# The impact of Rwanda's investment climate on attracting foreign direct investment flows

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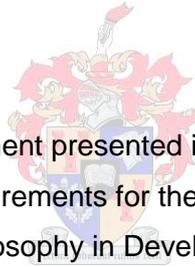
Research assignment presented in partial fulfilment
of the requirements for the degree of
Master of of Philosophy in Development Finance
at Stellenbosch University

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# D e c l a r a t i o n

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N Baloyi                                                                                                          19 May 2015

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# A c k n o w l e d g e m e n t s

To my mother Lucy Njhaki, my two sisters, Gavaza and Nthlolameri, and my line manager, Mandisi Nkuhlu, thank you for your unwavering support and encouragement throughout this Master's degree. To my late father, Donald Risenga, thank you for encouraging me to pursue this Master's degree. I know you were deeply passionate about education and I am certain that I have made you proud.

To my erudite supervisor, Charlene Gerber, thank you for your professional guidance, enthusiastic encouragement and useful critiques of this research work.

I also wish to express my deep gratitude to my classmate and sidekick, Petros Abrahams, who continuously reminded me to submit all my assignments on time, to always aim for a distinction and to put my all in this research paper. I value the fact that we soldiered this Master's Degree journey together, even though we fought the majority of the time.

Lastly, it would have been impossible to enrol and attend block classes of this Master's Degree if it had not been for the financial assistance and support of my employer, the Export Credit Insurance Corporation of South Africa SOC limited, I sincerely thank you.

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# A b s t r a c t

Foreign direct investment (FDI) has become an increasingly important element for economic development and integration for developing countries, least developed countries and transition economies. Following the 1990's frenzy of promoting trade liberalisation and enacting foreign investment policy reforms in developing countries, developing countries have enjoyed amplified FDI inflows and economic growth rates. Rwanda was among the countries that embarked on a journey to reform its foreign investment policies and endorse trade liberalisation.

The main purpose of this study was to develop an empirical framework to examine the impact of an improved investment climate on attracting FDI by employing a panel-data set of Rwanda for the period 1980 to 2013. The regression model in the study used six explanatory economic variables that were likely to influence Rwanda's FDI attractiveness, namely GDP (measures the market size), GDP per capita (measures the productivity), inflation (measures the country risk and macroeconomic policy), mobile telephone (measures the technological infrastructure), openness (measures the trade liberalisation), and secondary school enrolment (measures human capital). The study found GDP, GDP per capita and secondary school enrolment to be the main economic variables that lure FDI inflow to Rwanda. The study also found the abovementioned explanatory variables to be statistically significant determinants of FDI inflows into Rwanda.

**Key words**

Foreign direct investment

Investment climate

Economic growth

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# List of acronyms and abbreviations

| | |
|---|---|
| BoP | Balance of payments |
| BNR | National Bank of Rwanda |
| EAC | East African Community |
| EU | European Union |
| FDI | Foreign Direct Investment |
| FPI | Foreign Private Investment |
| GDP | Gross Domestic Product |
| GDPpc | Gross Domestic Product per capita |
| RGDP | Real Income Gross Domestic Product |
| ICF | Investment Climate Facility |
| ICT | Information and Communications Technology |
| ICSID | International Centre for Settlement of Investment Disputes |
| IMF | International Monetary Fund |
| IPR | Intellectual Property Rights |
| LDC | Least Developed countries |
| M&A | Mergers and acquisitions |
| MENA | Middle East and North Africa |
| MIGA | Multilateral Investment Guarantee Agency |
| NISR | National Institute of Statistics of Rwanda |
| OECD | Organisation for Economic Co-orporation and Development |
| OLS | Ordinary Least Squares |
| PSF | Private Sector Federation |
| RDB | Rwanda Development Board |
| RSS | Residual Sum of Squares |
| SOC | State-owned company |
| SSA | Sub-Saharan Africa |
| TNC | Transnational Corporation |
| TRIPS | Trade Related Aspects of Intellectual Property Rights |
| UNCTAD | United Nations Conference on Trade and Development |
| USA | United States of America |
| US$ | United States Dollars |
| WEO | World Economic Outlook |
| WTO | World Trade Organisation |

# C H A P T E R   1
# I N T R O D U C T I O N

## 1.1    INTRODUCTION

One remarkable feature in the world economy has been foreign direct investment (FDI). FDI has materialised and gained acceptance as one of the most stable and sought-after sources of development finance in developing countries (Kotrajaras, Tubtimtong and Wiboonchutikula, 2011). Just like many governments in developing countries, the government of Rwanda recognises FDI as a stable and long-term source of external finance, which has great potential for promoting economic growth and development in Rwanda.

Over the past few decades, FDI has grown tremendously, superseding world trade (Maliampally and Sauvant, 1999; Summer, 2008). Growth in FDI was noticed as early as the early 1980s. During the period 1980 to 1997, global FDI increased at an average rate of about 13 per cent, in comparison to a miserly seven per cent growth in world trade (Maliampally and Sauvant, 1999). During the same period, FDI inflows to Rwanda increased at an average rate of ten per cent, while trade in Rwanda grew at four per cent on average (UNCTAD, 2015).

In support of the popularity of FDI, Agosin and Machado (2005) found that FDI was the major contributor to and comprised a rising share of total capital in developing countries, especially in Latin America during the period 1990 to 2000. According to Cevis and Camurdan, (2007), trade openness and strong economic growth explained the upsurge in FDI inflow, particularly in developing countries. The United Nations Conference on Trade and Development (UNCTAD) (2009) and Morris and Aziz (2011) espoused rapid globalisation as the key driver of the growth in FDI flows. Cevis and Camurdan (2007) also maintained that high commodity prices stimulated growth in FDI flows, particularly to countries that were richly endowed with natural resources. Cevis and Camurdan, (2007) further asserted that the increase in cross-border mergers and acquisition (M & A) activity also contributed to the upsurge in FDI inflows. As a result, the massive growth in FDI flow laid a solid foundation for a marked expansion of international production by transnational corporations (TNCs). However, Adams (2010) warned that when TNCs considered where to invest they should take a country's characteristics into account, i.e. the locational advantages such as the market size and the investment climate. Adams (2010) and Dollar, Hallward-Driemeier and Mengistae (2006) stated that an ideal investment climate encompasses a stable macroeconomic environment, adequate infrastructure such as telecommunication, financial markets and transportation networks, and skilled human capital, among other factors.

An extensive body of literature accentuates the importance of a conducive investment climate as a means to attract FDI inflow (Kormendi and Meguire, 1985; Hall and Jones, 1999; Rodrik and Subramanian, 2003; Dollar *et al.*, 2006; Cevis and Camurdan, 2007; Sekkat and Veganzones-

Varoudakis, 2007; Adams, 2010; Kinda, 2010; Morris and Aziz, 2011). In addition, Navaretti and Venables (2004) alleged that a sound investment climate had great benefits, such as reduced costs of doing business, which successively led to higher and more certain returns on investments.

According to UNCTAD (2013), a rising number of governments are keen to attract and facilitate FDI as a means for productive capacity building and sustainable development. As a result, an overwhelming number of national policymakers have prioritised improving FDI policy frameworks, particularly in developing countries. By 2012, at least 53 economies worldwide had implemented 86 policy measures that influence foreign investment into their native countries. The bulk of these measures related to the liberalisation, facilitation and promotion of foreign investments, especially within the service sector.   Other policy reforms included privatisation and the establishment of special economic zones (UNCTAD, 2013). Maliampally and Sauvant (1999) and  Dollar *et al.*, (2006) found that trade liberalisation coupled with deregulation and privatisation improved TNCs' access to new and untapped markets, including those markets that were previously protected. Maliampally and Sauvant (1999) further cautioned that although reformed policy frameworks amplified FDI attractiveness, the effect was asymmetric, meaning that the reforms did not guarantee that external investors (if any) would ultimately invest in the countries that had liberalised their business environments.

Developing countries have been the most vigorous countries of all economies, taking radical strides to pursue reformed strategies to enhance their competitiveness in order to attract FDI inflows. During the past few decades, developing countries, including Rwanda, have liberalised their national policies to establish favourable regulatory frameworks for FDI by relaxing rules concerning market entry and foreign ownership, amongst others. Developing countries have also improved the functioning of their markets and the treatment accorded to foreign firms (Morris and Aziz, 2011). Maliampally and Sauvant (1999) emphasised that in addition to enacting enabling FDI policy frameworks, host countries must also pay more attention to other factors that greatly influenced foreign investors' location decisions, such as regional investment treaties and double-taxation treaties. Ingeniously, Maliampally and Sauvant (1999) further emphasised that as FDI policy frameworks became more similar, countries must take radical strides to differentiate themselves from other countries by focusing more on business enabling measures that include investment promotion, investment incentives, post-investment services and improvements in physical amenities. For example, providing sound and effective post-investment services is critical as it encourages reinvestment into the host country by existing investors.

While it is granted that a conducive investment climate coupled with business enabling measures and treaties are essential to lure FDI flows, Kinda (2010) explicitly argued that developing countries need to do more than just reform their FDI policy frameworks, because developing countries lack well-developed physical and financial infrastructure. Moreover, developing countries (especially sub-Saharan Africa) have widely dispersed populations, imperfect regional integration and a lack of

'agglomeration economies', which arises from the grouping of economic activities, and competitive pricing of resources and facilities (Maliampally and Sauvant, 1999). Adams (2010) further asserted that the even bigger challenge facing developing countries is not merely attracting FDI, but rather the way in which developing countries make effective use of the FDI inflows to generate sustainable growth that is greatly needed to eradicate poverty and ultimately improve the quality of life in developing countries.

While a substantial number of governments around the world have focused on reforming their investment climates in order to attract more FDI flows into their economies, a rising number of governments are in reverse, also reinforcing their old regulatory regimes and tightening their screening and monitoring procedures for foreign investments. Unsurprisingly, the stringent and deterring investment policies are increasingly applied to strategic industries, such as the extractive industries. To put this into measurable perspective, the UNCTAD World Investment Report (2013) found that the share of FDI-related restriction regulations had increased to 25 per cent in 2012 from a low six per cent in 2001, while the liberalisation of FDI policy frameworks declined to 75 per cent from 94 per cent in 2000 (refer to Figure 1.1).
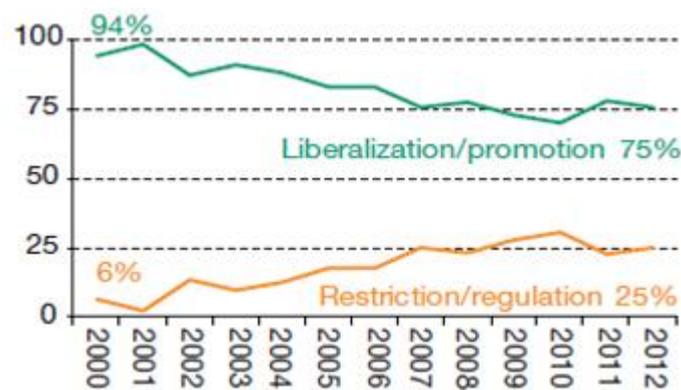


**Figure 1.1: Liberalisation vs impeding reforms of countries' investment climate 2000-2012**

Source: UNCTAD (2013).

