foreign investors do not consider the riskiness of a country before investing there. Nonetheless, there is a cause to believe that the determinants of FDI in conflict countries differ from that of the non-conflict countries.

There is therefore the need to identify the determinants peculiar to each category. From the findings of the aforementioned studies, there is a clear indication that determinants of FDI vary based on

the region, country of study and other factors. A study by Alam & Shah (2013) agrees with this observation.

2.6.1.2 Natural Resources and FDI

Natural resources as defined in the World Trade Report (2010) are "stocks of materials that exist in the natural environment that are both scarce and economically useful in production or consumption, either in their raw state or after a minimal amount of processing". They can be in the form of oil rent, gas rent, mineral rent or forest rent. These resources are location factors that usually draw resource-seeking FDI into an economy (Rogmans & Ebbers, 2013). UNCTAD (1998b) asserted that natural resources are essential factors for FDI flows to Africa but these elements in themselves are not sufficient unless there is an enabling environment.

It has been well noted by existing literature that countries with huge amounts of oil and minerals attract more FDI in Africa as compared to other less resource-rich countries (Cleeve, 2012). The presence of natural resources and foreign investments have the ability to stimulate economic advancement and stability (Bokpin, Mensah, & Asamoah, 2015). Asiedu (2006) and Brafu-Insaidoo & Biekpe (2014) discovered that natural resources promote FDI flows in Africa. Aleksynska & Havrylchyk (2013) also noted that counties with great natural resource endowment would attract significant FDI in the midst of low institutional quality. On the other hand, Okafor et al. (2015) in their study on the motives for inward FDI into SSA by adapting FE and GMM, found a negative relationship between natural resources and FDI in their SSA study over the period 1996-2010. This, they explained to be that due to the existence of vast amounts of unused resources as a result of misplaced priorities as well as conflicts between interest groups.

Rogmans & Ebbers (2013) found that gas and oil reserves which in their study represented natural resources, negatively affected FDI in the Middle East and North Africa (MENA) region. This, they attributed to policy decisions that impede FDI inflows into countries endowed with natural resources. They also attributed this to the resource curse which implies that countries with abundant natural resources tend to be economically poor and this theory emanates from the "Dutch disease". They further indicated the fact that these countries internally finance the extraction of the resources so as not to share ownership with foreigners through FDI.

Asiedu (2013) also discovered a negative but significant relationship between FDI inflows to SSA and natural resources. Similar results were obtained by Asiedu & Lien (2011). This brings to bear that new and upcoming literature are identifying adverse effect of natural resources on FDI flows in Africa. Moreover, Musila & Sigué (2006) had earlier indicated in their study that it is in the past that Africa used to receive FDI based on their abundance of natural resources which it is no longer the case.

The African continent is greatly gifted with natural assets and Hailu (2010) in his study on Africa, found natural resources to be highly and positively significant in attracting FDI in the region. He further noted that there are unexploited rich natural resource deposits in most African countries therefore serving as a great attractor to foreign investors into the continent. Dupasquier & Osakwe (2006) and Asiedu (2002) obtained similar findings. Cleeve (2012) demonstrated in his study that, the massive deposits of natural resources and/or big markets usually have significant positive impact which outweighs all other factors that may be vital in Africa. Congo and Nigeria are

evidence because though they have been unstable for some time, they still receive high FDI in their extractive industries. Both theoretical and empirical literature have established that the need to gain access and exploit natural resources is a motivation that drives MNCs to Africa (Anyanwu, 2012). This makes natural resource endowment a key factor for Africa to attract FDI.

2.6.1.3 Market Size and FDI

The depth, size as well as the present and potential growth rate of the host country market is a key determinant of foreign investment inflows (Luiz & Charalambous, 2009), especially for market-seeking FDIs. Resmini (2000) and Seyoum (2009) found that market is a strong determinant of FDI. It is among the least controversial factors to FDI inflows and GDP or GDP per capita are usually used as proxies (Rogmans & Ebbers, 2013). Boateng, Hua, Nisar, & Wu (2015) postulated that as market size grows, there is a high possibility that residents in a country can demand for variety of goods and services due to high purchasing power which results in more FDI flows as domestic firms might not be able to meet this increasing demand. This is a good signal for market-seeking FDI or horizontal FDI. Meanwhile, the higher the GDP per capita or GDP, the less likely for such economies to attract efficiency-seeking FDI since this exhibits high wages.

In ascertaining the factors of FDI in Malaysia for the period from 1960 to 2005, Ang (2008) discovered that the size of the market is positively and significantly related to inward FDI as theorized by the market size hypothesis. He further stated that economies of scale benefits are derived from larger markets in host countries which serve as an incentive for foreign investors to invest there. Bengoa & Sanchez-Robles (2002) made a similar assertion on the economies of scale. Jadhav (2012) found that the size of the market plays significant role in attracting FDI into the

BRICS economies. Kang & Lee (2007) found that market size had a significant and positive bearing on firms' decisions in choosing places for their investments. On the other hand, Villaverde & Maza (2015) discovered in their study on the determinants of FDI inflows in the European regions from 2000 to 2006 that, market size and labour regulation are not significant factors in attracting FDI into the 260 EU NUTS2 regions. This suggests that the relevance of market size varies with regions and countries. There is therefore the possibility that such a non-negotiable factor would impact conflict and non-conflict countries differently.

In the African context, Musila & Sigué (2006) noted that small market sizes in host countries deter FDI inflows. Moreover, Asiedu (2006) gave a fact that countries in SSA have relatively smaller markets due to their low incomes and that 23 countries out of the then 47 countries had GDP below US$3 billion. This suggests that countries in Africa due to their small sizes are unable to attract FDI.

2.6.1.4 Trade Openness and FDI

This indicates the level of liberalization of trade in the host country (Al-Khouri, 2015). Ideally, the more a country is opened, the more investments flow into it. Nonetheless, there is another school of thought that postulates that the higher the tariffs (that is, the more restrictive a country is), the more MNCs would want to establish manufacturing firms in such economies in order to exempt themselves from the taxes as well as enabling them gain access to larger markets. The latter is referred to as tariff-jumping hypothesis. This also helps protect companies since there are restrictive measures put in place to prevent other external firms from exporting goods into such locations.

Trade openness is in two-fold; exports and imports. Foreign investors would be attracted to both high import and export-oriented markets (Hailu, 2010) depending on their motives. For high imports, there is a signal that goods produced in these countries are not sufficient for domestic consumption so investing in such markets will be very profitable and market-seeking FDI will be suitable in such environments. Moreover, for the high export economies, it means that investing in such counties would enable the MNC gain access to the international market while accessing the local market.

The proxy for this determinant is total trade (sum of exports and imports) as a share of GDP which can also be as a measure of the extent of trade restrictions. The effect of openness in relation to FDI is dependent on the type of FDI (Asiedu, 2002). For instance, investors that are into market-seeking FDI will gain much profit from their investments if the host country is less opened. This is due to the fact that investors in such category would not want to share their target groups with other competitors from several countries.

Trade openness is a major macroeconomic variable (Hailu, 2010) and thus, it is a positive and statistically significant determinant of FDI (Asiedu, 2002). In their study of assessing the effect of macroeconomic elements on FDI, Boateng et al. (2015) discovered trade openness as among the key factors that positively impacted FDI flows in Norway. Kolstad & Villanger (2008) found negative and insignificant relationship between trade openness and FDI inflows in the service industry of host countries. This implies that for the service sector, the extent of openness of countries of destination does not matter.

2.6.1.5 Infrastructure and FDI

Infrastructure according to Wheeler & Mody (1992), is insignificant for developed economies but is of great importance to firms seeking investment abroad. Agbloyor, Abor, Adjasi, & Yawson (2013) found that infrastructure has a positive and statistically significant effect on FDI flows in Africa. Good infrastructure improves productivity which in turn attracts more FDI inflows (Asiedu, 2002). The number of mobile phones per 100 population, transport and ICT has been used by extant literature to measure infrastructure development.

Openness is highest in the presence of mobile telecommunications as indicated by the World Investment Report (UNCTAD, 2008). Hailu (2010) documented that infrastructure is of great essence when it comes to attracting FDI especially in developing economies. Dupasquier & Osakwe (2006)and Musila & Sigué (2006) found that FDI flows into Africa are dependent on infrastructure development. Donaubauer, Meyer, & Nunnenkamp (2016) demonstrated that in developing economies, infrastructure tends to be constantly essential in attracting FDI. They indicated that the reason for focusing on infrastructure was that, it has been globally established that countries with adequate endowment in infrastructure are of great importance to foreign investors. This is particularly true for low and middle-income countries.

Cheng & Kwan (2000) in their study on the locational determinants of FDI in China found that good infrastructure, regional market and preferential policy among other factors had a positive effect on FDI. Luiz & Charalambous (2009) in determining the factors that influence FDI of South African financial services in SSA identified the extent of the availability of infrastructure with

regards to ICT as among the major factors that they consider before investing in SSA. Mina (2007) in a study on Gulf Cooperation Council (GCC) discovered infrastructure as an important factor in attracting FDI into the region.

2.6.1.6 Institutional Quality and FDI

Several surveys undertaken by the World Bank and other bodies on investors' ideologies of Africa as a location have indicated that institutions are among the significant factors of FDI flows to SSA. Notable among these surveys include; World Investment Report Survey 1999/2000, World Development Report Survey of 1996/1997 and World Business Environment Survey 1999/2000. Corruption is a major factor that inhibits FDI inflows to the region as pointed by the World Investment Report Survey (UNCTAD, 2003). Dunning (1998) indicated that the host country's institutional framework is a crucial location determinant that impacts prevailing ownership advantages of corporations.

Several authors and organisations have given various definitions for institutional quality or governance but there has not yet been a strong consensus on a single definition. Kaufmann, Kaufmann, Kraay, & Mastruzzi (2010) defined it as "the traditions and institutions by which authority in an economy is exercised. This constitutes; the capacity of the government to effectively formulate and implement sound policies, the process by which governments are selected, monitored and replaced and the respect of citizens and the state for the institutions that govern economic and social interactions among them". This has given rise to six indicators- voice and accountability (VA), political stability and absence of violence or terrorism (PV), government

effectiveness (GE), regulatory quality (RQ), rule of law (RL) and control of corruption (CC). These indicators would be used in the current study as proxies for institutional quality.

The World Bank defines institutions as "sets of formal and informal rules governing the actions of individuals and organizations, as well as the interactions of participants in the development process" (World Bank, 1999). Also, Naudé & Krugell (2007) explained institutions to be arrangements between people to facilitate cooperative activity. They often provide "rules for the game" which are essential in creating baseline conditions for human interaction. Amendolagine et al. (2013) asserted that quality institutions and dependable legal system are pre-requisites for improving the links that are created by foreign companies. Seyoum (2009) in studying the impact of formal institutions on FDI for 125 countries in the world discovered that there is a positive relationship between stronger formal institutions and FDI flows. He indicated that much research has not been done with regards to the role of institutions to attract FDI.

Bevan, Estrin, & Meyer (2004) and Buchanan et al. (2012) had similar findings. Bevan et al. (2004) further stated that institutions are significant in the international commerce because of their locational benefit as serving as immovable elements in the global economy. Thus, they influence the manner of interaction among firms which affects the cost of coordination and transaction process. Cleeve (2012) also found that institutional variables are very crucial in attracting FDI flows into SSA. Institutional quality is of great importance in attracting FDI (Kolstad & Villanger, 2008) especially in a developing country context as compared to advance regions (Wang, Gu, Tse, & Yim, 2013). With more developed institutions, there is facilitation of efficient market competition.

Institutional development enhances entrepreneurial dynamism which propels FDI's positive externalities (Wang et al., 2013). They signify the level of government's fitness of various countries (Anyanwu, 2012). Openness is greater with more developed institutions. Ledyaeva, Karhunen, & Kosonen (2013) in studying the effects of democratization and variation of corruption on FDI locational decisions of investors in Russia, found that foreign investors from non-democratic and more corrupt countries are more inclined to invest in less democratic and more corrupt regions.

Okada (2013) discovered that institution is a pre-requisite for financial openness to have effect on international capital inflows. In other words, for financial openness to affect international capital flows there should be the existence of high level of institutional quality since the separate variables of financial openness and institutional quality in his study had no significant impact whereas their interacted terms had statistically significant effect on foreign flows. Agbloyor, Gyeke-Dako, Kuipo, Ransome, & Abor (2016) also discovered that institutions played positive role in changing relationship between FDI and economic growth. Wei (2000) identified that high level of corruption diminishes the flow of inward FDI. The existence of institutions is highly essential since they create the firm structures that enable collaborations amongst units and aid in reducing information and transaction cost by reducing uncertainty.