Even though there is undisputed consensus that favourable FDI policies are an integral catalyst for attracting FDI, Krifa-Schneider and Matei (2010) proposed that trade barriers promote inward direct investment because they encourage TNCs to shift from international trade to increased domestic production in the host country. Dollar *et al.*, (2006) refuted claims made by Krifa-Schneider and Matei (2010) and firmly stated that opportunity costs arose in countries that were infused with high bureaucracy, red tape and trade barriers. The adverse effect of such rigorous regulation is that these countries will find it difficult to attract potential foreign investors to locate in their countries. Maliampally and Sauvant (1999) and Kinda, Plane and Véganzonès (2011) supported Dollar *et al.*, (2006), by attesting that restricting the openness of an economy, through nationalisation or strict barriers to entry, significantly reduced FDI inflow to host countries and largely restricted investment opportunities.  Rowat (1992) further conceded that developing countries might experience an

erosion of investor confidence when they reinforced restrictive FDI policy frameworks, which could ultimately compound the problem of capital flight. Overall, the UNCTAD (2014) was of the opinion that there was an on-going risk that some of these restrictive measures were being undertaken for protectionist purposes.

## 1.2    PROBLEM STATEMENT

A majority of empirical studies on FDI policy reforms in investment climate focuses on FDI inflows to developing countries in Asia and South America, with few studies focusing on FDI policy reforms in SSA. Although UNCTAD (2015) revealed that the volume of FDI flows to SSA had increased substantially from the 1980s, the upsurge in FDI inflow to SSA received very meagre attention in literature. No study has focused exclusively on FDI policy reforms and trade liberalisation regimes in SSA or in Rwanda when investigating the impact of a country's investment climate on attracting FDI.

However, Sekkat and Veganzones-Varoudakis (2007), Ndikumana and Verick (2008), and Morris and Aziz (2011), were amongst the few authors in literature that focused on SSA when it came to the topic of FDI inflow. For example, Sekkat and Veganzones-Varoudakis (2007) examined the relationship between openness and FDI in 35 African countries together with 37 developing countries in South America and Asia during the 1990s. Ndikumana and Verick (2008) focused on the linkage between FDI and domestic investment in SSA from 1970 to 2004. Morris and Aziz (2011) concentrated on the ease of doing business and FDI inflow to SSA and Asian countries during the period 1980 to 2004. Overall, none of these studies focused solely on FDI policy reforms and trade liberalisation regimes in SSA or in Rwanda when investigating the impact of a country's investment climate on attracting FDI.

## 1.3    RESEARCH OBJECTIVES

### 1.3.1    Research questions

The primary research question of the research is whether the World Bank Rwanda Investment Climate Reform Programme has successfully helped improve the attractiveness of FDI flow into Rwanda.

### 1.3.2    Research aim

The proposed research aimed to prove that the radical strides undertaken by the Government of Rwanda to improve its business environment, as a result of the successful implementation of the World Bank Rwanda Investment Climate Reform Programme, has positively contributed to the increased FDI inflow into Rwanda.

### 1.3.3    Scope of the study

The subject of FDI inflow and its determinants is broad and complex. However, this study only focused on FDI inflows during the period 1980 to 2013. For the purpose of this study, FDI stock, FDI outflows and other sources of external private financing did not form part of the study and as such were not analysed in the study.

### 1.4    CHAPTER OUTLINE

This study is divided into seven chapters. Chapter 1 provides the background to the research, the problem statement, the research question and the aim and scope of the study. The literature review is presented in Chapter 2. Chapter 3 presents an overview of FDI, its characteristics and trends. Chapter 4 takes a closer look at Rwanda's investment climate and FDI inflows. Chapter 5 outlines the specific methodology employed in the study together with the empirical analysis. The findings and detailed discussions of the empirical analysis of the study are presented in Chapter 6. Lastly, Chapter 7 provides a summary of the main findings, the limitations of this study and a consolidated conclusion. The recommendation for future research is also included in Chapter 7.

# C H A P T E R   2
# L I T E R A T U R E   R E V I E W

## 2.1      INTRODUCTION

This chapter reviews a broad range of theoretical and empirical literature on the effects of a country's investment climate as an integral catalyst for attracting FDI inflow. This chapter highlights the fundamental role played by FDI and its significance, the determinants of attracting FDI, variables that contribute to establishing a conducive investment climate, and the contention of FDI.

## 2.2      FUNDAMENTAL ROLE PLAYED BY FDI AND ITS SIGNIFICANCE

According to Neal and Bennett (1994), Borensztein, Gregorio and Lee (1998), Ndikumana and Verick, (2008), and UNCTAD (2011), FDI inflows play a fundamental role in a host country's economy, by boosting economic growth, integration and augmenting progress towards achieving developmental goals. The overarching effects of FDI inflows successively increase the recipient country's competitive position in the global environment (Borensztein *et al.*, 1998).

To demonstrate the nexus between FDI inflows and economic growth, Borensztein *et al.*, (1998) examined the impact of FDI inflows from industrial countries against domestic investment to economic growth in 69 recipient economies in developing countries. The results found that FDI contributed more to economic growth in developing countries than did domestic investments. The results, however, cautioned that the positive effects of FDI inflows only became apparent when the recipient country had a minimum level of skilled human capital (Borensztein *et al.*, 1998). The overarching results found by Borensztein *et al.*, (1998) also found evidence of the FDI crowding-in effect, that is, a unit increase in net FDI inflow resulted in an increase in total investment in the host country of more than one unit. De Gregorio (1992) further found FDI to be three to six times more efficient than domestic investment. Kose, Prasad, Rogoff and Wei (2006) and Adams (2010) found that the impact of FDI on economic growth was dependent on a host economy's economic foundation. Countries that possess appropriate conditions such as a sufficient level of financial market development, institutional development, better governance and appropriate macroeconomic policies tend to reap better growth and stability benefits from FDI.

With regard to the effects of FDI on economic growth, Qureshi and Te Velde (2013) maintained that FDI stimulated firm productivity, which in turn increased aggregate output because of improved efficiencies. Kinda *et al.*, (2011) examined the relationship between the FDI firm productivity performances of eight manufacturing industries in 22 countries. Of the 22 countries, five were in the Middle East and North Africa (MENA) and these five countries were compared to 17 other emerging economies with particular focus on India and China. The results found that MENA countries underperformed when compared to other emerging economies. The

underperformance was mainly driven by insufficient economic reforms and a plagued investment climate that crippled the manufacturing sector's competitiveness. The inefficiencies in firm performance was explained by the poor quality of infrastructure, low levels of education of the labour force, the cost and access to capital and weak relations between business and government. Overall, Kinda *et al.*, (2011) concluded that a deficient investment climate was a bigger contributor to loss of domestic and international competitiveness. In summary, Kinda *et al.*, (2011) conceded that improvements in firm productivity in the manufacturing sector positively contributed to growth, since the manufacturing sector is an area renowned for pioneering innovation and an engine for long-term economic growth. As a result, Kinda *et al.*, (2011) proposed that MENA countries should focus on improving their investment climate, particularly the efficiencies in the manufacturing sector.

Beyond the macroeconomic stimulus that host countries enjoy because of increased FDI inflow, host countries also enjoy an array of assets that are generally scarce, particularly in developing countries. These array of assets, amongst others, include cutting-edge technology, managerial skills, channels to market domestic products in the international market, transfer of skills and access to capital goods at lower prices (Agosin and Machado, 2005; Borensztein *et al.*, 2008). The application of the more advanced technologies however, requires the presence of skilled human capital in the host country (Borensztein *et al.*, 2008).

## 2.3     DETERMINANTS OF ATTRACTING FDI INFLOW

In order for host countries to enjoy the array of assets that arise from FDI inflows, a massive body of literature emphasises that it is essential for host countries to have an investment climate conducive to attract FDI into their respective economies. According to Bannock (2005), Herzberg and Wright (2005) and Te Velde, (2006), a sound investment climate generated confidence and trust among foreign investors and it subsequently improved the quality of public and private sector investment spending. A sound investment climate also encourages market friendly institutions and policies that lead to a better allocation of resources, which ultimately foster economic growth. During the period 1950 to 1985, De Gregorio (1992) used panel data to examine determinants of economic growth in 12 Latin American countries. De Gregorio (1992) found that a sound macroeconomic environment coupled with substantial physical and human investment was fundamental in driving economic growth in a host country. On the other hand, Kinda (2010) analysed 77 developing countries and 33 604 firms, including 4 660 foreign firms during the period 1970 to 1996. The results established that regions with a better investment climate attracted relatively more foreign firms. Furthermore, regions with better access to telecommunication, formal credit, reliable electricity and the availability of safe road networks encouraged economic activities, thus attracting foreign firms.

Some of the factors that contribute to establishing a conducive investment climate include sound macroeconomic fundamentals, appropriate financial development, skilled human capital, government expenditure on infrastructure, degree of openness, domestic investment, investor protection and institution development among other factors, and which will be discussed in the next section.

## 2.4 VARIABLES THAT CONTRIBUTE TO ESTABLISHING A CONDUCIVE INVESTMENT CLIMATE

### 2.4.1 Sound macroeconomic environment

Determinants of investment location differ among countries and across economic sectors. However, certain factors constantly determine which countries attract the most FDI, and the better these factors are understood, the more investments countries are likely to receive (Bénassy-Quéré, Coupet and Mayer, 2007). Investors generally worry about the performance of a country's economy, because a weak economy typically means lower profit returns and vice versa for their investments. Therefore, investors cite sound macroeconomic fundamentals, reflected, amongst others, by the size of the host economy, a stable exchange rate, low inflation, sustained growth and growth prospects as some of the most significant determinants of attracting FDI.

GDP growth rate is the single best indicator of economic growth as it depicts the market size and the overall performance of the host economy. GDP enables investors to judge whether a country's economy is contracting or expanding and to establish whether a threat such as a recession or inflation is looming (RMB Global Market Research, 2015). Kinda *et al.*, (2011) emphasised that a strong economy of a host country crowds-in foreign private investment.

### 2.4.2 Appropriate financial development, skilled human capital and government expenditure on infrastructure

Kose *et al.*, (2006), Ndikumana and Verick (2008) and Kotrajaras *et al.*, (2011) conceded that countries that possessed appropriate economic conditions such as high levels of financial development, high education levels and high government expenditure on investment in infrastructure tended to reap better collateral benefits from FDI. Sound financial intermediaries for example, reduce the problem of opaqueness by communicating information about the risks or opportunities in the local market to foreign investors. This transparency conveys a message of confidence about profit (or lack thereof) opportunities in the host country and subsequently encourages increased FDI flows from foreign investors (Dollar *et al.*, 2006). To prove this positive relationship between FDI inflows and appropriate economic conditions, Kotrajaras *et al.*, (2011) used panel data to examine the influence of FDI in 15 East Asian countries classified by level of economic development. The results found that high-income economies such as Japan, Hong Kong, Singapore and Taiwan, which had high levels of education, adequate infrastructure, high financial development  and low levels of corruption, benefited more than middle-income economies

such as China, India, Malaysia and Thailand that had high financial development, but have low education levels and deficient infrastructure. On the contrary, low-income economies such as Vietnam, Cambodia and Myanmar benefitted less from FDI inflows. This is mainly because low-income economies have low education levels, low levels of public investment in infrastructure, poor financial development and are plagued by corruption. Ndikumana and Verick (2008) further found that high public investment in infrastructure reduced the cost of doing business, which raised the marginal return to FDI.

### 2.4.3    Degree of openness

Kinda *et al.*, (2011) alleged that countries that enacted trade liberalisation policy frameworks were better able to attract more FDI and successively export to uncharted markets. To test for the importance of an enabling and liberal investment climate, Dollar *et al.*, (2006) used 6 487 firms and examined whether a positive investment climate influenced the probability that a randomly chosen firm in a particular city would export.

Dollar *et al.*, (2006) found that increased exports and FDI flows to be significantly higher in locations where barriers were least observed. Overall, Dollar *et al.*, (2006) found that locations that had a favourable investment climate increased the probability of domestic firms entering into exporting activities in the international markets and these countries received a large amount of FDI. Sekkat and Veganzones-Varoudakis (2007) and Ndikumana and Verick (2008) also found the same results as Dollar *et al.*, (2006), namely that countries that opened their economies were better able to attract more FDI. To prove this relationship, Sekkat and Veganzones-Varoudakis (2007) used a panel of 20-72 developing countries to assess whether openness of a country, availability of infrastructure and sound economic and political environment led to increased attractiveness of FDI.

The results found that South Asia, Africa and the Middle East would have enjoyed greater benefits than other countries if they had had greater openness and a sound investment climate. The results further found that openness was significantly higher for FDI in the manufacturing sector than for total FDI. Sekkat and Veganzones-Varoudakis (2007) further asserted that the improvement of infrastructure and a stable macroeconomic and political environment could result in a far greater increase in FDI inflows that had more value-add than those resulting from greater openness of a country.

In contrast, Gregorio (1992) found no significant impact on the openness of an economy to attracting FDI and economic growth. In other words, openess to trade and international integration in an economy does not translate into attracting FDI flows into the host economy.

### 2.4.4    Domestic investment

High domestic private investments act as a signal of high returns to capital and this decoy successively invites foreign investment to host countries (Ndikumana and Verick, 2008).

Ndikumana and Verick (2008) emphasised that African countries would increase their competitiveness and attract more FDI if they made an effort to improve their domestic private investments. To examine the impact of domestic investment on attracting FDI, Ndikumana and Verick (2008) empirically analysed 38 countries in SSA for the period 1970 to 2005. The evidence found a strong bi-directional relationship between FDI and domestic private investment, where domestic private investment drove FDI and FDI crowds-in private investment into the host country.

### 2.4.5    Investor protection

When investors consider investing in a foreign country they want to be assured that the host country has efficient investor protection laws and civil and property rights. Intellectual property rights (IPR) have become part of the infrastructure that assists the attractiveness of FDI flows into a country (Knack and Keefer, 1995; Rodrik and Subramanian, 2003). After the World Trade Organisation (WTO) agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) was enacted on 1 January 1995, IPR policy reforms have been pursued, especially in developing countries. Advocates of IPR regimes attribute its importance to its dual purpose of promoting technological innovation and of attracting FDI inflows, which are essential determinants of growth (Adams, 2010).

Adams (2010) maintained that the establishment of an effective IPR policy framework had a significant effect on the business location decision of TNCs, prices and the market structure. Adams (2010) alleged that improved IPR encouraged firms to invest and to undertake production in foreign countries because of the extended protection of their ownership benefits. Furthermore, adequate protection of IPR assures foreign investors that their technology will not be leaked, because IPR protection decreases the probability of imitation as well as the risk of infringements. In countries were IPR protection is inadequate, Kalande (2002) found that most TNCs were only willing to invest in extractive industries and not in the technology sectors. Overall, Adams (2010) reported that firms that created intellectual property were unlikely to participate in foreign production in countries that had deficient IPR policy frameworks. On the contrary, Maskus (2000) argued that a robust IPR regime might have an adverse effect on FDI, as it may encourage TNCs to shift from local production to licencing. Maskus (2000) also substantiated that a sound IPR alone was not adequate for firms to invest in a country and that other variables such as a favourable investment climate, adequate infrastructure and economic growth were essential to attract FDI flows into a country. As an example, high-growth developing countries such as China and Brazil, with weak investor protection, have attracted most of the FDI to developing countries. In essence, Maskus (2000) conceded that the net effect of rigorous levels of IPR protection on FDI was theoretically ambiguous.

In order to examine the impact of IPR on FDI inflows, Adams (2010) used panel data for a cross-section of 75 developing countries during the period 1985 to 2003. The period of the study was chosen mainly to help examine whether the coming into effect of the TRIPS agreement in 1995

had any effect on FDI inflows. The results found that countries that strengthened their IPRs attracted more FDI inflow and technology into their countries. The results also found that TNCs were more open to investing in extractive industries rather than investing in technological industries in countries that had inadequate IPR protection. Moreover, Adams (2010) revealed that IPR reforms must be complemented by positive policies that strengthened improvements in physical, financial and institutional infrastructure to enhance the chances of attracting more FDI inflow. This is so because TNCs are always on the lookout for locational advantages, and they are consistently examining ways in which to operate their production more efficiently.

### 2.4.6    Political Insurance cover and arbitration regimes

Political risk, expropriation and nationalisation impede FDI inflows, particularly in developing countries and LDCs. In order to promote FDI flows to developing countries, the World Bank established the Multilateral Investment Guarantee Agency (MIGA) and the International Centre for Settlement of Investment Disputes (ICSID) as multilateral synergies to help improve the investment climate in developing countries (Rowat, 1992).

MIGA provides political risk insurance guarantees to private sector investors and lenders. MIGA also plays a fundamental role in filling the market gap by supplying reinsurance cover for political risk, thus allowing foreign investors to invest in countries that they would not ordinarily invest in. The establishment of MIGA has seen a number of developing countries enjoy an influx of FDI inflow. To date, MIGA has about 181 member countries globally and 48 of these member countries in Africa (MIGA, 2015). ICSID facilitates legal dispute resolution and conciliation between international investors, thus encouraging international flow of investment and mitigating non-commercial risks by a treaty signed by member countries. To date, ICSID has about 159 member states, 45 of which are in Africa (Rowat, 1992; ICSID, 2015). Rowat (1992) assessed the effectiveness of MIGA and ICSID and the impact they had on fostering a business environment that was more hospitable to attracting FDI flow to developing and LDC countries during the 1990s. Rowat (1992) found astonishing results, which showed that governments in developing countries benefited tremendously from increased FDI inflows, which was substantially higher than it would have been in the absence of a dispute resolution or political risk cover body. The results found by Rowat (1992) concluded that MIGA and ICSID has had a synergistic impact on FDI inflow to developing countries.

### 2.4.7    Sound institutional infrastructure

FDI has gained supremacy as a source of foreign private capital in developing countries and LDCs (UNCTAD, 2015). Therefore, in order for host countries to attract increased levels of FDI inflows they must improve their institutions. According to Bénassy-Quéré, Coupet and  Mayer (2007), good institutions exerted a positive influence on development through their promotion of investments. Bénassy-Quéré, Coupet and Mayer, (2007) emphasised the importance of good quality institutions

as vital determinants for attracting FDI.  For example, host countries with good governance are more likely to attract more FDI than host countries plagued by corruption.

Since FDI is susceptible to high sunk costs, FDI is vulnerable to any form of uncertainty, which may stem from poor government efficiencies, weak legal systems, policy reversals and weak enforcement of property rights. Therefore, good quality institutions are fundamental on attracting and retaining FDI host countries (Bénassy-Quéré, Coupet and Mayer, 2007).

## 2.5     CONTENTION AGAINST FDI INFLOWS

While FDI inflows have been well received worldwide, several studies, including Campos and Kinoshita (2002), Carkovic and Levine (2002) and Mencinger (2003), amongst others, found that FDI inflows impeded economic growth, which subsequently decelerates a host country's development. Lehnert, Benmamoun and Zhao (2013) emphasised that many governments in host countries perceive FDI as a potential threat to their sovereignty. Campos and Kinoshita (2002), and Carkovic and Levine (2002) found that FDI inflows led to market imperfections and unequal bargaining power, which limited efficiencies.

Mencinger (2003) maintained that TNCs exploited already weak economies by extraditing profits and funds out of the subsidiary company in the host country and back to the parent company in the foreign country. Mencinger (2003) also conceded that TNCs influenced the adoption of foreign consumer preferences and weakened the culture and values of the particular host country. Conversely, Neal and Bennett (1994) found that it is difficult for a country to open up its economy to global markets without experiencing an inflow of products, media, ideas and foreign trends, since economic growth and cultural change were interlinked. Overall, Neal and Bennett (1994) upheld the argument that TNCs played a fundamental role in the spread of peace and democracy worldwide and that TNCs empowered the indigenous population with money, resources and ideas.

## 2.6     SUMMARY

Without a doubt many analysts, economists, governments and policymakers agree with the assertion that FDI inflow plays a fundamental role in a host country, not only by boosting economic growth and promoting integration, but also by successively increasing the host country's competitive position. Beyond the macroeconomic stimulus that host countries enjoy because of increased FDI inflow, they also enjoy an array of assets that is generally scarce, particularly in developing countries. This array of assets includes cutting-edge technology, managerial skills, channels to market domestic products in the international market, transfer of skills and access to capital goods at lower prices, amongst others.