Grogan & Moers, (2001) emphasized that institutional quality is continuously an essential variable for FDI. In transition economies, Pournakakis & Varsakelis (2004) found that the institutional elements relating to investment decisions fortify locational factors like market size to enhance the

attractiveness of transition economies. Dunning & Zhang (2008) using data from the Global Competitiveness Report (World Economic Forum) and World Investment Report (UNCTAD, 2009) found that the institutions factor had a positive and stronger influence in attracting FDI than market size, resources and capabilities factors of countries and that this effect is especially stronger in the advanced level of countries' development.

2.6.1.7 Financial Development and FDI

Agbloyor, Abor, Adjasi, & Yawson (2013) found that African countries that have more developed financial markets (in terms of stock and bank) can attract more FDI inflows. Ang (2008) also established that financial development increases FDI flows into Malaysia. Moreover, Brafu-Insaidoo & Biekpe (2014) discovered that financial liberalization induces higher international capital inflows in Africa. Gui-Diby & Renard (2015) in their study on African countries over the period of 1980-2009, discovered that the financial sector plays a vital role in FDI impacting industrialization. On the other hand, Anyanwu (2012) using domestic credit to the private sector as a percentage of GDP as a proxy for financial development in his study in Africa, found that the more developed the financial systems of countries in this continent are, the less FDI inflows they draw.

2.6.2 Conflict as a Determinant of FDI

There are several factors that attract FDI into various countries. According to the KPMG 2015 FDI Report, some key variables like infrastructure, level of corruption, the nature of political and business environments play crucial roles in attracting FDI therefore the lack of or inadequacy of one factor in a country would not totally deter FDI in such countries. This is because, these and

many other factors work hand in hand in attracting FDI. Thus, other factors in the presence of conflict in a country might have benefits that exceeds the cost of conflicts. This brings on board the issue of some conflict countries receiving more FDI flows than other comparatively peaceful countries. Additionally, the conflict issue might not be an overriding factor so investors will still invest in conflict-prone areas and rather devise means of incapacitating such threat. For example, Congo which has been noted for conflict some years past still attracts high FDI flows due to their natural resource endowment (UNCTAD, 2008).

Al-Khouri (2015) in the Multinational Business Review identified that internal conflict, which is a major component among the political risk factors included in their study is an important determinant of FDI. This, they achieved by employing a panel data for 16 countries in the MENA region over the period from 1984 to 2015. Busse & Hefeker (2007) found that internal and external conflicts were important determinants of FDI inflows the 83 developing countries that they employed in their study over the period, 1984-2003.

2.6.3 FDI in Conflict Locations

FDI acquired a crucial role in the international economy after the Second World War. Since FDI really gained much recognition after the war, due to the need for globalization, FDI should not be studied in isolation from conflict (wars). Locations with high uncertainties, conflict, macroeconomic and political instability are alleged to undermine incentives to invest but empirical studies have produced mixed findings and one reason for this is that FDI inflows differ across sectors and countries.

Driffield, Jones, & Crotty (2013) at the firm level, studied the factors that inform the strategies of firms to invest in conflict areas and they recognized that countries with less concern for corporate social responsibility and those with weaker institutions are likely to invest in conflict zones. They further noted that the more concentrated a firm's ownership, the higher the likelihood of its investments in such areas. Their paper did not establish the determinants in these host conflict regions that attract inflows since their focus was on the Ownership advantages of the Eclectic paradigm. Also Cuervo-Cazurra & Genc (2008) highlighted that firms from countries with less developed institutions may take great advantage of their exposure to gain massive competitive advantages in other locations with like features.

Sirr et al. (2012) in their bid to find out whether or not large MNEs are concerned about risk of nationalization (which has a bearing on increasing political risks), demonstrated that such companies are not bothered about such risks especially in the natural resource sector. This, they attributed to two major reasons; that, the profitable nature of natural resource investments may outweigh the risks involved and also, these large MNEs have operations in many countries and thereby may be less exposed to such risks. They further postulated that these large MNEs in the natural resource sector may be more capable and willing to undertake investments in risky locations due to the level of their diversification.

Jiminez & Delgado-Garcia (2012) in their study to ascertain the relationship between the political risk assumed by Spanish MNEs in their Foreign Direct Investment location and their performance over five years discovered positive and statistically significant evidence with regards to the two variables. In other words, political risk has a positive impact on MNE's performance and vice

versa. This result, they indicated is consistent with the Prospect Theory as well as the traditional Financial and Economic Theory grounded in risk aversion. The authors further noted that firms by their deliberate decisions invest in risky areas where they might lose some money in the course of doing business but would gain immeasurably, certain resources and/ or advantages that can be transferred to other units of the company around the world. These risky countries sometimes possess certain unique desirable qualities that cannot be gained anywhere on the globe. These firms in addition, enjoy low competition in such areas due to the fact that other companies may see such locations as too risky.

Guidolin & La Ferrara (2010) in assessing the impact of conflict onset on asset markets in various regions discovered that the national stock markets on average exhibit positive response (rather than negative) to conflict onset and that investors make use of conflict onset to adopt certain conflict-driven strategies have exorbitant returns accruing to them.

Sanjo (2012) in their study on how country risk (locational disadvantage) and country size (locational advantage) impacts an MNC's choice of place for investment discovered that foreign countries enjoy high benefits (returns) in countries with larger market and higher risk relative to the lower market with lower risk locations even in the face of high lump-sum tax levied by government. Moreover, it was shown by this study that what concerns most foreign firms is the cost factor of host countries rather than the risky nature of such locations. It can be implied that even if host countries are experiencing conflicts, it would not be of much bother for MNCs to invest there so far as these firms can operate in these locations at low cost. However, some studies depict that due to the high risk nature of countries as a result of conflicts, FDI do not flow in these

risky countries. Goswami & Haider (2014) using 146 countries across the globe between the years 1984- 2009 and employing panel regression technique and factor analysis found that cultural conflict is a major deterrent of FDI inflows.

2.7 Chapter Summary

We have discussed various factors regarding FDI and how FDI relates with conflict. This was meant to present a detailed review of the on-going dialogue in the global FDI and conflict literature. In the light of this objective, the chapter opened with a presentation and discussion of stylized facts on FDI followed by definitions of key terms and a discussion of key characteristics of FDI and conflict. Also, to situate this study in theory, we reviewed theories that relate to FDI as well as reviewing empirical studies on the determinants of FDI and the role of conflicts.

CHAPTER THREE

METHODOLOGY

3.1 Overview of Chapter

This chapter presents the methodology that we implemented for the study. It also discusses important methodological issues. Section 3.1 gives an introduction to the chapter and section 3.2 describes the research design of the study. The econometric model is presented in section 3.3 and in section 3.4, we present a detailed discussion of the variables employed for the study. Section 3.5 describes the data sources whilst the study sample, population as well as the study period is outlined in section 3.6. Section 3.7 presents a discussion of the technique of analysis and the Panel Data method. The chapter ends with a summary in section 3.8.

3.2 Research Design

We applied the quantitative approach of data analysis for this study. The objective of the study is to determine the differences in the factors that motivate foreign investors to choose countries that have experienced conflict or those that have not had conflict. We do this by first determining whether there are differences between the two classes of countries and if there are, then we go further to determine what these differences are. To enable us to do this effectively, we classified the countries that were included in the study into conflict and non-conflict countries.

The criterion for classifying a country as a conflict country was dependent on whether the country recorded at least a thousand battle related deaths in any given year within the study period as compiled by Collier, Hoeffler, & Soderbom (2008). We paid particular attention to certain variables: natural resources(Asiedu, 2002; Asiedu, 2013), infrastructure (Asiedu, 2002),

institutional quality (Agbloyor, Gyeke-Dako, Kuipo, Ransome, & Abor, 2016), and financial development (Agbloyor et al., 2013; Anyanwu, 2012) , market size (Boateng et al., 2015) and trade openness (Asiedu, 2002; Loots & Kabundi 2012; Kolstad & Villanger, 2008). We selected relevant variables based on literature and acquired data from the same sources that previous authors obtained them.

3.3 Model and Empirical Strategies

3.3.1 Econometric Specification

The model used in this study is based on theory and literature. Some variables were derived from studies done by Asiedu (2002), Asiedu (2006), Asiedu (2004) and Anyanwu (2012). Hence, regression model adopted to determine the factors that draw FDI inflows to Africa as well as conflict and non-conflict countries within the period of study is expressed below.

$\mathrm{FDI}_{\mathrm{it}} =$

$\mathrm{F}(\text{Natural Resouces, Institutions, Market Size, Trade Openness, Infrastruture , Financial Development})$

$$FDI_{it} = \partial_1 NATRE_{it} + \partial_2 INSTI_{it} + \partial_3 MKTSZ_{it} + \partial_4 TRDOPEN_{it} + \partial_5 INFRAS_{it} + \partial_6 FINDEV_{it} + \mu_i + \lambda_t + \varepsilon_{it}$$

Where i=1, 46 t=1996, 2010, μ_i- country specific effect, λ_t- time specific effect, ε_{it}- error term

FDI- Net FDI inflows expressed as a percentage of GDP.

NATRE- Natural Resources

INSTI-Institutions

MKTSIZE-Market size

TRDOPEN- Trade Openness

INFRAS- Infrastructure

FINDEV- Financial Development

The above model will be run on three samples. Firstly, on the full sample that consists of 46 countries. Then, the data is split into conflict (13 countries) and non-conflict (33 countries) sub-samples. The conflict sample constitutes countries that have experienced civil wars and recorded at least 1000 battle-related deaths within the period of interest. The definition of conflict is derived from COW. The non-conflict sample comprises countries that did not have wars or any battle-related deaths. Additionally, a country that has ever experienced conflict within the study period (1996-2010) is classified as a conflict country.

3.4 Variables

The dependent variable is the ratio of net Foreign Direct Investment (FDI) to Gross Domestic Product (GDP). The explanatory variables include market size whose proxy is GDP, financial development for which credit to the private sector as a percentage of GDP is used as a proxy, institutions (the six governance indicators are used as proxies) and natural resources which has total natural resources expressed as a percentage of GDP as its proxy. Asiedu (2006) used natural resource as a major determinant for SSA. Other explanatory variables are quality of infrastructure (number of telephones - both main lines and mobile per 1000 subscribers) and trade openness which is measured as total imports and exports as a ratio of GDP.

3.4.1 Foreign Direct Investment (FDI)

It is the net inflow of investments to obtain a substantial long term management interest (at least 10% voting stock) in a firm operating in a country other than that of the investor. It also includes those that establish and own new businesses in the host country. It is measured by subtracting all disinvestments from new investments by foreign investors in the host country and it is then divided by GDP. This variable is used as the dependent variable because it best serves the purpose since the focus of the study is on inward FDI. Data was obtained from Africa Development Indicators which are published by the World Bank.

3.4.2 Market Size

The natural log of GDP is used as a measure for the size of the domestic market of host countries. GDP in this study is the sum of gross value of all products produced by inhabitants within the countries (less subsidies plus taxes). They are measured in current US Dollars. This serves as a proxy because it gives investors information on the size of the economy and also, the ability of residents to demand for goods and services. The larger the market, higher the demand and the more likely that there would high returns on their investments. This in turn would increase the flow of FDI into host countries. Thus, a positive relationship is expected. From GDP of countries, investors get information on whether the host countries is expanding or contracting. Asiedu (2006) used same measure as a proxy for market size. The source of data is WDI.

3.4.3 Natural Resources

They are the sum of mineral, forest, coal, and natural gas and oil rents. These are derived by subtracting the average cost from the price and multiplying by the quantity obtained and expressed

as a share of GDP. According to Bokpin et al. (2015), few studies have adopted natural resource as a share of GDP as a measure for resources as against those expressed as a share of exports. The measure used in this study depicts the relevance of natural in host country's growth (GDP) which has resultant effect on FDI flows. Our measure of natural resources, which include the above-mentioned components is broad and covers a wide range of measures used by existing studies. Data is obtained from WDI. We expect a positive relationship between natural resources and FDI; that is, natural resource rich countries will attract greater amounts of FDI.