While FDI has received renowned acclaim, analysts state that in order for host countries to enjoy maximum FDI benefits, they must have complementary economic fundamentals in place. These complementary fundamentals include a high level of financial market development, good

governance, appropriate macroeconomic policies, a minimum level of skilled human capital and sufficient infrastructure in order for host countries to reap better growth and stability benefits from FDI flows. The next chapter provides an overview of FDI, its generic makeup, its characteristics and trends, and, most importantly, the way in which it has evolved over the last few decades.

# C H A P T E R  3
# O V E R V I E W   O F   F O R E I G N   D I R E C T   I N V E S T M E N T   C H A R A C T O R I S T I C S   A N D   T R E N D S

## 3.1    INTRODUCTION

FDI has evolved as an imperative source of private external finance for developing countries (Mallampally and Sauvant, 1999; Ndikumana and Verick, 2008). As such, developing countries, emerging markets and transition economies are increasingly viewing FDI as an integral component of economic development, income growth and integration (Cevis and Camurdan, 2007; Summer, 2008; Kotrajaras *et al.*, 2011). As a positive sign for developing countries, FDI has become the main source of development finance, indicating greater stability and return to confidence for longer-term productive investment (UNCTAD, 2011).

Traditionally, developed countries attracted the greatest portion of global FDI inflow, but their share has since declined, as developing countries, emerging markets and transition economies (*albeit* at a marginal rate) have become increasingly attractive recipient destinations for FDI. The share of total FDI inflows to developing countries increased from 26 per cent in 1980 to 37 per cent in 1997 (UNCTAD, 2002). Furthermore, from 2005 until 2014, the share of total FDI inflows to developing countries increased from 30.1 per cent to 55.5 per cent, while the share of total FDI inflows to developed countries decreased from 66 per cent to 40.6 per cent during the same period, see table 3.1 below (UNCTAD, 2015). According to Summer (1998) and UNCTAD (2002), the presence of FDI in developing countries is more important than in developed economies. This is mainly because beyond the macroeconomic stimulus from the actual foreign investment, FDI encourages growth by increasing total production output, capital formation and the efficiency of resource use in developing countries. In addition, developing countries also enjoy the inflow of production technology, skills transfer, innovation capacity and organisational and managerial practices that developed countries already possess.

FDI is the investment by TNCs in foreign countries in order to control assets and manage production activities in those particular countries. The difference between FDI and other major types of external private capital flows is that FDI comprises equity ownership and managerial control (Summer, 1998). Furthermore, FDI is a more stable form of investment and is largely driven by investors' long-term prospects for making profits in production activities that they directly control (Mallampally and Sauvant, 1999; Sekkat and Veganzones-Varoudakis, 2007). The UNCTAD defines FDI inflow as the value of inward direct investment made by foreign investors in the host economy, including reinvested earnings and intra-company loans, net of repatriation of capital and

repayment of loans. Therefore, FDI comprises of three categories: equity capital, which is new investment in a company, loans from affiliates or from shareholders and retained earnings.

**Table 3.1: FDI inflows 1990-2013 as percentage share in world FDI flows**

| Region | 1990 | 2005-2007 (pre-crisis averages) | 2009-2011 (post-crisis averages) | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|
| **Developed Economies** | - | 66.0 | 49.0 | 48.4 | 47.5 | 40.6 |
| Europe | - | 43.9 | 27.2 | 28.6 | 22.2 | 23.5 |
| N. America | - | 17.2 | 16.2 | 14.9 | 20.5 | 11.9 |
| **Developing Economies** | - | 30.1 | 45.2 | 45.6 | 45.7 | 55.5 |
| Africa | - | 2.7 | 3.4 | 4.0 | 3.7 | 4.4 |
| Asia | - | 19.4 | 27.8 | 28.6 | 29.2 | 37.9 |
| L.America | - | 7.9 | 18.8 | 12.7 | 12.7 | 13.0 |
| Oceania | - | - | - | 0.3 | 0.2 | 0.2 |
| **Transition Economies** | - | 4.0 | 5.9 | 6.1 | 6.8 | 3.9 |
| **Structurally weak, vulnerable and small economies** | - | - | - | 4.1 | 3.5 | 4.3 |

Source: UNCTAD (1990-2015).

The overarching benefits of FDI are well-documented (see Gastanaga, Nugent and Pashamova, 1998; Sekkat and Veganzones-Varoudakis, 2007; Kinda, 2010; Kinda *et al.*, 2011; Kotrajaras *et al.,* 2011). For instance, a majority of studies found that FDI stimulated positive technological spillovers, contributed to international trade integration, helped create a highly competitive business environment and supported the development of human capital through labour training and skills and knowledge acquisition. In addition, Rowat (1992), Knack and Keefer (1995), Acemoglu, Johnson and Robinson (2001), and Sekkat and Veganzones-Varoudakis (2007) found that FDI complemented domestic resources and subsequently sent a signal of confidence to potential investors. FDI also positively contributed to capital formation without the risks associated with repayment of loans (Gastanaga *et al.*, 1998). Collectively, these benefits positively contribute to improved long-run economic growth, which is an essential instrument for alleviating poverty mainly in developing countries. Furthermore, according to the UNCTAD (2002), over and above the contribution to enhanced economic growth, FDI may help improve the environmental and social welfare in the host country by, for example, introducing cleaner technologies and more socially responsible policy frameworks.

In order for countries to savour the significant benefits associated with increased FDI inflow, Sekkat and Veganzones-Varoudakis (2007), Dollar *et al.*, (2006) and  Kinda (2010) emphasised that countries should make measureable efforts to improve their investment climate with core focus on infrastructure (physical and financial) and openness in their economies. Infrastructure is considered as being complementary to private investment and is an important factor for developing countries. For example, well-built infrastructure in the manufacturing and services sector reduces

transaction costs as entrepreneurs can easily connect with their suppliers and customers. In addition to the improved investment climate, Schneider and Frey (1985) and Kinda (2010), highlighted that the economic, political and institutional frameworks of a country played a critical role in attracting FDI inflow to host countries.

There is no one-size-fits-all definition for investment climate. Dollar *et al.,* (2006) and Kinda *et al.,* (2011) defined investment climate as a well-structured regulatory environment encompassing institutional policies in which firms function. Knack and Keefer (1995) and Acemoglu *et al.,* (2001) defined investment climate as state-of-the-art institutions in a country. Kinda *et al.,* (2011) further underlined that highly qualified and experienced human capital, access to capital, and public-private relationships were essential components of a sound investment climate. Rowat (1992) highlighted four factors that contributed to the establishment of a conducive investment climate. Firstly, a sound macroeconomic environment, with stable exchange rates and trade policies, must be in place. Secondly, sound legal and regulatory frameworks, with constructive tax, labour, investment and property laws are essential. In addition, the environment must also protect the investor's intellectual property rights, and sound competition policies must be in place. Thirdly, the business environment must have in place satisfactory infrastructure, such as reliable power supply, adequate transportation amenities and networks, telecommunications and competent human capital. Lastly, the business environment must possess political stability. Overall, Rowat (1992) recommended the following economic measures for countries to achieve political stability: The liberalisation of foreign investment laws, the shift away from dictatorship and a move towards transparent democracy.

An old English idiom reads "there are two sides to a story", and the same applies to FDI, as there is more than one perspective to this economic concept. So far, the study has focused solely on the benefits that arise because of FDI. However, drawbacks may arise in host countries that significantly affect FDI inflow. Possible drawbacks of FDI include a worsening of a host country's balance of payments as profits are repatriated back to the investing country, the absence of positive linkages of FDI with the local communities in the host country, pushback and resistance of accelerated commercialisation that result from FDI inflow especially in LDC, which may result in social disruption in the host country. Moreover, the harmful emissions that arise from FDI investments in extractive and heavy-duty industries have negative social and health effects. Lastly, some governments in host countries perceive the massive dependence on TNCs as indicating a loss of political sovereignty.

## 3.2     MODE OF ENTRY

An important feature of the structure of foreign investment is the choice of the mode of entry, which can take the form of Greenfield investment, cross-border mergers and acquisitions (M&As) or private equity.  Greenfield investment is a form of FDI where a parent company establishes a new

company in a foreign country by constructing new facilities from the ground up. M&A transactions bring separate companies together to form larger joint ones. Private equity is equity capital investment that is not quoted on a public exchange, into a private company.

During the last decade, Greenfield projects have consistently been the predominant mode of entry for direct investments, followed by M&As (refer to Figure 3.1 below). However, a marginal dip in Greenfield projects was apparent in 2007, when M&As superseded Greenfield projects. Interestingly, during the period 2004 until 2007, although Greenfield projects were dominating the mode of entry for direct investments, cross-border M&As as a mode of entry increased at a faster rate than Greenfield projects before plunging in 2008, mainly due to the global financial crises. The fascinating accelerated increase in cross-border M&As partly reflects a torrent of transatlantic corporate takeovers and partly the extensive privatisation programmes that were implemented throughout much of the world in the 1990s. In current terms, the value of Greenfield projects still supersedes cross-border M&As. While Greenfield projects dominates the mode of entry for FDI, the value of Greenfield projects declined by two per cent in 2014, to US$696 billion from US$707 billion in 2013. The value of cross-border M&As increased by 28 per cent in 2014 to US$399 billion from US$313 billion in 2013 (UNCTAD, 2002; UNCTAD, 2013; UNCTAD,2014; and UNCTAD, 2015).
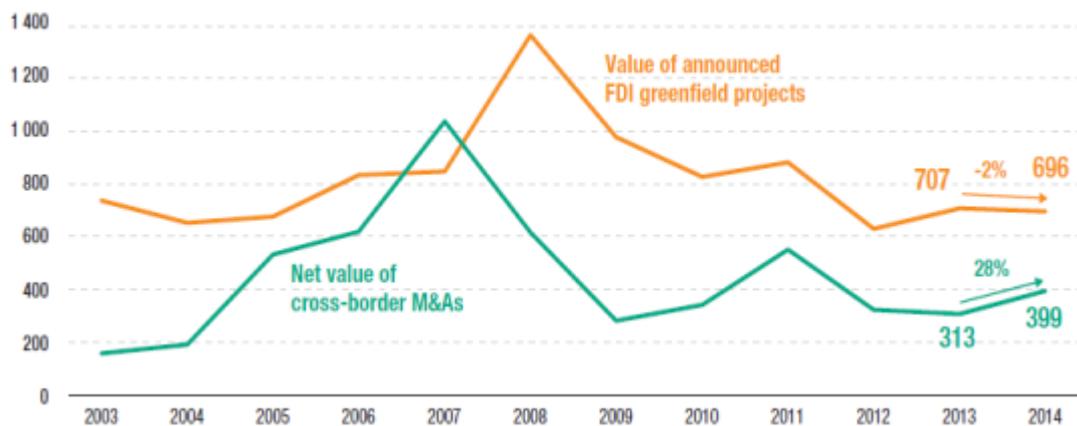


**Figure 3.1: Historic trends of FDI mode of entry 2003-2014 (billions of dollars)**

Source: UNCTAD (2015).

Although private equity as a mode of entry is not explicitly presented in Figure 3.1, recent studies found that there had been an increase in private equity investment after the global financial crisis (see Figure 3.2). Looking at the global picture, private equity as a mode of entry significantly lags behind Greenfield projects and cross-border M&As. Europe is consistently leading the aggregate share of private equity as a mode of entry followed by Asia, the United States and then the rest of

the world. In Africa, private equity as a mode of entry is concentrated in a few countries, with South Africa leading the pack (accounting for 53 per cent of total investments in 2011), followed by Egypt, Mauritius, Morocco and Nigeria (while all other countries account for approximately five to eight per cent of total investment) (UNCTAD, 2013). Nonetheless, it is envisaged that private equity investment will increase in Africa in the medium-to-long term as the affluent become accustomed to investment opportunities on the continent.
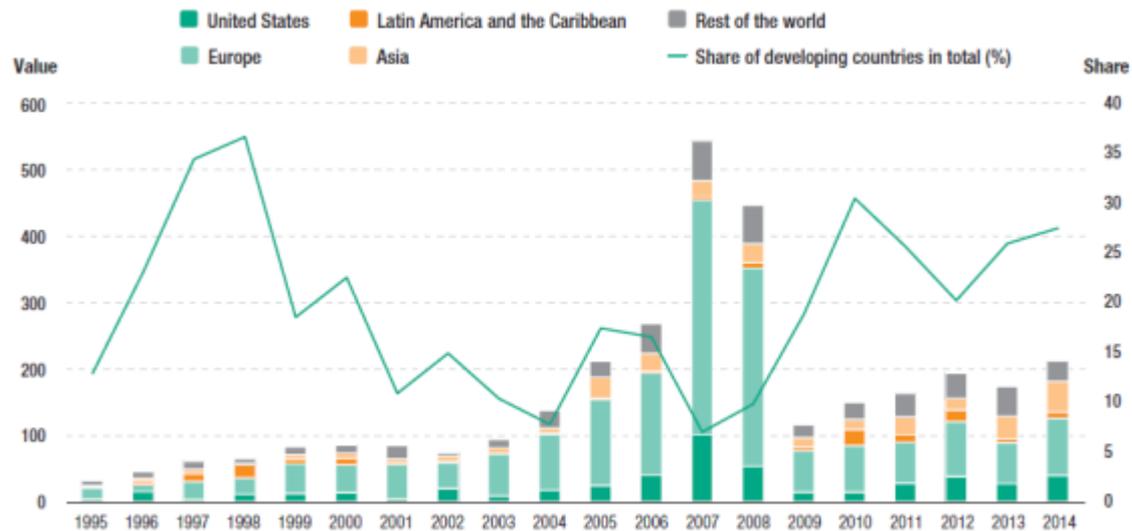


**Figure 3.2: FDI by private equity funds, by major host region (billions of dollars and per cent)**

Source: UNCTAD (2015).

## 3.3    FDI INFLOW TRENDS

### 3.3.1    Foreign direct investment – global context

As explicitly stated in Chapter 1, this study solely focused on FDI inflows, and not on FDI outflows or FDI stock. Just like a roller coaster, global FDI inflows have fluctuated dramatically during the past two decades (see Figure 3.3 below), with noticeable peaks apparent in the year 2000 and again in 2007, while significant troughs were evident in 2003 and 2009 and more recently in 2012 and 2014.
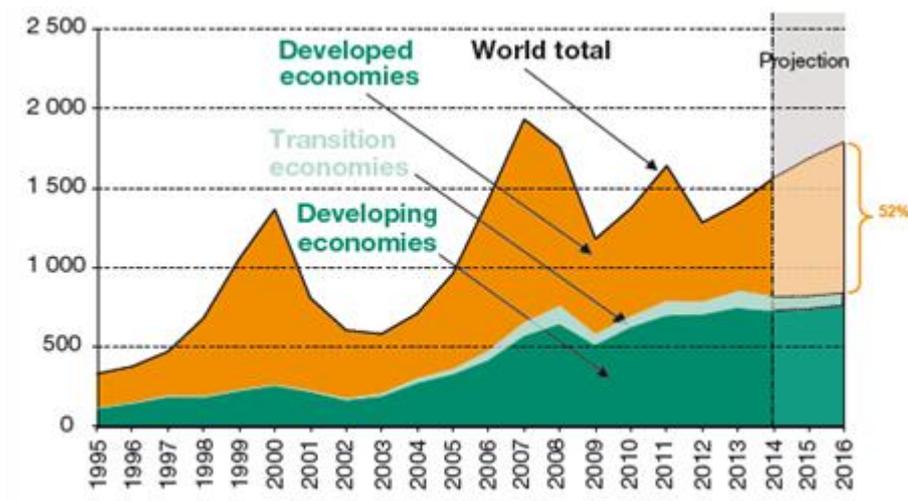
**Figure 3.3: Global and group of economies FDI inflows for the period 1995-2013 and projections for the period 2014-2016**

Source: UNCTAD World Investment Report (2014)

### 3.3.2    Global FDI trends from the period 1995 to 2000

From 1995 until 1999, FDI inflows grew at an accelerating rate before peaking in 2000 and reaching a record US$1.3 trillion. The peak in 2000 was prompted by the dot.com bubble. According to the UNCTAD (2001), FDI grew faster than other economic aggregates such as capital formation, international trade and world production.

During the same period, expansion of global FDI inflow was driven by more than 60 thousand TNCs with over 800 thousand conglomerates overseas. Developed countries were the main recipients of FDI, accounting for more than three-quarters of global inflows. Cross-border M&As was the main stimulus behind FDI inflow. FDI inflows to developing countries also rose (*albeit* at marginal values), while their share in world FDI flow declined significantly to 19 per cent in 2000 from a peak of 14 per cent in 1994. LDCs remained marginal in terms of attracting FDI. Within the developed markets, the European Union (EU), United States (US) and Japan were the leaders – accounting for 71 per cent of world inflows. The United Kingdom remained the top source for FDI worldwide, while the US remained the world's largest FDI recipient country (UNCTAD 1996; UNCTAD 1997; UNCTAD 1998; UNCTAD 1999 and UNCTAD 2000).

### 3.3.3    Global FDI trends from the period 2001 to 2003

Global FDI inflows started declining from 2001 and again in 2002 until reaching an all-time low of US$560 billion in 2003 from a record high of US$1.3 trillion in 2000. The decline was driven by a tumble in FDI flows to developed countries. By 2003, 111 countries saw a marginal increase in flows, while FDI to 82 countries declined rapidly.

In the developing world, the United States experienced a 53 per cent plunge in FDI flows – the lowest level in the past 12 years. FDI flows to Central and Eastern Europe also collapsed by ten per cent. Developing countries as a group were the only economies that experienced a recovery, with FDI inflows rising by nine per cent in 2003 from 2002. However, the results were mixed in this group, and Africa, Asia and the Pacific for instance saw an increase in FDI flows, while Latin America and the Caribbean experienced on-going decline. Lastly, the LDC group continued to receive little FDI (UNCTAD 2001; UNCTAD 2002 and UNCTAD 2003).

### 3.3.4  Global FDI trends from the period 2004 to 2007

After three consecutive years (2001 to 2003) of decline in global FDI inflows, FDI started rising in 2004. The rise skyrocketed from 2005 until reaching an all-time high of US$1.83trillion in 2007, well above the previous record high of US$1.3 trillion set in 2000. The all-time high was driven by the booming house prices in the US and the infamous mortgage-backed securities. All the major economic groupings, namely developed countries, developing countries and the transition economies, enjoyed sustained growth in their FDI inflows, despite the global financial crises, which began in the second half of 2007. The upsurge in FDI echoed the moderately high economic growth and strong corporate performance in several parts of the world, driven mainly by the increase in the subprime mortgage market. Reinvested earnings was one of the greatest sources of FDI, accounting for about 30 per cent of total FDI inflows as a result of augmented profits of foreign affiliates, particularly in developing countries. The significant depreciation of the US dollar against other major currencies also partly explained the all-time high in the FDI flow in dollar terms (UNCTAD 2004; UNCTAD 2005; UNCTAD 2006 and UNCTAD 2007).

In the developed world, FDI inflows reached US$1.24 trillion in 2007. The largest host country of FDI inflow was the United States, followed by the United Kingdom, France, Canada and the Netherlands. The largest host region of FDI inflow was the EU, attracting almost two thirds of total FDI inflows into developed countries. FDI inflows to developing countries reached the highest level ever (US$500 billion) in 2007. LDCs also enjoyed a record high of FDI inflow, attracting US$13 billion worth of FDI in 2007. FDI inflows into transition economies also surged, increasing by 50 per cent from 2006 to reach US$86 billion in 2007. Among developing and transition economies, China, Hong Kong (China) and the Russian Federation were the three largest host countries for FDI inflow (UNCTAD 2004; UNCTAD 2005; UNCTAD 2006 and UNCTAD 2007).

Cross-border M&As significantly contributed to the global surge in FDI. In 2007, cross-border M&As as a mode of entry, accounted for US$1.63 trillion worth of transactions, which is 21 per cent higher than the previous record in 2000. Overall, the global financial crisis did not have a noticeable deterring effect on global cross-border M&As in 2007. Interestingly, the biggest deal in banking history took place in the latter half of 2007, including the acquisition of ABNAMRO Holding NV by the consortium of Royal Bank of Scotland, Fortis and Santander for US$98 billion (UNCTAD 2004; UNCTAD 2005; UNCTAD 2006 and UNCTAD 2007).

### 3.3.5    Global FDI trends from the period 2008 to 2011

In 2008, global FDI inflows fell from a historic high of US$1.83 trillion in 2007 to reach US$1.69 trillion. The collapse in FDI inflow was mainly driven by the global financial crisis. The drop in FDI inflow continued into 2009, with added impetus as FDI inflows fell a further 37 per cent to reach US$1.11 trillion in 2009. A slow recovery was noticeable in 2010 as global FDI rose modestly by five per cent, to reach US$1.24 trillion. Even though a recovery was apparent in 2010, FDI inflows in 2010 remained some 15 per cent below their pre-crisis average and nearly 37 per cent below their peak in 2007. By 2011, the FDI recovery was significant as Global FDI inflows increased by 16 per cent, exceeding the 2005–2007 pre-crisis level for the first time, despite the enduring effects of the global financial crisis. The FDI increase was mainly driven by higher profits of TNCs and moderately high economic growth in developing countries during 2011 (UNCTAD 2008; UNCTAD 2009; UNCTAD 2010 and UNCTAD 2011).