3.4.4 Trade Openness

We measure trade openness using the total merchandise trade as a share of Gross Domestic Product in any given year (that is, the total exports plus imports as a ratio of GDP). The motive for adopting this measure is due to literature and theory. With regards to literature, there have been vast studies that have included this variable as a determinant of FDI. Generally speaking, it is expected that the more opened an economy is, the more FDI will flow. In theory, it has been established that the extent to which a country is opened will determine its FDI inflows. According to the tariff-jumping hypothesis or the export substituting FDI, the more restrictive (less opened) a country is, the more FDI inflows it draws. The relationship between trade openness and FDI has been mixed (is uncertain) depending on the motive of foreign investors. At large, previous studies have found positive and significant effect of this variable on FDI. Loots & Kabundi (2012) discovered that though trade openness has a positive impact of FDI in flows into Africa, this was weakly significant. We hypothesize a positive relationship for non-conflict countries and negative effect for conflict countries. Data is from WDI.

3.4.5 Infrastructure

Infrastructure covers a wide range of dimensions such as telecommunication systems, railways, roads, ports, ICT among others. In this study, we use the total number of telephone mainlines and mobile cellular telephone subscriptions per 1000 subscribers. This indicator also applies to all mobile cellular subscriptions that offer voice communications. Asiedu (2002) indicated that it is a suitable measure though it does not capture the reliability but only the availability. Including infrastructure in this study is important because it is used to determine the level of productivity in a particular country. The better or high quality the infrastructure in host country is the more FDI inflows it is likely to draw. Thus, we hypothesize a positive relationship because more FDI flows will be attracted to countries better infrastructure. Agbloyor et al. (2013) used this same measure of infrastructure. Data on this variable is obtained from the ADI.

3.4.6 Financial Development

Financial Development is measured in this study by the amount of domestic credit to private sector as a percentage of GDP. This measurement is adopted because it is very comprehensive as compared to measures like; private credit by deposit money banks and other financial institutions to GDP and private credit by deposit money banks to GDP (Munemo, 2016). This variable is added to the model because the roles played by the financial system of every country are inevitable, especially in undertaking international business. In that, they provide capital, help facilitate transactions across countries and also aid in safe keeping customers' valuables. With regards to the capital provision, it is important to note that money is the life-blood of every business. Hence, it is important to factor such element in FDI. We expect a positive relationship between financial

development and FDI; that is, countries that have better developed financial systems will be more attractive to investors. Data was obtained from ADI.

3.4.7 Institutions

For our study, our measure for institutional quality included six composite indicators and their definitions as well are adopted from Kaufmann, Kraay, & Mastruzzi (2010). These indicators and their definition are adopted from the metadata from WGI:

- Voice and Accountability (VA) captures the perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association and free media.
- Political Stability and absence of Violence or Terrorism (PV) captures perceptions and the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism.
- Government effectiveness (GE) captures the perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
- Regulatory quality (RQ) captures the perceptions of the quality of the government to formulate and implement sound policies and regulations that permit and promote private sector development.
- Rule of Law (RL) captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.

- Control of Corruption (CC) captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.

It is expected that countries with better institutions will attract higher of FDI flows. This is because investors are interested in the safety of their investments and the assurance that their rights will be safeguarded. A positive relationship is thus expected.

3.5 Data

Annual data was obtained from sources which include the WDI and the ADI of the World Bank. WDI database provides a comprehensive set of data on many macroeconomic variables and is the preferred source of macroeconomic data in the FDI literature (eg. Al-Khouri, 2015; Gui-Diby, 2014; Asiedu & Lien, 2004). There are 1519 indicators available in the WDI for 264 countries (and regional groupings) over a 57-year period. The indicators show the progress of nations with regards to social, environmental and economic variables. Development indicators are thus, statistical measures of the state of living conditions in countries around the world. ADI provides data on 1745 indicators for a 53- year period for only African countries. Unlike the WDI, the ADI's data ends in 2012 hence the 4-year gap.

We take our institutional variables (governance indicators) from the World Governance Indicators (WGI), following Globerman & Shapiro (2002), Morrissey & Udomkerdmongkol (2016), Farla et al. (2016) and Buchanan et al. (2012). The WGI gives indicators for several regions with six dimensions of governance, namely, control of corruption, voice and accountability, political stability and absence of violence or terrorism, regulatory quality, rule of law and government

effectiveness (Kaufmann, Kraay, & Mastruzzi, 2007). We use all the six measures to proxy institutional quality and for robustness. They are also used because they are easily accessible and are widely used by existing literature. These variables measure quality of governance in more than 200 nation-states using 40 data sources created by about 30 organizations.

The variables in this database are a collation of the perceptions of distinct group of respondents compiled from a vast number of surveys and additional cross-country assessments of governance. The range of the indicators is from -2.5 to 2.5, which represents weak and strong governance performance respectively. As stated by Farla et al. (2016): "The WGI are broad measures of highly correlated governance indicators". There are missing data for the years 1997, 1999 and 2001 which reduced the number of observations and render the data unbalanced. Variables like natural resources, FDI, credit to private sector (proxy for financial development) and total exports and imports (proxy for trade openness) were transformed into percentages whereas GDP (proxy for market size) and telephones (proxy for infrastructure) were log-transformed in order to deal with extreme values in the data. All the institutional variables are indices so they were not transformed.

We obtained conflict data from Collier et al. (2008) and table 3.2 shows the sources of data for the years that countries experienced conflict. We specifically obtained our data on FDI, market size and trade openness from the WDI database while infrastructure and financial development data were taken from the ADI.

Table 3. 1 Measurement and Sources of Variables

Variable	**Measurement**	**Expected sign**	**Data Source**
Foreign Direct Investment (FDI)	Foreign Direct Investment inflows (FDI/GDP)		Africa Development Indicators (ADI)
Natural Resources	Total natural resources. (Sum of minerals, oil, natural gas, forest and coal rents as a share of GDP	±	World Development Indicators (WDI)
Infrastructure	Natural log of Telephone (mainlines and mobile phone) subscribers per 1000 people.	±	Africa Development Indicators (ADI)
Trade Openness	It is merchandise trade as a percentage of GDP. (Imports + Exports)/GDP	+	World Development Indicators (WDI)
Market Size	Natural Log of Gross Domestic Product (GDP)	±	World Development Indicators (WDI)
Financial Development	Domestic Credit to private sector as a percentage of GDP (Private Credit/GDP)	±	Africa Development Indicators (ADI)
Institution	**Index**	±	World Governance Indicators (WGI)
	Control of Corruption		
	Government Effectiveness		
	Political Stability and Absence of Violence or terrorism		
	Regulatory Quality		
	Rule of Law		
	Voice and Accountability		

Table 3. 2 Sources of Conflict Data

Country	Duration	Data Source
Angola	1998-2001	Collier, Hoeffler & Rohner (2008)
Burundi	1993-1998; 2000-2002	Collier, Hoeffler & Rohner (2008)
Central African Republic	1998-2000; 2005-2010	UN Mission (MINURCAT)
Chad	2005-2010	UN Mission (MINURCAT)
Congo	1997-1999	Collier, Hoeffler & Rohner (2008)
Cote d'Ivoire	2002-2003; 2010-2011	Collier, Hoeffler & Rohner (2008), CIA World Fact book
D.R. Congo	1996-2010	Collier, Hoeffler & Rohner (2008), CIA World Fact book
Eritrea	1998-2000	UN Mission (UNMEE), CIA World Fact book
Ethiopia	1998-2000	UN Mission (UNMEE), CIA World Fact book
Liberia	1996-2003	Collier, Hoeffler & Rohner (2008)
Rwanda	1990-1994; 1998-2003; 2009	Collier, Hoeffler & Rohner (2008)
Sierra Leone	1991-2002	Collier, Hoeffler & Rohner (2008), CIA World Fact book
Uganda	1996-2001; 2004-n.a	Collier, Hoeffler & Rohner (2008)

3.6 Study Population, Sample Size and Period of Study

Generally, a population is a group of items with common characteristics. In research projects, we can study all members in the population together or we can select some members of the group according to the scope of the study. When we select only some members, we refer to the subset as a sample. In the present study, the population under consideration consists of 54 countries in Africa and our sample consists of 46 sub-Saharan African countries. Generally, countries in the north of

Africa have certain characteristics in common; but they are distinct from countries to the south of the Sahara. Northern African countries are more developed than sub-Saharan African countries and the former receives more FDI than the latter (Unctad, 2004; UNCTAD, 1998a, 2008, 2013a). Moreover, compared to other countries, extant studies on FDI have covered northern African countries (Anyanwu & Yameogo, 2015; Chenaf-nicet & Rougier, 2016; Sghaier & Abida, 2013).

We focus on sub-Saharan African countries in this study for two reasons. The first reason is that there is little existing research on sub-Saharan African countries; this has given rise to a context gap (see Osinubi & Amaghionyeodiwe, 2010; Asiedu, 2006; Anyanwu & Yameogo, 2015). The second reason is that, there is generally little research on the determinants of FDI to conflict countries in Africa, giving rise to an issue gap (see Ezeoha & Ugwu 2015; Wu & Heerink 2016; Bussmann 2010). The second reason is at the heart of the study especially that many countries in sub-Sahara Africa have been in conflict since 1960 (Collier & Hoeffler, 2002; Matsumoto, 2016; Mutanda, 2013).

For instance, Asiedu (2002) focuses on the differences in the factors that draw FDI to developing countries by comparing sub-Sahara Africa with other developing countries. Another study by Driffield et al. (2013) focused on the indicators in the countries of origin that drive FDI into conflict countries but their study did not consider host country characteristics that attract FDI neither has any study compared the two groups to the best of our knowledge. Besides, they focused on the ownership advantages of the eclectic paardigm but the L (locational) advantages will be the focus of this study.

We employ a panel dataset spanning 1996 to 2010. While we acknowledge that it would have been more interesting to extend the study period to recent years, the period of study is limited to 1996-2010 due to data constraints. The WGI commences from 1996 and the WDI has data up to 2016. However, from 2014 onwards, there are many missing variables in these databases. Also, the data from ADI ends in 2012 with missing observations for 2011 and no observation for the variables of interest in 2012 for all countries; hence the use of data over the 15-year period for this study.

3.7 Method of estimation

Panel data methodology was adopted for the study. *The random effect* (RE) model is a form of the generalized least square (GLS) estimator. The random effect model is also referred to as mixed or multilevel models (Clarke, Crawford, Steele, & Vignoles, 2010). With this model, the unobserved variables are assumed not be correlated with all the observed variables. The RE is more efficient than FE if the assumption of the independent variables not being correlated with the individual specific effects holds. It can vastly limit the variance of the estimate which makes estimates closer to their true values. This is done by partially pooling information across units and therefore results in lower variability from sample-to-sample (Gelman & Hill, 2007). Total variance can be partitioned into two components: the within variance and between variance.

Additionally, there is the likelihood of estimating shrunken residuals and of accounting for differential effectiveness. It produces more efficient (narrower confidence intervals) results than FE model. Regardless of these advantages of using the random effects, it usually produces biased estimates. An assumption to help reduce possible bias is that there should be no correlation between the unit effects and the covariate of interest.

The fixed effects model is also a form of the GLS estimator and it is known as the within estimator. It controls for time-invariant effects with the effects of time-invariant variables. FE explores the association between the independent and dependent variables within an entity such as a country, company or person. It captures the unique individual features which might influence the variables by controlling for the impact of such characteristics but are ignored by other methods. FE controls for all time-invariant discrepancies between each observation and also controls for unobserved heterogeneity when it is correlated with the independent variables and constant over time. This method is designed to study the causes of changes within a particular entity and it produces consistent estimates. It considers both country and time specific effects. FE is expected to have a systematic and predictable influence on data and it "exhausts the population of interest". Moreover, FE solves omitted variable problems and also caters for non-continuity in data.

An important assumption of the FE technique is that the time-invariant characteristics are unique to the individual and should not be correlated with other individual characteristics. It produces unbiased estimates and it is somehow straightforward to implement as it requires the inclusion on the right-hand side, of a set of dummy variables. The major shortcoming of the FE method is that the estimates produced from this model can suffer from high sample-to-sample variability thus, rendering estimates highly sample-dependent (very sensitive to the random error in a given dataset). Making out-of-sample predictions is not possible when using this model. This is due to the fact that the unit effects for unobserved units are not identified. In a nutshell, FE estimator is unbiased and consistent but not efficient whereas RE estimator is asymptotically efficient (Hausman, 1978).

In order to decide which of the two methods is appropriate for our data, the Hausman specification test has to be conducted. This test helps determine the nature of the data by considering several factors such as; the extent of variability within the subjects, the nature of the omitted variables and whether the study focuses on the effects of variables whose values do or do not change across time (Greene, 2008).

3.8 Chapter Summary

In this chapter, we discussed issues regarding the data, sampling and empirical methods and strategies as well as the software that were adopted for the study. The study included data from sources such as the World Bank and Collier et al. (2008). The time scope of the study was 15 years (1996-2010). Our sample included 46 sub-Sahara African countries and consists of 13 conflict countries (Angola, Burundi, Central African Republic, Chad, Congo, Cote d'Ivoire, DR Congo, Eritrea, Ethiopia, Liberia, Rwanda, Sierra Leone and Uganda) and 36 non-conflict countries (Benin, Botswana, Burkina Faso, Carbo Verde, Cameroon, Comoros, Equatorial Guinea, Gabon, The Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Sao Tome and Principe, Senegal, Seychelles, South Africa, Sudan, Swaziland, Tanzania, Togo, Zambia and Zimbabwe).

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1Overview of Chapter

This chapter presents the details of discussions of the results obtained for the study. The purpose of the discussion is to answer the research questions within the context of the on-going dialogue in the FDI and conflict literature. We begin with relatively short diagnostic tests and proceed to a brief discussion of the descriptive statistics where we explore the peculiarities of the data and the variables used for the study. This is followed immediately by another brief section of discussion of the correlation between key variables and then a presentation of the results of diagnostic testing on the variables. Following these discussions, we explore the relationships suggested by the regression results and then attempt to explain why these relationships may be valid within the limits of what is already known except in a couple of places where we obtained unexpected results.

4.2 Descriptive statistics

Table 4.1 gives information about the number of country-year observations, minimum, maximum as well as the standard deviations for the variables used in this study. In all, there are at most 690 observations. The data is unbalanced due to missing observations for some countries and years. The descriptive tables show that some variables had unavailable data and this results in the reduced observations for the various regressions.

There were six regressors for each regression model; different measures of institutional quality were adopted for each model. FDI was the dependent variable. It can be observed that the institutional variables are the only variables with negative figures. The range within which they

fall signifies that on average, Sub-Sahara Africa has poor institutions. This is because information gathered from WGI and Kaufmann et al.(2010) gives the range for these variables as -2.5 to 2.5 and the higher the value, the better the institutions.

Table 4. 1 Descriptive statistics for Full sample

Variable	Obs.	Mean	Std. Dev.	Min	Max
FDI	690	.0474213	.1105235	-.828921	1.618238
NATRE	690	.1356151	.1566994	.0000670	.8613238
INFRAS	678	3.936931	1.84428	-.9462666	7.386332
TRDOPEN	690	.6023832	.4524004	.078027	7.434128
MKTSIZE	685	22.11123	1.447661	18.09537	26.65112
FINDEV	690	.1667073	.2193413	.001982	1.601249
CC	551	-.5928615	.5943717	-2.057458	1.249671
GE	551	-.7265976	.6025041	-1.982005	.8765076
PV	552	-.515275	.9367455	-2.444749	1.19232
RQ	552	-.6820587	.6116755	-2.412734	.8979619
RL	552	-.7099697	.6580039	-2.229847	1.056726
VA	552	-.6078532	.7345518	-2.164566	1.024631

FDI-Foreign Direct Investment, NATRE- Natural Resources, INFRAS-Infrastructure, TRDOPEN-Trade Openness, MKTSIZE-Market Size, FINDEV-Financial Development, CC-Control of Corruption, GE-Government Effectiveness, PV-Political Stability and Absence of Violence or terrorism, RQ- Regulatory Quality, RL-Rule of Law, VA- Voice and Accountability.

Source: Research Data, 2017

The mean value for FDI is 4.74% which signifies that on average, FDI contribution to GDP in SSA over the period 1996-2010 is very small. This tells us that on average, much of production in

Africa is by residents and foreign investments may be over rated in its importance to Africa. After all, Asiedu (2002) and others have found that Africa is simply not attractive to foreign investors. In fact, the annual UNCTAD Reports have shown that this is the case. The share of natural resource with regards to GDP on average is very important and therefore plays vital role in the growth of SSA countries. This is because it recorded a mean of 13.56% (of GDP). While this figure appears to be the above-stated figure, it is important to observe also that this means that African countries are moving from dependence on natural resources to other productive sectors.

Combined with the previous point, we can say that if investors were indeed very particular about Africa's natural resources, they may have invested more than we have seen over the years. The financial development measure also marks an average of 16.75% which signifies that credit extended to the private sector forms this percentage of GDP in SSA within the period of study. The existence of financial markets will surely boost the activities of private enterprises in the region and this would also serve as a motivation for foreign investors to invest in the continent. Countries in SSA are very opened on average since their mean mark is 60.24 meaning there are numerous trading activities across the borders of these countries and its share to GDP is very significant.

Table 4. 2 Descriptive Statistics for Conflict Sample

	Obs.	Mean	Std. Dev.	Min	Max
FDI	195	.0545582	.1360987	-.828921	.8947596
NATRE	195	.2404655	.1859086	.0193209	.7705454
TRDOPEN	195	.5782901	.6492458	.0780279	7.434128
MKTSIZE	195	21.97929	1.280781	18.88693	25.1562
INFRAS	184	3.047178	1.831814	-.9462666	6.827777
CC	156	-.9135571	.4605073	-2.057458	.8516657
GE	156	-1.136497	.4251749	-1.982005	-.0472604
PV	156	-1.387868	.6468453	-2.994749	.0109176
RQ	156	-1.115497	.4969599	-2.412734	.2496218
RL	156	-1.197942	.4227265	-2.229847	-.2258167
VA	156	-1.139928	.4400145	-2.164566	-.1737306
FINDEV	195	.0996363	.0808376	.0019828	.4647665

FDI-Foreign Direct Investment, NATRE- Natural Resources, INFRAS-Infrastructure, TRDOPEN-Trade Openness, MKTSIZE-Market Size, FINDEV-Financial Development, CC-Control of Corruption, GE-Government Effectiveness, PV-Political Stability and Absence of Violence or terrorism, RQ- Regulatory Quality, RL-Rule of Law, VA- Voice and Accountability.

Source: Research Data, 2017

We now turn to discuss the descriptive statistics for the subsamples, the conflict and non-conflict samples. These are presented in tables 4.2 and 4.3. The conflict sample consists of 13 counties and a total of at most 195 observations while the non-conflict sample consists of 33 countries and at most 495 observations.

The classification of countries as conflict or non-conflict was based on the definition by the COW[1] project (2010). This conflict sub-sample includes countries that were ever in conflict within the period of study. All other countries are considered to be non-conflict. The tables show that on average, conflict countries also have weaker institutions than was observed in the full sample over the period of study. Conflict countries on average appear to have received more FDI over the period than the non-conflict sample. They also have more natural resources on average but also have a wider dispersion than non-conflict countries. The average of 24.1% of natural resource share to GDP is also higher than the non-conflict sample. Conflict countries on average recorded a 9.97% credit to private sector as a percentage of GDP which in this study is used as a proxy for financial development. This mean value for financial development implies weak financial systems existing in countries that are in conflict.

Financial development in the non-conflict sample within the period of study is higher on average. It accounts for 19.3% of the 36 countries' GDP from 1996 to 2010. This financial indicator can be attributed to better institutions existing in these countries that aid easy transactions among private businesses and firms. With regards to natural resource endowment, this sample exhibits a lesser average of 9.43% compared to that of the conflict average of 24.05%. The mean of trade openness which is 61.19% implies that non-conflict countries on average are comparatively opened and they experience more international trade activities. This tends to enhance good relationships between

[1]The Correlates of War (COW) project is an academic study of the history of warfare. It was started in 1963 at the University of Michigan by political scientist J. David Singer. Concerned with collecting data about the history of wars and conflict among states, the project has driven forward quantitative research into the causes of warfare. The COW project seeks to facilitate the collection, dissemination, and use of accurate and reliable quantitative data in international relations.

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these countries and other nations. The market size with GDP as its proxy is also on average (22.16), larger than that of the conflict countries which has a mean of 21.98.

Table 4.3 Descriptive Statistics for Non-conflict sample

Variable	Obs.	Mean	Std. Dev.	Min	Max
FDI	495	.0446098	.0986668	-.0858943	1.618238
NATRE	495	.0943105	.1209351	.0000695	.8613238
TRDOPEN	495	.6118744	.345832	.2094822	2.253046
MKTSIZE	490	22.16373	1.506965	18.09537	26.65112
INFRAS	494	4.268337	1.737745	.4800305	7.386332
CC	395	-.466207	.5940741	-1.705715	1.249671
GE	395	-.5647132	.5855144	-1.77376	.8765076
PV	396	-.1715261	.8004283	-2.660021	1.19232
RQ	396	-.5113103	.5670751	-2.210173	.8979619
RL	396	-.517738	.6346297	-2.071867	1.056726
VA	396	-.3982479	.7216874	-1.897924	1.024631
FINDEV	495	.1931292	.2491187	.0055909	1.601249

FDI-Foreign Direct Investment, NATRE- Natural Resources, INFRAS-Infrastructure, TRDOPEN-Trade Openness, MKTSIZE-Market Size, FINDEV-Financial Development, CC-Control of Corruption, GE-Government Effectiveness, PV-Political Stability and Absence of Violence or terrorism, RQ- Regulatory Quality, RL-Rule of Law, VA- Voice and Accountability.

Source: Research Data, 2017

4.3 Correlation analysis

The pairwise correlation matrices are presented in tables 4.4, 4.5 and 4.6. Stars are used to show statistical significance at the 10% level. The numbers in the tables do not give indication of the presence of multicollinearity in any of our regressions. We find that consistent with the assertion

made by Kaufmann et al. (2010), the six measures of institutions are highly positively correlated. Consequently, these are not put in one model. Aside these institutional variables, the financial development tends to have high correlations of 0.51 and 0.56 with control of corruption and government effectiveness respectively. It is expected to be normal and also because the relationships are positive.

Other variables that appear to have quite a high and statistically significant correlation are infrastructure and the institutional variables; they are all positive as well. This is not surprising because when institutions are stronger, development is likely to happen at a faster pace and infrastructural development comes along with it. We also observe from the correlation matrix for the full sample that natural resources have even higher correlation with institutions except that these are negative. This gives a new insight that suggests that countries that have more natural resources tend have weaker institutions. High levels or corruptions, ineffective governance, political instability, absence of rule of law and weak media freedom are prevalent in countries that have more natural resources. We observed in section 4.2 that conflict countries tend to have higher amounts of natural resources.

This could suggest that in countries with abundant natural resources, people feel cheated as a result of inequitable distribution of the rewards of natural resource exploitation hence, leading to break down of law and order. It is common in Africa to find that localities where natural resources exploitation takes place are also among the least developed. There is therefore the tendency for the local residents to protest the “inequity”. This will result in political instability and a weakening of the rule of law. Besides, when these resources are present, people will find illegal means to exploit

them; thus corruption will thrive. These conjectures are consistent with findings by Asiedu (2013) who made a similar observation and bemoaned them to be as a result of the phenomenon described by the resource curse hypothesis.

We extend our analysis of the association between variables by comparing the two sub-samples. The matrix for both sub-samples show a high correlation on average among institutional variables just as Kaufmann et al. (2010) asserted. Notwithstanding this, we also observe that conflict countries have weaker correlations between institutional variables than non-conflict countries. This is expected especially when one considers the details. For instance, voice and accountability and political stability have a weak correlation (0.062).

Besides these, the highest correlation in the conflict sample is between financial development and control of corruption. In the non-conflict sample, the highest correlation coefficient aside that between the institutional variables is between financial development and government effectiveness. Thus, among conflict countries, those with better control of corruption would also have more developed financial systems while non-conflict countries tend to have better developed financial systems if they have more effective government *ceteris paribus.*

We observe that natural resources and FDI are positively correlated in both sub-samples. Additionally, the magnitude is higher and statistically significant in the non-conflict sample. These are generally consistent with the regression results. Thus, we can conclude on the basis of the respective correlation matrices that the non-conflict countries in Africa receive more natural resource related FDI than conflict countries. If we consider that in table 4.2 and table 4.3, conflict

countries have more natural resources, the common belief that conflict countries receive more FDI as a result of natural resources is not supported by the evidence. It is safe therefore, to conclude that other factors are responsible for the higher FDI inflows into conflict countries.

For infrastructure, trade openness and market size, the degree of association is higher for non-conflict countries than for conflict countries. The coefficients in the non-conflict sample are significant at 10% for trade openness and market size but not infrastructure while none is significant for the conflict sample. Infrastructure and trade openness have positive association with FDI in both samples whereas market size has a negative association with FDI. Overall, the direction of association is similar to the full sample but many relationships as far as FDI is concerned are stronger for the non-conflict sub-sample. This is evident from the fact that no variable has a significant association with FDI in the conflict sample. This goes to confirm an earlier assertion that suggested that the factors that explain the apparent higher flow of FDI to conflict countries have not been captured. We dare to conjecture that the kind of FDI that flows to conflict countries is not explained by the commonly regarded determinants.