One noticeable effect of the global financial crisis was the change in the FDI dynamics whereby foreign investments to developing and transition economies amplified, increasing their share in global FDI flows, while FDI flows to developed countries declined considerably (see Table 3.1 above). Developing countries weathered the global financial crisis better than developed countries, as their financial systems were less interlinked with the hard-hit banking sectors of the United States and Europe. Their economic growth remained robust, reinforced by rising commodity prices. The deterioration in FDI inflows to developed countries during the financial crisis was mainly due to a collapse of cross-border M&As sales that fell by 39 per cent in value after a five-year boom ended in 2007. Inflows to structurally weak, vulnerable and small economies remained significantly low during the global recession (UNCTAD 2008; UNCTAD 2009; UNCTAD 2010 and UNCTAD 2011).

In the midst of the global financial crisis, the United States still maintained its position as the largest recipient country of FDI. However, many developing and transition economies also emerged as large recipient countries. In contrast, a significant number of European countries lost their positions in terms of FDI inflows. The United Kingdom also lost its position as the largest source of FDI among European countries. Overall, in spite of the global financial crisis' serious impact on FDI, the crisis did not halt the growing internationalisation of production (UNCTAD 2008; UNCTAD 2009; UNCTAD 2010 and UNCTAD 2011).

With regard to the mode of investment, Greenfield investments were initially more resilient to the crisis in 2008, but were hit hard in 2009. On the other hand, cross-border M&As were on a continuous decline. The sustained slump in cross-border M&As accounted for most of the FDI flow decline during the early stages of the financial crisis. Examining the quantitative context, cross-border M&A contracted by 34 per cent compared to a 15 per cent cutback in the number of Greenfield FDI projects during the crisis period. This pattern is not surprising as cross-border M&As are generally more sensitive to financial volatility than Greenfield projects. This is because

turmoil in financial markets conceals the price signals upon which M&As rely, and because the investment cycles of M&As are usually shorter than those of Greenfield investments. Overall, the global financial crisis condensed the funding available for FDI thus reducing the number of acquisitions (UNCTAD 2008; UNCTAD 2009; UNCTAD 2010 and UNCTAD 2011).

After the global financial crisis, cross-border M&As started gaining momentum, rising by 53 per cent in 2011 to reach US$526 billion. The rise was stimulated by an increase in the number of megadeals (deals with a value over US$3 billion) in developed economies. Developing and transition economies, on the other hand, continued to host more than two thirds of the total value of Greenfield investments in 2011. Although the growth in global FDI flows in 2011 was driven in large by cross-border M&As, the overall total project value of Greenfield investments was significantly higher than that of cross-border M&As, which had been the case since the global financial crisis (UNCTAD 2008; UNCTAD 2009; UNCTAD 2010 and UNCTAD 2011).

Overall, the post-crisis business environment was plagued by uncertainties. Risk elements included the volatility of global economic governance, widespread sovereign debt crisis, imbalances in the fiscal and financial sector in some developed countries, and escalated inflation derailed the FDI recovery. Moreover, developing economies increased their importance, both as recipients of FDI and as sources of FDI. The shift in FDI flow also saw TNCs increasingly investing in both efficient and market-seeking projects in developing and transition economies, as a result, by 2010 half of the top 20 host economies for FDI were in developing and transition economies (UNCTAD 2008; UNCTAD 2009; UNCTAD 2010 and UNCTAD 2011).

### 3.3.6    Global FDI trends from the period 2012 to 2014

Global FDI deteriorated for the sixth time in the last two decades by 18 per cent to reach US$1.4 trillion in 2012 from US$1.7 trillion in 2011. Economic instability and policy uncertainty in several key economies gave rise to caution among investors. Moreover, many TNCs also restructured their assets and also divested and relocated their investments (UNCTAD, 2012).

In 2013, FDI flows reverted to an upward trend. Global FDI inflows rose by five per cent to US$1.47 trillion in 2013, up from US$1.4 trillion in 2012, despite some volatility in global investments caused by the shift in market expectations because of quantitative easing in the United States. FDI inflows improved in all major economic groupings. FDI flows to developed economies continued its recovery after the sharp fall in 2012. Even though the developed countries' share of total global FDI flows was marginally better than all other economic groups (47.5 per cent), its share of total global FDI remained lower than its 2007 peak of 57 per cent (refer to table 3.1) (UNCTAD, 2013 and UNCTAD, 2014).

Global FDI inflows declined again in 2014, making it the seventh decline in the last two decade. The FDI flows declined by 16 per cent in 2014 to US$1.23 trillion, down from US$1.47 trillion in

2013.The deterioration in FDI flows was mainly due to the instability of the global economy, policy uncertainty for investors and eminent geopolitical risks. New investments were also offset by large divestments (UNCTAD, 2015).

On a regional scale, the tables finally turned in 2014, when developing countries accounted for a greater share of the global FDI inflow (55.5 per cent of the global total FDI to developing countries compared with 40.6 per cent share of total FDI flow to developed countries) (refer to table 3.1). Asia drove the rise in FDI flow to developing countries, while flows to Latin America declined and those to Africa remained flat. The greatest impediment to Africa's inflows was mainly due to the Ebola virus outbreak, regional conflicts and falling commodity prices, which negatively affected several countries. In the developed world, FDI flows plummeted by 28 per cent to US$499 billion from US$697 billion in 2013. Inflows to the United States fell to US$92 billion, mainly due to Vodafone's divestment of Verizon. FDI flows to Europe also fell by 27 per cent to $289 billion from US$401 billion in 2012.

Among European economies, FDI inflows decreased in Ireland, Belgium, France and Spain while increasing in the United Kingdom, Switzerland and Finland. Inflows to transition economies declined by 52 per cent to US$48 billion from US$100 billion in 2014, as regional conflict and sanctions deterred new foreign investors. Inflows to structurally weak, vulnerable and small economies increased (*albeit* marginally) in 2014 to US$52 billion from US$51 billion in 2013. Overall, China became the largest FDI recipient in the world in 2014, while the United States plunged to being the third largest host country, after years of consistently maintaining the top spot of being the largest FDI recipient country in the last two decades. The decline in FDI flows to the U.S. was mainly because of the large Verizon divestment by Vodafone. Furthermore, of the top 10 FDI recipients in the world, five were to developing economies (UNCTAD, 2014 and UNCTAD, 2015).

### 3.3.8    FDI projection

It is clear that during the past two decades that the greatest global FDI inflows were recorded in 2007, driven  by the booming U.S. housing prices and mortgage-backed securities, reaching an all-time record high of US$1.83 trillion. The lowest global FDI inflow was recorded in 2003 at US$560 billion, due to the tumble in FDI flows to developed countries.To date, these records (both all-time high of US$1.83 trillion in 2007 and all time-low of US$560 in 2003) have not recurred. Overall, the UNCTAD forecasts an improvement in total global FDI flows in the near future, to reach US$1.4 trillion in 2015 and US$1.5 trillion in 2016 and US$1.7 trillion in 2017. The key drivers of this upsurge will be due to growth prospects in the United States, the demand-stimulating effects of lower oil prices, hospitable monetary policies, and continual investment liberalisation and investment promotion measures among host countries.

TNCs will also support the expectation of higher FDI flows as they sustain continued high levels of profitability and maintain adequate cash reserves. However, several economic and political risks,

comprising unending uncertainties in the Eurozone, potential spillovers from geopolitical tensions and persistent vulnerabilities in emerging economies, may disrupt the projected recovery. Thus, the road to FDI recovery is proving to be bumpy and may take significantly longer than expected (UNCTAD 2014 and UNCTAD 2015).

## 3.4    SUMMARY

Even though there is no one-size fits all definition for FDI, the common traits of FDI are that FDI is a far more stable source of development finance, and that FDI investments are for the long-haul. It is true that 'change is the only constant in time', because FDI dynamics have evolved over the years. Traditionally, developed countries attracted the greatest portion of global FDI. This dominant flow of FDI to developed countries has remained intact for the past two decades. However, the aftermath of the 2007/2008 global financial crises saw the tables turn, resulting in developing countries being the greatest recipient of global FDI flow. When filtering the FDI flow by country, the U.S. was the largest recipient country of FDI for the past two decades. Interestingly, amidst the 2007/2008 global financial crisis, which emerged in the U.S. banking sector, the U.S. still maintained its position as the largest recipient country of FDI. In recent terms, China is at present the largest recipient country of FDI. This is not surprising because China has been on a massive industrialisation boom.

The next chapter unpacks Rwanda's investment climate, focusing on the country's genocide history, the corrective measures the government took to improve the country's investment climate and the current state of the business environment in Rwanda today.

# C H A P T E R   4
# R W A N D A ' S   I N V E S T M E N T   C L I M A T E   A N D   F D I   I N F L O W

## 4.1     INTRODUCTION

The motivation behind this study was to determine the impact of Rwanda's investment climate on attracting FDI inflows. As a result, this chapter presents a broad overview of Rwanda's investment climate and the effect it has had on attracting FDI inflows into Rwanda. Specifically, the study highlights the problems that militate the investment climate, the remedial measures the government undertook to improve the investment climate, and the trends in FDI inflows over the years to Rwanda. It is important to note that the problems discussed in this chapter are specific to Rwanda's generic DNA and historic makeup and are not the general problems of investment climates in SSA or least-developed countries.

## 4.2     IMPEDIMENTS TO RWANDA'S INVESTMENT CLIMATE

Two decades have passed since the genocide against the Tutsis in Rwanda, where over one million people were killed. Those that survived were badly tortured with little hope for a future, while others fled the country to neighbouring states in search of a better tomorrow. Just like a deeply wounded scar, the side-effects of the genocide lasted long after the violent attacks ended in 1994. The aftermath of the genocide saw many already existing investors, potential investors and tourists write-off Rwanda as a lost cause (The Lancet, 2014). The unwarranted genocide episode left Rwanda in a state of destitution, despair and despondency. The negative perception of Rwanda also stifled the Rwandan economy, as almost no one wanted to be associated with a tortured country such as Rwanda. In addition to the genocide episode in 1994, Rwanda is geographically disadvantaged, as it is a small landlocked country, with limited natural resources. Rwanda's flagship exports (tea and coffee) are not well diversified and are prone to international commodity price fluctuations. Given all the challenges facing the country, it is critical for the government of Rwanda to undertake a series of pro-investment policy reforms that are intended to improve Rwanda's investment climate and increase FDI inflows into the country (Kinda *et al.*, 2011).