Table 4. 4 Correlation Matrix

	Full Sample											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
FDI (1)	1.0000											
NATRE (2)	0.1719*	1.0000										
INFRAS (3)	0.0488	-0.0752	1.0000									
TRDOPEN (4)	0.2240*	0.2422*	0.1477*	1.0000								
MKTSIZE (5)	-0.1788*	0.1306*	0.2826*	-0.1528*	1.0000							
FINDEV (6)	-0.0446	-0.2304*	0.3785*	0.0077	0.3493*	1.0000						
CC (7)	-0.0199	-0.4496*	0.3107*	0.0238	-0.0279	0.5133*	1.0000					
GE (8)	-0.0365	-0.4085*	0.3389*	0.0008	0.2154*	0.5616*	0.8374*	1.0000				
PV (9)	0.0539	-0.3685*	0.3768*	0.0981	-0.1546*	0.2606*	0.6554*	0.6430*	1.0000			
RQ (10)	-0.0912	-0.3497*	0.3334*	-0.0693	0.2614*	0.4722*	0.7194*	0.8500*	0.6086*	1.0000		
RL (11)	-0.0087	-0.4483*	0.3779*	0.0080	0.0267	0.4654*	0.8620*	0.8805*	0.7893*	0.8196*	1.0000	
VA (12)	-0.0398	-0.3584*	0.3614*	-0.0405	0.0444	0.4731*	0.7046*	0.7641*	0.6912*	0.7434*	0.8080*	1.0000

FDI-Foreign Direct Investment, NATRE- Natural Resources, INFRAS-Infrastructure, TRDOPEN-Trade Openness, MKTSIZE-Market Size, FINDEV-Financial Development, CC-Control of Corruption, GE-Government Effectiveness, PV-Political Stability and Absence of Violence or terrorism, RQ- Regulatory Quality, RL-Rule of Law, VA-Voice and Accountability.

Source: Research Data, 2017

Table 4. 5 Conflict sample Correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12
FDI (1)	1.0000											
NATRE (2)	0.1552	1.0000										
INFRAS (3)	0.0331	0.1888	1.0000									
TRDOPEN(4)	0.0043	0.4572*	0.0026	1.0000								
MKTSIZE (5)	-0.1146	0.1752	0.4772*	-0.1552	1.0000							
FINDEV (6)	-0.1013	-0.3248*	0.0488	-0.0631	-0.0973	1.0000						
CC (7)	0.0381	-0.4716*	0.0195	-0.2211	-0.2205	0.6456*	1.0000					
GE (8)	-0.0308	-0.3340*	0.1051	-0.2388	0.2696*	0.3048*	0.6177*	1.0000				
PV (9)	0.0817	-0.0889	0.3917*	-0.0794	0.0930	0.2828*	0.5019*	0.4774*	1.0000			
RQ (10)	-0.0352	-0.2531*	0.2639*	-0.2322	0.3271*	0.0544	0.3258*	0.7458*	0.3076*	1.0000		
RL 11)	0.0344	-0.3766*	0.1910	-0.3056*	0.1058	0.5086*	0.7627*	0.8125*	0.5867*	0.6523*	1.0000	
VA (12)	0.1482	-0.0053	0.2937*	-0.0425	-0.0510	-0.1359	0.0620	0.2536*	0.3618*	0.5074*	0.3432*	1.0000

FDI-Foreign Direct Investment, NATRE- Natural Resources, INFRAS-Infrastructure, TRDOPEN-Trade Openness, MKTSIZE-Market Size, FINDEV-Financial Development, CC-Control of Corruption, GE-Government Effectiveness, PV-Political Stability and Absence of Violence or terrorism, RQ-Regulatory Quality, RL-Rule of Law, VA-Voice and Accountability.

Source: Research Data, 2017

Table 4. 6 Non-conflict correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12
FDI(1)	1.0000											
NATRE(2)	0.1843*	1.0000										
INFRAS(3)	0.0683	-0.0242	1.0000									
TRDOPEN(4)	0.4562*	0.0876	0.2626*	1.0000								
MKTSIZE (5)	-0.2198*	0.1732*	0.2125*	-0.1810*	1.0000							
FINDEV(6)	-0.0328	-0.1745*	0.4122*	0.0172	0.3864*	1.0000						
CC(7)	-0.0402	-0.3356*	0.3095*	0.1460	-0.0004	0.4864*	1.0000					
GE(8)	-0.0398	-0.2814*	0.2980*	0.0964	0.2027*	0.5747*	0.8580*	1.0000				
PV(9)	0.0708	-0.2208*	0.2284*	0.2050*	-0.3067*	0.1783*	0.6229*	0.5498*	1.0000			
RQ(10)	-0.1265	-0.1872*	0.2338*	-0.0242	0.2548*	0.5016*	0.7689*	0.8350*	0.5275*	1.0000		
RL(11)	-0.0187	-0.3239*	0.3211*	0.1297	-0.0131	0.4325*	0.8641*	0.8597*	0.7506*	0.8056*	1.0000	
VA(12)	-0.0993	-0.3061*	0.2703*	-0.0952	0.0343	0.4875*	0.7707*	0.7884*	0.6361*	0.7219*	0.8227*	1.000

FDI-Foreign Direct Investment, NATRE- Natural Resources, INFRAS-Infrastructure, TRDOPEN-Trade Openness, MKTSIZE-Market Size, FINDEV-Financial Development, CC-Control of Corruption, GE-Government Effectiveness, PV-Political Stability and Absence of Violence or terrorism, RQ- Regulatory Quality, RL-Rule of Law, VA-Voice and Accountability.

Source: Research Data, 2017

4.4 Diagnostic Tests

4.4.1 Test for Multicollinearity

Multicollinearity occurs when two or more independent variables are highly correlated in a multiple regression model. This can result in misleading or skewed results, inaccurate p-values and can make it difficult to ascertain which of the explanatory variables (that are highly correlated) is actually causing the variability in the dependent variable. To deal with multicollinearity, one of the highly correlated variables can be dropped or replaced. VIF shows how much the standard errors of the coefficients have been inflated.

After constructing the correlation matrices for all the samples, there were some high correlations (exceeded 0.5) between some independent variables. For example, in the full sample pairwise correlation matrix, financial development had high correlations of 0.56 and 0.51 with government effectiveness and control of corruption respectively. For the conflict sample, financial development again had high and positive correlation of 0.65 and 0.51 with control of corruption and rule of law respectively. Finally for the non-conflict sample, same financial development variable has strong correlation with government effectiveness (0.58) and regulatory quality (0.50). Thus, the Variance Inflation Factor (VIF) test was carried out to detect the existence of multicollinearity. The results obtained indicated that there was no multicollinearity in any of the samples since none of the VIF figures exceeded 10. The range was from 1.16 to 2.16 for all the samples put together and the mean VIFs also recorded a lowest of 1.35 and a highest of 1.65. Below are the VIF results.

Table 4. 7 Variance Inflation Factors (VIF) output

Variance Inflation Factors			
Models/ Variables	Full sample	Conflict sample	Non-conflict sample
Model 1			
CC	1.75	2.16	1.56
FINDEV	1.68	1.78	1.77
NATRE	1.42	1.69	1.22
MKTSIZE	1.39	1.51	1.41
INFRAS	1.30	1.39	1.34
TRDOPEN	1.18	1.38	1.20
Model 2			
PV	1.52	1.35	1.39
INFRAS	1.46	1.57	1.37
MKTSIZE	1.45	1.41	1.63
FINDEV	1.39	1.31	1.54
NATRE	1.36	1.57	1.16
TRDOPEN	1.18	1.36	1.20
Model 3			
GV	1.73	1.36	1.62
FINDEV	1.64	1.26	1.85
NATRE	1.43	1.70	1.21
MKTSIZE	1.34	1.56	1.38
INFRAS	1.28	1.33	1.32
TRDOPEN	1.18	1.35	1.20

Source: Research Data, 2017

Table 4.7 Variance Inflation Factors (VIF) output Con't.

Variance Inflation Factors			
Models/ Variables	Full sample	Conflict sample	Non-conflict sample
Model 4			
RQ	1.48	1.27	1.37
FINDEV	1.48	1.18	1.69
NATRE	1.36	1.70	1.16
MKTSIZE	1.36	1.49	1.39
INFRAS	1.29	1.38	1.32
TRDOPEN	1.17	1.35	1.18
Model 5			
RL	1.68	1.67	1.46
FINDEV	1.53	1.51	1.66
NATRE	1.44	1.63	1.22
INFRAS	1.36	1.39	1.36
MKTSIZE	1.35	1.41	1.41
TRDOPEN	1.17	1.42	1.19
Model 6			
FINDEV	1.57	1.71	1.78
VA	1.54	1.16	1.50
MKTSIZE	1.36	1.47	1.42
INFRAS	1.35	1.52	1.36
NATRE	1.32	1.37	1.18
TRDOPEN	1.17	1.35	1.21

FDI-Foreign Direct Investment, NATRE- Natural Resources, INFRAS-Infrastructure, TRDOPEN-Trade Openness, MKTSIZE-Market Size, FINDEV-Financial Development, CC-Control of Corruption, GE-Government Effectiveness, PV-Political Stability and Absence of Violence or terrorism, RQ- Regulatory Quality, RL-Rule of Law, Voice and Accountability.

Source: Research Data, 2017

4.4.2 Test for Heteroscedasticity

This assumption implies that the variance of the errors should be constant across all the values of the explanatory variables. Some reasons why this condition should hold include but not limited to the possible presence of outliers. The absence of this condition is called heteroscedasticity which results in inefficient estimators, incorrect standard errors as well as wrong hypothesis tests and confidence intervals. Notwithstanding these, the estimators will still be unbiased and consistent. This test was conducted using the Breusch-Pagan/ Cook-Weisberg test and it can be seen from table 4.8 that our data is heteroscedastic because we reject the null hypothesis at 5% significance level. Thus, to correct this problem, the robust standard errors are used in all models. The output for the test is found below.

Table 4. 8 Breusch-Pagan / Cook-Weisberg test for heteroscedasticity

H_o : Constant variance

	Full Sample		**Conflict Sample**		**Non-Conflict Sample**	
Model	**Chi2(1)**	**Prob>Chi2**	**Chi2(1)**	**Prob>Chi2**	**Chi2(1)**	**Prob>Chi2**
Model 1	1161.14	0.0000***	294.54	0.0000***	2858.31	0.0000***
Model 2	1137.40	0.0000***	267.59	0.0000***	2815.32	0.0000***
Model 3	1062.79	0.0000***	243.57	0.0000***	2885.63	0.0000***
Model 4	1203.46	0.0000***	263.11	0.0000***	2855.27	0.0000***
Model 5	1130.10	0.0000***	276.78	0.0000***	2845.05	0.0000***
Model 6	1200.69	0.0000***	205.10	0.0000***	2839.00	0.0000***

Source: Research Data, 2017

4.4.3 Test for Endogeneity

This condition indicates that independent variables should not be correlated with the error terms. It usually occurs as a result of simultaneous causality, omitted variables and measurement error. For reliable FE results, the variables in the model should be exogenous meaning, their values should be determined by factors that are outside the model. From table 4. 9, it can be seen that variables are exogenous since we fail to reject the null hypothesis. This means that the FE method can be adopted without any undesirable consequences.

4.5 Hausman's specification test

This test ascertains if there is a correlation between the unique errors and the regressors in the model. It aids in choosing the suitable method (whether FE or RE). The results for the test are presented in tables 4.10, 4.11 and 4.12.

H_o: There is no correlation between the unique errors and the regressors. Hence, RE is preferred

H_1: There is correlation between the unique errors and the regressors. Thus, the preferred model is FE.

Based on the results obtained from the test conducted, we reject the null hypothesis and conclude that there is correlation between the unique errors and the regressors; therefore, FE model fits the data better. Thus, the FE is employed and the results are presented in the next section.

Table 4. 9 Durbin/ Wu-Hausman Test of Endogeneity

H_o : Variables are exogenous

Full Sample				
Model	**Durbin (Score) Chi2(1)**	**Prob>Chi2**	**Wu-Hausman F(v1,v2)**	**Prob>Chi2**
Model 1	3.353 (1)	0.0671	3.324 (1,529)	0.0688
Model 2	3.341 (1)	0.0676	3.311 (1,529)	0.0698
Model 3	3.277 (1)	0.0702	3.248 (1,530)	0.0720
Model 4	3.156 (1)	0.0756	3.127(1,530)	0.0776
Model 5	3.602 (1)	0.0577	3.573 (1,530)	0.5398
Model 6	3.103 (1)	0.0781	3.074 (1,530)	0.0801
Conflict Sample				
Model 1	1.055 (1)	0.3043	1.004 (1,138)	0.3179
Model 2	0.781 (1)	0.3767	0.742 (1,138)	0.3903
Model 3	0.510 (1)	0.4748	0.484 (1,138)	0.4875
Model 4	0.806 (1)	0.3691	0.766 (1,138)	0.3827
Model 5	0.746 (1)	0.3875	0.746 (1,138)	0.4011
Model 6	0.354 (1)	0.5518	0.335 (1,138)	0.5634
Non-Conflict Sample				
Model 1	0.526 (1)	0.4682	0.516 (1,383)	0.4730
Model 2	0.761 (1)	0.3828	0.747 (1,383)	0.3878
Model 3	0.638 (1)	0.4243	0.6262 (1,384)	0.4292
Model 4	0.334 (1)	0.5631	0.327 (1,384)	0.5672
Model 5	0.611 (1)	0.4342	0.600 (1,384)	0.4390
Model 6	0.608 (1)	0.4355	0.596 (1,384)	0.4403

Source: Research Data, 2017

Table 4. 10 Hausman Test: Full Sample

Model	1	2	3	4	5	6
chi2(6)	104.57	100.87	101.2	101.91	102.14	101.51
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Source: Research Data, 2017

Table 4. 11 Hausman Test: Conflict Sample

Model	1	2	3	4	5	6
chi2(6)	50.83	51.12	50.42	50.57	51.56	=50.70
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Source: Research Data, 2017

Table 4. 12 Hausman Test: Non-conflict Sample

Model	Model 1	2	3	4	5	6
chi2(6)	63.96	64.31	47.65	56.13	58.54	50.72
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Source: Research Data, 2017

4.6 Results and Discussion

4.6.1 Determinants of FDI to Africa

Alam & Shah (2013) asserted that there is no consensus on the determinants of FDI. They observed that results varied depending on the countries and regions that were studied. In this section, we show results of a different sample that includes countries from all regions in SSA.

Infrastructure: We find a positive and statistically significant relationship between *infrastructur*e and FDI. Meaning, better infrastructure will result in higher FDI inflows in SSA. Recall that the infrastructure variable is measured using the natural log of the sum of telephones (both fixed and mobile) per 1000 subscribers. The coefficients are however large relative to the mean of FDI as was shown in the descriptive statistics. This means that the effect of infrastructure is economically significant in explaining variations in the relative net FDI inflows to Africa. This implies that the presence of infrastructure plays an important role in attracting foreign investors to SSA (Asiedu, 2002; Asiedu, 2013) and this was as expected.

Infrastructure is essential because more foreign investors have multiple MNCs across several counties and even continents and thus, they would need certain gadgets like telephones or mobile phone, internet, roads and other economic infrastructure in order to be able to enhance quick and easy communication and to improve on the efficiency of business. The importance of infrastructure varies across industries. Asiedu (2002) used same measure and obtained a positive and significant relationship with FDI inflows. Additionally, Donaubauer et al. (2016) found that improved infrastructure aids in attracting higher FDI inflows into developing economies.

Trade openness is both statistically and economically significant in determining net FDI inflows to Africa. However, contrary to expectation this relationship was negative suggesting that countries that are less open relative to the size of the domestic economy tend to attract more FDI. The tariff-jumping hypothesis which is also known as the export substituting FDI can be an explanation to this unusual result. This hypothesis implies that countries which are less opened with trade restrictions tend to attract more FDI. This is because foreign investors would establish their companies in host countries rather than deal in exports and imports due to very high tariffs on such transactions. Thus, trade is a substitute to FDI. (Wheeler & Mody 1992) found a negative relationship between trade openness and FDI flows in Mexico and Brazil. They further stated that US MNCs are attracted to more restrictive economies. Kolstad & Villanger (2008) also discovered a negative relationship between these two variables in host countries.

Market size is negatively but economically and statistically significant in explaining FDI inflows to Africa. This result shows that in the full sample, the larger the market size, the less FDI a country will attract. It can be explained that size could be inversely related to FDI inflows because of minimal regional integration within regional blocs in Africa and the fact that some small countries have more flexible trade policies which could be attractive to investors. For instance, Togo is a small country (with a small market size) in West Africa compared to Ghana, Nigeria, Niger and Ivory Coast and other but Togo has less restrictive import duties which could entice foreign investors to set up there since they could import equipment at lower tariffs. Meanwhile, ECOWAS operates a free trade regime where goods and services can move within the sub-region freely. Investors therefore have an incentive to set up in Togo and then sell their output to the wider ECOWAS region.

Given that we use GDP as a measure of market size and also because the size of GDP is an indication of national wealth; another explanation could be that countries with higher GDP have many wealthy and active domestic investors who are crowding out foreigners. This is to say that local businesses are doing well and know the system better than foreigners who cannot compete favourably as a result. Moreover, locals could place impediments in the way of foreigners who they consider as threats and this could lead to lower inflows in the medium to long run. This might not happen in a poor country where domestic capital is woefully low. Musila & Sigué (2006) also stressed that the major role played by the domestic market in attracting FDI flows into Africa is of the past.

Financial development in the full sample is both statistically and economically significant in determining FDI inflows to Africa. This was expected since most investors dwell on the soundness of the financial systems of host countries before investing in such environments. This is due to the fact that a reliable financial system helps to allocate financial resources in addition to increasing the supply of capital in the various countries, aids in easy and quick transactions among MNCs across countries, improves the absorptive capacity of countries, provides credit for working capital and reduces firm entry cost.

In this study, the measure for financial development which is domestic credit to the private sector as a percentage of GDP makes it more valid that foreign investors are really concerned about the health of financial systems in host countries. The World Bank indicates that credit serves as an essential link in money transmission, since it facilitates capital formation, consumption and

finances production which results in turn to positively affect economic transactions. Agbloyor et al. (2013) had similar finding for an African study. Moreover, Brafu-Insaidoo & Biekpe (2014) found a positive relationship between international capital inflows and financial liberalization.

Table 4.13 Determinants of FDI to Africa

	FDI	FDI	FDI	FDI	FDI	FDI
NATRE	0.25975	0.27593	0.25294	0.25586	0.26645	0.25368
	(0.16201)	(0.16842)	(0.16313)	(0.16511)	(0.16311)	(0.16663)
INFRAS	0.03710***	0.03739***	0.03817**	0.03760**	0.03638**	0.03668***
	(0.01374)	(0.01372)	(0.01442)	(0.01435)	(0.01361)	(0.01337)
TRDOPEN	-	-	-	-	-	-
	0.11851***	0.12008***	0.12151***	0.12247***	0.11882***	0.12186***
	(0.04246)	(0.04141)	(0.04006)	(0.04096)	(0.04064)	(0.03997)
MKTSIZE	-0.13782**	-0.13633**	-0.14377**	-0.13981**	-0.13820**	-0.13846**
	(0.06008)	(0.05809)	(0.06418)	(0.06275)	(0.06082)	(0.06055)
FINDEV	0.17691**	0.17336*	0.19450**	0.18168*	0.17691*	0.18641**
	(0.08610)	(0.09045)	(0.09028)	(0.09254)	(0.08870)	(0.09037)
CC	0.03475					
	(0.02860)					
GE		0.04926				
		(0.03789)				
PV			0.01685			
			(0.01472)			
RQ				0.01705		
				(0.01978)		
RL					0.04685	
					(0.03132)	
VA						0.01740
						(0.02161)
Constant	2.97619**	2.95610**	3.09145**	3.01107**	2.99905**	2.98325**
	(1.26364)	(1.22996)	(1.34676)	(1.31200)	(1.28479)	(1.27282)
Observations	537	537	538	538	538	538
Number of countries	46	46	46	46	46	46
Adjusted R-squared	0.26115	0.26471	0.25884	0.25624	0.26372	0.25645

FDI-Foreign Direct Investment, NATRE- Natural Resources, INFRAS-Infrastructure, TRDOPEN-Trade Openness, MKTSIZE-Market Size, FINDEV-Financial Development, CC-Control of Corruption, GE-Government Effectiveness, PV-Political Stability and Absence of Violence or terrorism, RQ- Regulatory Quality, RL-Rule of Law, VA- Voice and Accountability.

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Institutions, in all regressions were not statistically important in drawing FDI to Africa. The results discussed so far are largely based on the full sample. There is reason to believe that countries in the sub-region have unique characteristics which emanate from the fact that some have experienced conflict and others have not. This gives foreign investors different motives for investing in different locations. On the basis of this belief, we examine groups of countries based on one factor, conflict (whether a country experienced conflict over the period from 1996 to 2010), in the following sections.

4.6.2 Determinants of FDI to Conflict Countries

We examine the determinants of FDI to conflict countries in turn. In our descriptive statistics, we found that conflict countries received more FDI on average than non-conflict countries. It is therefore important to examine some of the factors that investors look out for in conflict countries. Recall that we defined a conflict country as one which had experienced 1000 battle related deaths in a year within the sample period. Prior to this study, there was a general notion that countries in conflict mostly receive FDI inflows in the extractive sectors that is, the sectors most related to *Natural resources.* Contrary to this belief however, our results show a negative relationship between FDI inflows and natural resources in conflict countries. This relationship also attains both statistical and economic significance.

Okafor et al. (2015) in their study on SSA over the period from 1996 to 2010, also had similar results and explained that, the region has in its possession, enormous natural resources but these remain unused due to continuing conflicts and misplaced priorities among interest groups. They

further highlighted some evident cases in Republic of Congo, DR Congo and Angola where natural resources extraction has been frozen due to conflicts and political uprisings and thus, have negatively impacted investments. This assertion is confirmed in the current study since the sample being discussed is that of conflict countries. Asiedu & Lien (2011) also obtained similar results.

Moreover, from the descriptive statistics table, it was observed that conflict countries are well endowed in terms of natural resources as compared to their non-conflict counterparts. This gives a firm ground for the three possible explanations that (Asiedu, 2013) offers for this contradiction which she termed as FDI-resource curse. They are as follows; Firstly, FDI in the extractive industry involves enormous preliminary investment outlay whereas the consequent operations involve small cash flows. Hence, after the initial stage, FDI might stagger due to financial constraints.

Secondly, resource booms in host countries result in the appreciation of the local currency. This renders the country's exports to be less competitive on the world market and hence, crowds out investments in non-natural resource sectors which tend to cause a decline in overall FDI in these countries. Okafor et al. (2015) added that the majority of SSA countries that experienced local currency appreciation, had bulk of their exports in natural resources. Lastly, natural resources, particularly oil, are characterised by booms and busts, which result in increased exchange rate volatility (Sachs & Warner, 1995). Since FDI in SSA is dominated in the extractive industry, this implies less diversification which in turn makes such countries more vulnerable to external shocks. This will subsequently lead to macroeconomic instability which gradually results in the reduction of FDI inflows.

Rogmans & Ebbers (2013) in their study on MENA found a negative effect of natural resources on FDI inflows had same results and Jadhav (2012) found similar results in their study on BRICS. A study by Mina (2007) in the Gulf Cooperation Council (GCC) contrary to their expectation, also found a negative relationship for these two variables. Compared to the full sample, our results in the conflict sample suggest that there is a differential impact of natural resources for conflict countries than for other countries.

On the other hand, the results in this study could have been attributed to several factors like natural resource curse and the possibility of these countries financing their own extraction without FDI in order to maintain their ownership in the resource sectors without foreign intrusion in these countries. This explanation would not hold for SSA countries since most of our natural resources are mainly extracted through FDI. In SSA, foreign firms dominated the oil sector. UNCTAD (2007) reported that in 2005, the share of oil productions by MNCs was 57% for the sub-region as compared to the foreign share of production of about 19% in all developing economies, 11% for transition economies and 18% for Latin America. Africa's extractive sector is dominated by foreign firms because of the capital-intensive nature of mineral extraction which is risky and has long gestation periods as well as requires sophisticated technology.

Infrastructure in the conflict sample has shown consistency with the full sample results because it is positive and significant both statistically and economically. This implies that even in conflict countries, investors are still particular about the availability and access to infrastructure since it aids in communication and improves efficiency in business. We however observe that the effects of infrastructure though positive, were lower in the conflict sample than in the full sample. This

can be seen from comparing the size of the coefficients. The measure of infrastructure used in our study has additional meanings. First of all, the more telephones and mobile phones there are would mean that the residents of a country are connected to the global community especially in recent times when internet services are largely mobile. Investors on average could prefer such countries because of the "common culture". Besides, this also mean that for investors who are interested in producing items that are not indigenous to countries in conflict, an open society is more likely to accept these items.