## 4.3     CONTINGENCY MEASURES TO IMPROVE THE INVESTMENT CLIMATE IN RWANDA

The genocide was indeed a true test for the Rwandan government. When President Paul Kagame was sworn in as the first official president of Rwanda in 2003, he explicitly communicated his strategic intent for the country. The strategic intent includes the commitment to rebuild a solid foundation for reconciliation and to enact pro-investment reforms intended to improve Rwanda's investment climate, increase FDI inflow, and expand trade in products and services (ENP

Newswire, 2012). These commitments by the Rwandan government are anchored in the country's national development blueprint, dubbed Vision 2020.

The overarching goal of Vision 2020 is to transition Rwanda into a lower middle-income economy by improving its competitiveness and to position Rwanda as a knowledge-based technological economy by the year 2020 (Haslett, 2014). Central to Vision 2020 is ensuring inclusive growth, people-oriented development, social unity and health equity for the people of Rwanda, as President Kagame strongly believes in making the Rwandese people feel part of Rwanda's structural transition. The government of Rwanda has made significant strides over the last two decades towards achieving this vision, particularly concerning improvements in peace and security and improvements in the country's business environment and competitiveness. For example, in 2008, the government of Rwanda in collaboration with the World Bank Investment Climate Advisory Services, embarked on a journey to reform Rwanda's investment climate. The main objective of the Rwanda Investment Climate Reform Programme is to make doing business in Rwanda easier, quicker and more affordable to successfully attract foreign investment into Rwanda (ENP Newswire, 2012; Investment Climate Advisory Services, 2014; Investment Climate Facility, 2014). Moreover, in the efforts to attract private investments to Rwanda and to retain them, the National Bank of Rwanda (BNR) in partnership with Rwanda Development Board (RDB), National Institute of Statistics of Rwanda (NISR) and the Private Sector Federation (PSF) established the Rwanda Foreign Private Capital working group in 2009. The working group monitors and manages foreign private capital inflows and undertakes the annual foreign private investment census.

## 4.3    FDI FLOWS TO LEAST DEVELOPED COUNTRIES

The UNCTAD categorises Rwanda as a LDC. FDI inflows to LDCs have been on an upward trajectory over the past few decades, with Africa in the lead, followed by Asia (see Figure 4.1 below). To put this into a measureable context, FDI flow to LDC grew from US$13 billion in 1987 to US$22.5 billion in 1989 (Rowat, 1992). Fast-forward to the millennial years, FDI inflow to LDC averaged US$24 billion during the period 2010 to 2014 (UNCTAD, 2015). Rowat (1992) suggested that the increase in FDI inflow to LDCs in the 1980's was because of the policy reforms many LDCs undertook when they realised that in order to promote economic growth, they had to foster a business environment that was conducive to attracting FDI. Just like many other LDCs, the Rwandan Government also prioritised the establishment of a highly sought after investment climate, as the government strongly believes that a sound economy, spearheaded by the private sector, will amplify the quality of life and reduce poverty in Rwanda.
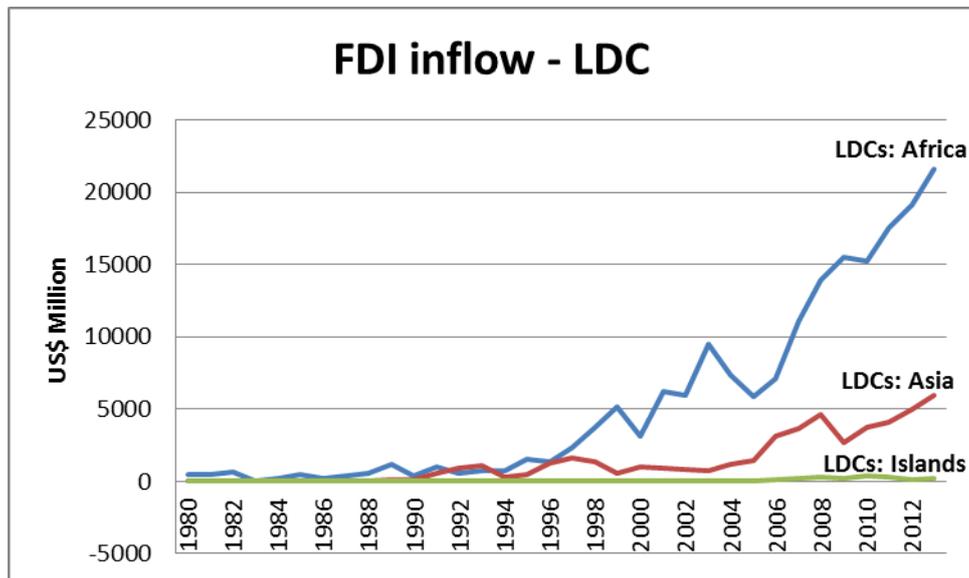
**Figure 4.1: FDI inflows to LDCs 1980-2013**

Source: UNCTAD Statistics.

## 4.3 RWANDA INVESTMENT CLIMATE POST-INVESTMENT CLIMATE REFORM PROGRAMME

In Rwanda, FDI is described as investments by foreigners in resident companies with a shareholding of at least ten per cent of the company's total capital and debt from related enterprises, but excluding debt among related financial intermediaries (National Bank of Rwanda, 2013).

FDI is progressively becoming an important source of development finance in Rwanda. FDI is the leading source of external private investment in Rwanda (see Table 4.1 below). Over the period 2008 to 2013, FDI grew on average by 52 per cent. In 2013, FDI accounted for 60.31 per cent of the total external private investment. The reason for the dominance of FDI inflow is not surprising, as portfolio investment, for example, involves the purchase of stocks, bonds, commodities, or money market instruments by non-residents, and Rwanda currently has a nascent financial market.

**Table 4.1: External private investment in Rwanda 2008-2013 (US$ million)**

| YEARS | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|
| FDI | 66.9 | 103.3 | 250.5 | 119.1 | 255.0 | 257.6 |
| Portfolio Investment | 1.1 | 0.7 | 1.5 | 87.3 | 1.0 | 1.7 |
| Other investment | 77.9 | 35.7 | 91.0 | 150.2 | 153.3 | 168.4 |
| Total | 145.9 | 139.7 | 343.1 | 356.6 | 409.3 | 427.7 |

Source: National Bank of Rwanda (2013).

During the same period (2008 to 2013) a total of 280 investments projects that are fully owned by foreign investors or in joint ventures with domestic companies, have been registered in Rwanda with a pledged investment value of US$2,526 million. Of the 280 pledged projects, 151 are already operational, 69 are in implementation phase, 22 have closed, while 38 remain committed to start their activities in the near future. The projects that are operational and in implementation stage have already created 35 580 jobs in Rwanda (National Bank of Rwanda, 2013).

Since the implementation of the World Bank Rwanda Investment Climate Reform Programme, Rwanda has made exceptional strides in reducing redundant regulations and establishing a legal framework that is encouraging for doing business. Under the World Bank Doing Business Economy ranking, Rwanda is currently ranked 46 out of 189 countries, up two notches from 48 in 2014 (World Bank Doing Business, 2015). When observing historic data, Rwanda's doing business ranking improved from 150 in 2008 to 58 out of 183 countries in 2010. Doing Business ranks economies' ease of doing business after taking into account improvements made by governments on their respective regulatory environments for business (World Bank Doing Business, 2015). The improvement in the business environment in Rwanda has translated into increased FDI inflow as evidenced by Figure 4.2 below. According to the National Bank of Rwanda (2013), the increased FDI inflow into Rwanda is a response to continuously improving the business environment and the high confidence of foreign investors in the Rwandan economy. Overall, the National Bank of Rwanda (2013) stated that the increased FDI inflow to Rwanda has contributed to sustained economic growth.
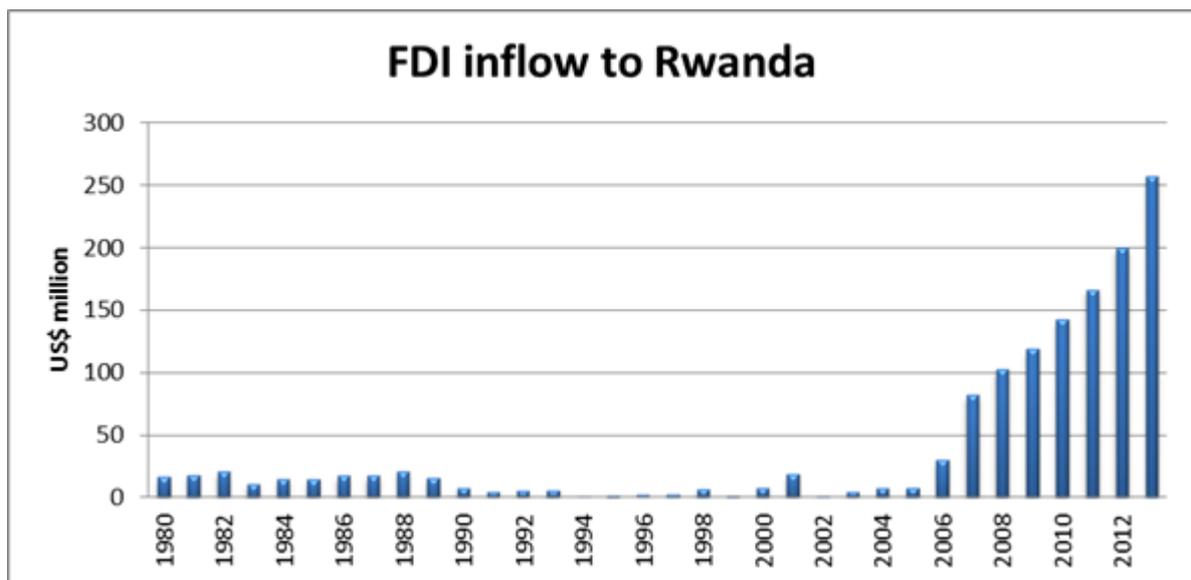


**Figure 4.2: FDI inflows to Rwanda 1980-2013**

Source: UNCTAD Statistics.

There are several reasons why investors invest in Rwanda. Firstly, Rwanda is one of the fastest growing economies in Africa, having enjoyed a year-on-year average real GDP growth rate of 7.6 per cent during the period 2007 to 2013 (IMF, 2014). Secondly, Rwanda has an investor-friendly

climate coupled with a robust regulatory regime. The World Bank Doing Business (2014) ranked Rwanda the second top global reformer for six consecutive years and the second easiest place to do business in Africa after Mauritius. Thirdly, Rwanda has good governance, as it is a politically stable country with well-functioning institutions. Rwanda also has zero tolerance for corruption. Fourthly, Rwanda is one of the most competitive countries worldwide. Globally, Rwanda is in the upper half of the World Economic Forum Global Competitiveness Index, superseding historically stronger countries in Europe and America. From an African context, Rwanda is currently the third most competitive country in SSA after Mauritius and South Africa. Lastly, the country presents abundant untapped investment opportunities, particularly in the following sectors, namely infrastructure, ICT, tourism, renewable energy sector, agriculture and mining (National Bank of Rwanda, 2013).