Similar to findings in the full sample, *Trade openness* is very significant both economically and statistically (at 1%) and the magnitudes are slightly higher for conflict countries. The sign is negative which can be interpreted to mean that conflict countries who are less open receive more FDI. If a country is less open to trade and is also in conflict, what then will make them attract more FDI? We conjecture that this could suggest that foreign investments in conflict zones are not in merchandise only. If it is not in merchandise then it could be that, for the countries in our conflict sample, because they have to rebuild their economies after the conflict, they have attracted FDI in the form of foreign firms that are involved in infrastructural developments. Moreover, there has been an argument that trade can serve as a substitute or a complement to FDI. In this study, it serves as a substitute.

Table 4. 13 Determinants of FDI to Conflict Countries

	FDI	FDI	FDI	FDI	FDI	FDI
NATRE	-0.24788*	-0.26648*	-0.23208**	-0.23939*	-0.22665*	-0.21745*
	(0.12935)	(0.13830)	(0.10568)	(0.11389)	(0.12587)	(0.10022)
INFRAS	0.01980**	0.02001**	0.01902**	0.01856**	0.01673**	0.01460*
	(0.00749)	(0.00719)	(0.00741)	(0.00715)	(0.00720)	(0.00752)
TRDOPEN	-0.12716***	-0.12613***	-0.12542***	-0.12526***	-0.12365***	-0.12063***
	(0.01515)	(0.01103)	(0.01019)	(0.01151)	(0.01222)	(0.00971)
MKTSIZE	-0.06198*	-0.06126*	-0.06362*	-0.05920*	-0.05683	-0.05352
	(0.03346)	(0.03324)	(0.03096)	(0.03247)	(0.03227)	(0.03169)
FINDEV	0.15813	0.15557	0.10200	0.10980	0.06897	-0.01603
	(0.28063)	(0.25785)	(0.26563)	(0.23532)	(0.26467)	(0.19834)
CC	-0.01116					
	(0.04922)					
GE		-0.02437				
		(0.03696)				
PV			0.00869			
			(0.01117)			
RQ				0.00806		
				(0.03839)		
RL					0.02576	
					(0.04159)	
VA						0.05793**
						(0.02070)
Constant	1.45621*	1.42658*	1.51830**	1.41961*	1.39504*	1.37070*
	(0.73157)	(0.72621)	(0.67770)	(0.71939)	(0.70268)	(0.69885)
Observations	146	146	146	146	146	146
Number of countries	13	13	13	13	13	13
Adjusted R-squared	0.43855	0.44060	0.43905	0.43827	0.44024	0.45449

FDI-Foreign Direct Investment, NATRE- Natural Resources, INFRAS-Infrastructure, TRDOPEN-Trade Openness, MKTSIZE-Market Size, FINDEV-Financial Development, CC-Control of Corruption, GE-Government Effectiveness, PV-Political Stability and Absence of Violence or terrorism, RQ- Regulatory Quality, RL-Rule of Law, VA- Voice and Accountability.

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

We did not expect *market size* to matter for conflict countries since a country that is unstable is not expected to have observable markets. On the contrary, we find that markets matter in four of the six regressions. The relationship is negative and economically significant in all regression but

statistically significant only in four. We take it that our earlier explanation in the full sample holds true for conflict countries except that we find that compared to the full sample the degree of the effect of market size is lesser in the conflict sample

For the institutional variables, we find that with the exception of voice and accountability, the rest are not statistically significant in drawing FDI to Africa. Studies by Gylfason & Zoega (2006) reveal that countries that are well endowed in natural resources, especially in oil, tend to have weak institutions. The index for voice and accountability implies that even when a country has ever experienced conflict, it would receive more FDI if there is freedom of speech and the governments can be criticized. The index for voice and accountability gives an indication of the freedom of association, expression, media and the like as well as to choose the preferred government. This means that even in the unstable nature of conflict countries, foreign investors still look out for democratic governments where the populace will be able to voice their concerns.

With regards to the free media, it is an essential factor because investors would want to be in an environment where most issues, if not all is covered to enable them some assurance of safe production process even in countries that are in conflict. Moreover, in a country with these characteristics, foreign business interests are more likely to be protected than even in times of conflict. Collier & Hoeffler (1998) stated in their study that on average, resource-rich countries tend to be more democratic and that this, is a striking change that has developed.

4.6.3 Determinants of FDI to Non-Conflict Countries

In the previous section, we examined the determinants of inward FDI to conflict countries. To allow for comparison, we have to discuss the determinants of inward FDI to non-conflict countries. The regression result for the non-conflict sample is shown in table 4.15 and these results reflect much of existing studies carried out in Africa. In the table we find statistical and economic significance for all variables. Also, the signs of the coefficients are as expected and as has been established in existing literature. For example, *natural resources* have positive and large coefficients. This suggests that the more natural resources non-conflict countries possess, the more FDI they receive on average. The implication of this is that the more resources we have as a sub-continent, the more FDI we will attract. Meaning, foreign investors really consider the availability of the natural resources which constitute oil, forest, mineral, natural gas and coal rents. This brings to the fore that most foreigners would establish extractive industries in SSA in order to exploit the available natural resources.

Earlier, it was stated that there are three main motives for FDI as can inferred from Dunning's eclectic paradigm which are resource-seeking, efficiency-seeking and market-seeking. It is clear from the results that the main reason for most FDI inflows to SSA is resource-seeking since non-conflict countries dominate this region. Generally, African countries are considered to be rich in natural resources and it is believed that foreign investors are interested in extracting the resources. What this implies is that, foreign investments are largely in the extractive sectors in non-conflict countries. This is observable in practice and our findings adduce evidence to this effect. Previous authors have observed this fact and have shown also that in Africa natural resources are important to foreign investors. For instance, Brafu-Insaidoo & Biekpe (2014) found that natural resources

played significant role in attracting FDI to Africa. Asiedu (2006) also had similar results. These therefore provide evidence to suggest that, consistent with our findings, indeed FDI inflows to Africa are targeted at natural resources.

Additionally, *infrastructure* is vital for investment because businesses thrive when there is adequate economic infrastructure to support their activities. For instance, it will be difficult to transport gold or timber out of a country if the road network, at a minimum, cannot facilitate movements from the mine or forest to the port. Moreover, the port facilities are required to facilities export of these resources especially because the natural resources that are taken from Africa are sent to the industrialised world for processing. Consistent with this reasoning, we find a positive relationship between infrastructure and FDI inflows.

Infrastructure is an important determinant of FDI inflows into non-conflict countries because these countries are expected to have better infrastructure in place which serves as a motivating factor for foreign investors to invest in these countries. The statistical significance of the coefficients also suggests that the data supports our assertion. The size of the coefficients relative to the average for FDI also means that the effect of infrastructure on the amount of FDI received is very high. It is important therefore, that countries that have not experienced conflict will pay attention to their infrastructure if they want to attract more foreign investments. Dupasquier & Osakwe (2006) and Agbloyor et al. (2013) in their study on Africa, indicated that good infrastructure is crucial in attracting FDI into the continent. Luiz & Charalambous (2009) found that the availability of infrastructure is essential for more FDI inflows in countries in SSA.

Trade openness has a positive relationship with FDI flows. This attains significance both statistically and economically and is consistent with our expectation. We expected this to be the case because if it is established that foreign investors are resource seeking and they do not have a market for those resources in Africa. Thus, these investors extract the resources with the intention of exporting them so as to refine or process them in their country of origin. For this to happen, the host country's borders must be open in terms of trade in order to get many investors to undertake foreign investment activities in the host countries. Garriga & Phillips (2013) also found a positive and significant relationship between FDI and trade openness for developing countries that have never had conflict. Moreover, Asiedu (2002) found a positive effect of trade openness on FDI inflows in developing economies. Countries that are more opened have greater possibility of receiving more FDI flows (Agbloyor et al., 2013; Boateng et al., 2015). Hence, it is important that most resource endowed countries be more opened in order to attract more FDI. Furthermore, trade in this sample serves as a complement to FDI and this makes practical sense.

Market size once again has a negative but statistically significant effect on FDI inflows in non-conflict countries. This implies that the larger the market size, the less FDI inflows in non-conflict countries. Economic wise, the size of the market in the non-conflict sample is not really significant. The expectation prior to this study was a non- significant relationship since the motive of resource-seeking investors is to extract the resources and export them to their countries of origin. Asiedu (2006) also indicated in her paper that countries with abundant resources or large markets attract more FDI. In this case, the former is evident therefore it makes intuitive sense. Moreover, (Musila & Sigué, 2006) have already stated that the concept of market size as a factor in attracting FDI inflows to Africa is of the past.

Financial development is also positive and significant both economically and statistically. This was also expected because the more financially developed a country is, the more FDI it attracts due to the benefits that are associated with financial development. Aside this, countries that are not in conflict are expected to have the enabling institutional environment to support effective financial systems which in turn attract foreign inflows to enhance smooth flow of transactions across countries. The financial markets operate mostly with rules and regulations and it is institutions that establish these thus, in countries where institutions are vibrant, there would be well developed and effective financial systems which in turn attract more FDI. Luiz & Charalambous (2009) again stressed that a reliable financial system in host countries is considered a prerequisite by foreign investors before investing in such locations.

The *institution*al variables are largely positive and significant. This is expected since countries that are not in conflict tend to have strong and create the enabling environment for investors to operate. Institutional quality plays a crucial role in drawing FDI. Amendolagine et al. (2013); Bevan et al. (2004); Buchanan et al. (2012); Kolstad & Villanger (2008) had similar findings in different locations. Wang et al. (2013) particularly indicated that institutions play more significant role in attracting FDI in a developing economy than an advanced one.

It is salient to know that the institutional component (that is, voice and accountability) which was the only significant and positive factor in the conflict sample is not significant in this sample. This clearly brings out the fact that foreign investors consider different determinants when investing in various countries (in this context, conflict and non-conflict countries). Political stability in this

sample is negative and not significant. This is not strange because these countries are already stable politically, so this institutional factor would not be a significant determinant for foreign investors. In econometric terms, the fact that non-conflict countries are generally stable politically means that there is little variation in this index over time and this could explain the non-statistical significance of this variable.

Control of corruption, government effectiveness, regulatory quality and rule of law have positive and significant impact in attracting FDI to non-conflict countries whereas political stability and absence of violence as well as voice and accountability, though insignificant have positive and negative effect on FDI inflows respectively. These results emphasize the importance of good institutions in attracting FDI inflows in countries with enabling environments. The most significant of all which is the government effectiveness implies that the existence of quality public services as well as the quality and the degree of independence from political and civil service together with good policy formulation and effective implementation and reliable government's commitment to such policies attract much FDI in countries that have such characteristics in place. These factors would motivate investors to invest because of the assurance they would get for a smooth flow of their transactions.

With regards to the control of corruption and the rule of law, investors are concerned about the respect of citizens and the state for the institutions that govern economic and social interactions among them. The rule of law which captures the extent to which agents (foreign investors in this regard) have confidence in and abide by the rules of society, with particular emphasis on good contract enforcement and other law and order measures as well as the extent of crime and violence.

Control of corruption which measures the extent to which public authority is exercised for private gain is of great concern to foreign investors to enhance the safe-keeping of their acquired resources.

Table 4.15 Determinants of FDI to Non-Conflict Countries

	FDI	FDI	FDI	FDI	FDI	FDI
NATRES	0.25086**	0.27629***	0.24252**	0.25858**	0.26047**	0.24108*
	(0.09902)	(0.09467)	(0.11579)	(0.10943)	(0.10721)	(0.11988)
INFRAS	0.01980**	0.01990**	0.01922**	0.01990**	0.01999**	0.01892**
	(0.00824)	(0.00840)	(0.00928)	(0.00878)	(0.00886)	(0.00830)
TRDOPEN	0.23884**	0.24326**	0.23220**	0.23458**	0.23202**	0.23261**
	(0.10666)	(0.11036)	(0.10898)	(0.11237)	(0.10826)	(0.11023)
MKTSIZE	-0.09535**	-0.08715**	-0.09486**	-0.09491**	-0.09654**	-0.09372**
	(0.03806)	(0.03505)	(0.04368)	(0.04212)	(0.04171)	(0.04150)
FINDEV	0.17851**	0.15655**	0.18816**	0.17289**	0.18057**	0.18542**
	(0.06656)	(0.06868)	(0.07165)	(0.07044)	(0.07166)	(0.07045)
CC	0.06421**					
	(0.03118)					
GE		0.09069**				
		(0.04159)				
PV			0.00557			
			(0.01617)			
RQ				0.04083*		
				(0.02219)		
RL					0.06398*	
					(0.03450)	
VA						-0.00414
						(0.02926)
Constant	1.89838**	1.73558**	1.86363**	1.88127**	1.92957**	1.83743**
	(0.76994)	(0.71058)	(0.88090)	(0.84894)	(0.85208)	(0.83906)
Observations	391	391	392	392	392	392
Number of countries	33	33	33	33	33	33
Adjusted R-squared	0.41926	0.42853	0.39888	0.40570	0.41298	0.39863

FDI-Foreign Direct Investment, NATRE- Natural Resources, INFRAS-Infrastructure, TRDOPEN-Trade Openness, MKTSIZE-Market Size, FINDEV-Financial Development, CC-Control of Corruption, GE-Government Effectiveness, PV-Political Stability and Absence of Violence or terrorism, RQ- Regulatory Quality, RL-Rule of Law, VA- Voice and Accountability.

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

On the contrary, Voice and Accountability which measures extent of freedom of expression, association and media as well as the extent to which political leaders does not play a major role in determining FDI inflows to countries that have not experienced conflict over our sample period.

4.7 Are there differences between conflicts and non-conflict countries?

The discussions so far have shown clearly the factors that determine FDI flows to conflict countries are different from those that determine FDI flows to non-conflict countries. Firstly, we find that while natural resources, trade openness, infrastructure and market size are important in attracting FDI to both categories of countries, the direction of influence is heterogeneous. For instance, while abundant natural resources and trade openness draw FDI to non-conflict countries, it deters FDI to conflict countries. For market size and infrastructure, we find that they affect both conflict and non-countries in like manner. Institutions were important to investors for the non-conflict sample but not important in our conflict sample. In the full sample, however, two variables, infrastructure and market size, were important in drawing FDI to SSA.

Our result for non-conflict sample is largely similar to most literature done in African context. We explain this to mean that those studies probably took samples which were largely non-conflict hence, the resultant outcome. We have therefore established that when disaggregated, countries that experienced conflict during the study period face different determinants from those that did not. To test the statistical veracity of this observation, we conducted the chow test of parameter stability. The null hypothesis of the test is that the coefficients of the two samples are not different. We however, reject the null hypotheses based on the results of the test and concluded that the two samples are indeed different. Table below shows the results of the chow test. The formula for the Chow Test is:

$$F_{(k,N_1+N_2-2k)}=\frac{[SSE_p-(SSE_1+SSE_2)]/k}{(SSE_1+SSE_2)/(N_1+N_2-2k)}$$

Where SSE_p= sum of squared error term for pooled model

SSE_1 =Sum of squared error for group 1

SSE_2 = Sum of squared error for group 2

Group 1- conflict sample Group 2- non-conflict sample

K= number of estimated parameters including constant

N_1= number of observations for group 1

N_2= number of observations for group 2 $N_1+N_2=N$

N=sum of observations for group 1 and group 2

Table 4. 14 Chow test results according to order of regression tables

Model	F-Statistics
Model 1	$F_{7,526}=\frac{(5.526067-1.44165571-3.11259289)/7}{(1.44165571+3.11259289)/(146+394-2(7))}$ =16.0345246
Model 2	$F_{7,526}=\frac{(5.5238315-1.44893503-3.12887598)/7}{(1.44893503+3.12887598)/(146+394-2(7))}$ = 15.52853151
Model 3	$F_{7,527}=\frac{(5.52390956-1.43662646-3.12552042)/7}{(1.43662646+3.12552042)/(146+395-2(7))}$ =15.87125365
Model 4	$F_{7,527}=\frac{(5.5203266-1.44912528-3.10399909)/7}{(1.44912528+3.10399909)/(146+395-2(7))}$ =15.99264699
Model 5	$F_{7,527}=\frac{(5.52566665-1.4429681-3.12705758)/7}{(1.4429681+3.12705758)/(146+395-2(7))}$ =15. 74304349
Model 6	$F_{7,527}=\frac{(5.51948624-1.40728953-3.13178177)/7}{(1.40728953+3.13178177)/(146+395-2(7))}$ =16.26130858

F (5%) Critical = 2.01. Thus, we reject null and conclude that the two subsamples are different for all specifications.

4.8 Chapter Summary

In this chapter, we presented and discussed the results of the study. The chapter presented the descriptive statistics as well as discussion of these statistics. We presented and discussed briefly the correlation matrices, VIF results and other diagnostic tests. Our models were estimated using the fixed effect model after performing the Hausman specification test. The regression results as well as a discussion of the results were presented. The results all together showed that the factors which determine FDI to Sub-Sahara Africa differ from one country to another on the basis of whether the country is classified as being a conflict or non-conflict country. This classification was based on whether the country has recorded at least 1000 battle related deaths in any single year between 1996 and 2010. For the full sample, we find that financial development and infrastructure had positive and significant relationship with FDI flows while trade openness and market size attained negative but significant effect on FDI. Natural resources and all institutional variables were positive but not significant in determining FDI flows. In the conflict sample, it was discovered that natural resources, trade openness and market size negatively and significantly affected FDI inflows whereas infrastructure positively impacted FDI. Institutions and financial development had no significant effect on inward FDI. Trade openness, natural resources, institutions, infrastructure and financial development had positive and significant impact FDI flows but market size attained negative and significant effect on FDI in the non-conflict sample.

In a nutshell, the differences between the conflict and non-conflict samples within the period of study are that; whereas natural resources and trade openness positively impacted FDI inflows in the non-conflict countries, these variables adversely affected FDI inflows in conflict countries. Additionally, financial development and institutions are important determinants of FDI in non-conflict countries but these variables do not matter in conflict countries. On the other hand, market

size and infrastructure had similar effect on FDI in both samples. To answer the question of whether there are indeed differences between conflict and non-conflict samples and also to ascertain whether the differences are not just due to chance, we conducted the *chow test* of parameter stability which showed that the parameter estimates were different across the two sub-samples and that the differences were not due to chance. It is also worth noting that the non-conflict results largely exhibited characteristics of existing FDI studies done in the context of Africa. This observation is very profound because it gives a firm grounding for the results obtained for the three samples used and this also highlight the essence of this study.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Overview of Chapter

This chapter concludes the research report. We present here first, a summary of findings and then offer some conclusions and recommendations based on the findings. These are presented in sections 5.1, 5.3, 5.4 and 5.5 respectively.

5.2 Summary of Findings

The purpose of this study was to ascertain the factors that determine inward FDI to Africa and to bring to the fore the differences in the factors that matter in determining the destination of FDI in Africa according to whether or not a country has ever been in conflict. Consistently, three objectives were set *viz;* (1) to determine which factors are important in attracting inward FDI to sub-Sahara Africa; (2) to determine the factors that attracts FDI to conflict countries; (3) to determine the factors that attracts FDI to non-conflict countries.

We achieved these objectives using a sample of 46 countries drawn from sub-Saharan Africa over the period 1996 to 2010. The Fixed Effects method was used as the principal estimation technique for the regressions after the Hausman test was conducted. We also conducted descriptive and correlation analysis, as well as additional diagnostic testing for the various samples used. These included the Chow test and an analysis of the variance inflation factor (VIF). Overall, the results show that the factors which determine FDI to sub-Sahara Africa differ from one country to another on the basis of whether the country is classified as being a conflict or non-conflict country.

With regards to the first objective, the study revealed that financial development and infrastructure were positively and statistically significant in attracting FDI inflows to SSA while market size and trade openness showed inverse but significant relationship with FDI. Natural resources and all the institutional variables though positive, did not attain statistical significance. With the second objective, it was found for the study period that, in conflict countries, financial development and institutions did not matter. Infrastructure attained a positive significance with FDI whereas natural resources, trade openness and size of market at large had a significant but negative effect on FDI. Lastly, for the third objective, natural resources, infrastructure, trade openness, financial development and institutions (with the exception of voice and accountability and political stability) had positive and significant impact on FDI inflows whereas market size, though significant had a negative effect on FDI in the non-conflict sample.

There are clear differences in majority of the variables. It can be observed that while natural resource positively affected FDI inflows in non-conflict countries, there was an inverse relationship for the conflict counterparts. Trade openness, which positively affected FDI in non-conflict countries, negatively impacted FDI in conflict countries. Institutions and financial development were important in determining FDI inflows in non-conflict countries but these same variables did not really matter in the conflict countries. Chow tests conducted for all specifications confirmed the statistical veracity of these results by showing that these observed differences in the determinants of FDI to the conflict and non-conflict samples were not simply due to chance.

The implications for these results are that first; the factors that attract investors to conflict countries are different from that of non-conflict countries within the period of study and the sample used.

Secondly, that even though conflict countries receive more FDI on average, this is not because of natural resources. Finally, there is heterogeneity among countries in Africa therefore they should not be seen as having same characteristics.

5.3 Conclusion

Over the last two decades, while FDI flows have increased globally, these flows have also been fairly volatile. Overall, flows to developing countries have grown tremendously over the period. Unfortunately, however, compared to other regions, Africa has consistently been the least recipient of FDI in the world. Previous authors have attempted to explain why Africa is the least recipient of FDI. One of the reasons is the fact that Africa is regarded to be unsafe for foreign investments due to political instability, violence, disease and lawlessness.

Sadly as it may seem, this view of Africa cannot be generalised to include all countries since there exist some heterogeneity among African countries with regards to these factors. It is because of this that we undertook this study to identify whether investors distinguish among African countries that can be considered to be safe and those that we can agree are unsafe. Countries that are regarded as safe are known as non-conflict countries while unsafe countries are referred to as conflict countries. This classification may not seem obvious at first glance; however, we determine unsafe by whether the country has recorded 1000 battle related deaths in any given year from 1996 to 2010.

On the basis of our results, our principal conclusion is that, there are indeed differences in the factors that attract FDI to Africa for countries that are classified as conflict and those that are

classified as non-conflict. This confirmed the argument that investors have different motives for investing in any location of their choice- whether risky or otherwise.

5.4 Recommendations

To start with, policies geared towards natural resources sustainability should be properly formulated and effectively implemented in order to enhance investment flows in the resource sector as well as preserve the environment for future generations. This would also help minimize the illegal activities and other unscrupulous means of exploiting these resources which sometimes destroy the environment (especially, the land and water bodies). This would go a long way to encourage more foreign investors to invest in the resource sector since our full sample revealed that resources do not play significant role in drawing FDI into the sub-region.

Developing countries generally have underdeveloped infrastructure thus, policies should be directed towards providing very good, reliable and adequate infrastructure in order to enhance ease of doing business which would serve as a motivating factor for investors who would come and invest in SSA. For non-extractive countries, it is crucial to have large market sizes. Thus, trade blocs should be highly encouraged in order to attract market-seeking FDI.

Countries that experience conflicts can work towards avoiding the FDI-resource curse that Asiedu (2013) indicated. This can be done by formulating and implementing policies that would help sustain capital-intensive and long term projects. When such policies have been put in place, favourable trade policies should be enacted in order to attract more inward FDI. To be able to effectively carry out such ideas, there is the need to strengthen the existing institutions since

conflict countries within the period of this study had weak institutions relative to their non-conflict counterparts. Since infrastructure (in terms of mobile and telephones) plays vital role in attracting FDI even when countries have experienced conflicts, it is imperative that governments of these countries promote and support infrastructural development. This is important because businesses do better when the necessary social and economic infrastructure are in place. Lastly, conflict countries should aim at being more democratic and give the media the freedom to operate even in times of conflicts since investors still look out for such qualities in conflict locations due to the global nature of many MNCs' activities.

For non-conflict countries, the financial systems should continue to be regulated and highly monitored to continue to serve as a booster for FDI inflows since their roles cannot be done away with in international transactions. Institutional development should be of great concern to policymakers in order to attract high FDI inflows which can result in economic development. The resource sector should be more equipped with the needed machinery to enable resource-seeking investors to find the sector more attractive. Trade openness only attained positive and significant relationship with FDI in the non-conflict sample. Thus, countries that fall under this category should create a business-friendly economic environment in order to enhance further FDI flows.

5.5 Future Research

Future research should examine additional factors that attract foreign investors to the conflict countries since they still have certain qualities that are desirable for foreign investments. While conflict is bad in no uncertain terms, investors who come to Africa appear to have a taste for conflict countries regardless. This was evident in the descriptive statistics where we observed that

conflict countries received more FDI than non-conflict countries. Additionally, research needs to investigate further as to why investment goes to conflict countries. Lastly, future research should use more recent data as soon as they become available since our sample period ended in 2010.

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