Despite the favourable investment climate, FDI inflows to Rwanda lag well behind most of its neighbours in the East African Community (EAC) (see Figure 4.3 below). The United Republic of Tanzania, Uganda and Kenya are the dominant recipient countries of FDI inflow within the EAC. On the other hand, Burundi is the least popular country when it comes to attracting FDI inflows, as it receives the least FDI inflow in East Africa. Investors cite inadequate infrastructure, high transport and energy costs, lack of skilled workforce, limited access to affordable financing, and a small domestic market as the hurdles and constraints to attracting FDI inflow into Rwanda (UNCTAD, 2011).
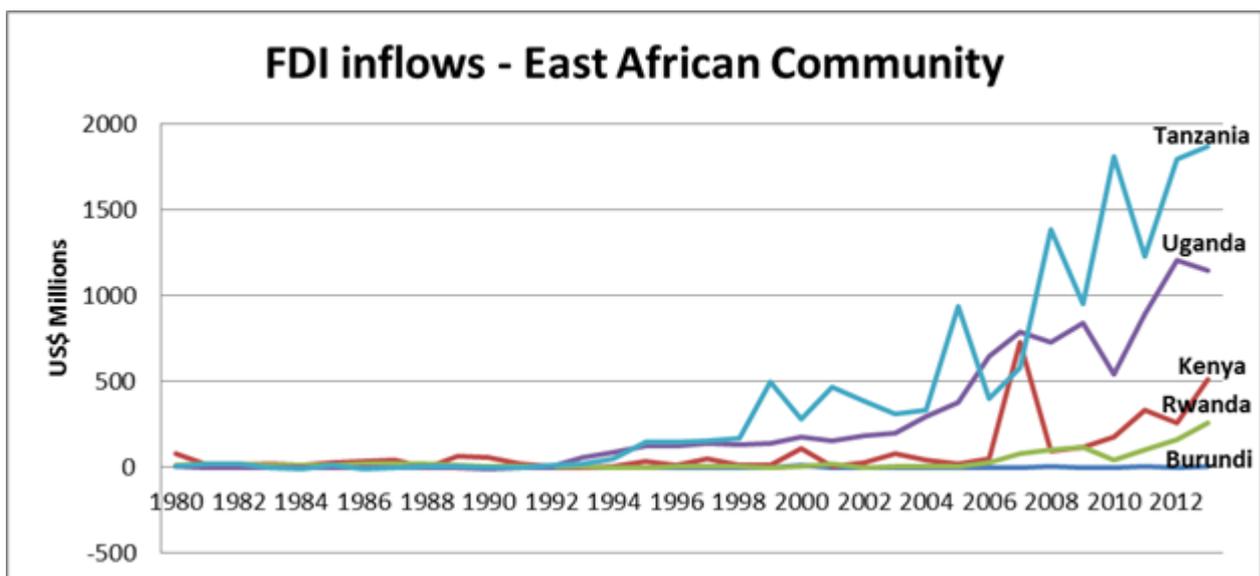


**Figure 4.3: FDI inflows to the East African Community 1980-2013**

Source: UNCTAD Statistics.

## 4.6      SOURCES OF FDI INFLOW INTO RWANDA

Switzerland, South Africa, Mauritius and Kenya are the major sources of FDI inflows into Rwanda. Collectively these countries accounted for 74.6 percent of total FDI inflows in 2013 (see Table 4.2 below).

Table 4.2: FDI source by country of origin to Rwanda in 2013 (US$ million)

| Country | Share | % Share |
|---|---|---|
| Switzerland | 96 | 37.2 |
| South Africa | 45.5 | 17.7 |
| Mauritius | 31.2 | 12.1 |
| Kenya | 20.2 | 7.8 |
| Netherlands | 10.8 | 4.2 |
| Uganda | 9.4 | 3.6 |
| Belgium | 6.3 | 2.4 |
| China | 5.9 | 2.3 |
| United Kingdom | 4.6 | 1.8 |
| Nigeria | 4 | 1.6 |
| Others | 20 | 7.8 |
| **Total** | **257.6** | **100** |

Source: National Bank of Rwanda (2013)

In terms of FDI inflows by recipient sectors, in 2013, 46 per cent of the aggregate inflow went to the primary sector with mining and agriculture accounting for the greatest share. The services and manufacturing sector received 26 per cent and 25 per cent of the aggregate FDI inflow respectively see figure 4.4 below.
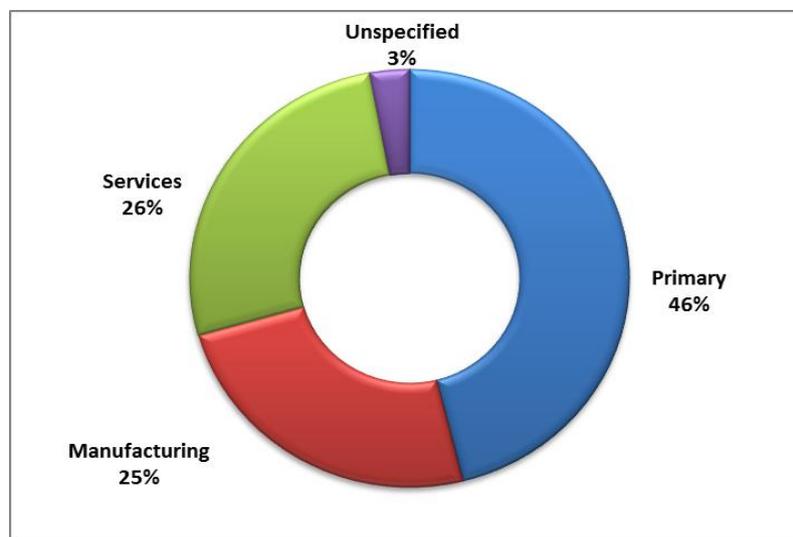


Figure 4.4: FDI inflows to Rwanda by sector

Source: National Bank of Rwanda (2013)

## 4.7    SUMMARY

Every country has a story to tell, and Rwanda's story is one of genocide. While the genocide had happened over two decades ago, it significantly crippled the country's investment climate and drenched the country in adverse reputational risk. While this was true for the country long after the genocide had ended, the government of Rwanda took radical strides to improve the country's business environment. To do this, the government of Rwanda collaborated with the World Bank and endorsed the World Bank Rwanda Investment Climate Reform Programme in 2008. To date, the reform programme has been seen to be successful, because Rwanda has seen FDI inflow grow on average by 52 per cent from the period 2008 to 2013. In the World Bank Doing Business (2014), Rwanda was ranked the second top global reformer for the sixth consecutive time and the second easiest place to do business in Africa after Mauritius. Globally, according to the World Economic Forum Global Competitiveness Report, Rwanda is currently the third most competitive country in SSA. Overall, it is evident that external private investment into Rwanda has continued to grow and provides a drive for sustained economic growth.

# C H A P T E R   5
# R E S E A R C H   M E T H O D O L O G Y

## 5.1    INTRODUCTION

As specified in Chapter 1, the purpose of this study was to examine the impact of Rwanda's investment climate on attracting FDI. Having presented the literature review on investment climate and FDI attractiveness in Chapter 2, an overview of FDI characteristics and trends in Chapter 3, followed by a synopsis of Rwanda's investment climate and FDI inflows in Chapter 4, the aim of this chapter, therefore, is to empirically examine the effects of various investment climate variables on attracting FDI into Rwanda. This chapter describes the variables used in the analysis and specifies the data sources. This chapter also analyses the data and provides a summary at the end of the chapter.

## 5.2    DATA DESCRIPTION

### 5.2.1    Investment variables

The study took its cue from Kinda (2010) who found that a favourable investment climate, with well-developed financial and physical infrastructure increased the host country's likelihood of receiving FDI. A wide variety of investment climate variables could have been considered in the study. However, due to the problem of multicollinearity among some explanatory variables, only six explanatory variables were considered in the study (Gastanaga *et al.*, 1998; Dollar *et al.*, 2006; Lehnert *et al.*, 2013). The dependent variable and explanatory variables used in the study are precise variables that have been used in earlier studies to examine the effect of an improved investment climate on attracting FDI. Therefore, in this study, FDI inflow is the dependent variable; GDP, GDP per capita, macroeconomic environment, technological infrastructure, degree of openness and human capital are the explanatory variables.

### 5.2.2    The dependent variable

FDI has emerged as one of the most stable and highly sought after sources of development finance in emerging markets (Borensztein *et al.*, 1998; Adams, 2010; Morris and Aziz, 2011; Kotrajaras *et al.*, 2011; Lehnert *et al.*, 2013).  For example, UNCTAD (2003) specified that the evolution of Botswana from a low-income country into a middle-income country during one generation was predominantly driven by the influx of FDI (Adams, 2010). As a result, FDI inflow is the dependent variable in the study (Kinda *et al.*, 2011; Morris and Aziz, 2011). The FDI inflow is measured as a percentage of Rwanda's GDP. The direction of the FDI flow is inward into the host country (Rwanda). It was fitting to use gross FDI data rather than net FDI data as the study was only interested in the effects of FDI inflow into Rwanda. Data for the FDI inflow as a percentage of GDP was extracted from UNCTAD statistics.

The explanatory variables used in the study included GDP, GDP per capita, macroeconomic stability, technological infrastructure, openness and human capital. All these variables depict the investment climate in Rwanda and are explained further below.

### 5.2.3    The explanatory (independent) variables

#### 5.2.3.1  Gross Domestic Product

Gross Domestic Product (GDP) depicts the market size of Rwanda (the host country) (Sekkat and Veganzones-Varoudakis, 2007; Ndikumana and Verick, 2008). Higher GDP unlocks better market opportunities and greater attractiveness for FDI (Cevis and Camurdan, 2007; Sekkat and Veganzones-Varoudakis, 2007).  Gastanaga *et al.,* (1998) and National Bank of Rwanda (2012) affirmed that FDI into a host country was primarily attracted by a booming economy. The GDP variable is measured in US dollars at current prices. The data for the GDP variable is obtained from the International Monetary Fund (IMF), World Economic Outlook Database, April 2015.

#### 5.2.3.2  Gross Domestic Product per capita

GDP per capita (GDPpc) displays the relative performance of a host country. An increase in per capita GDP indicates growth in the economy and tends to translate as an increase in productivity. A higher real per capita GDP is assumed to increase the attractiveness for FDI (Sekkat and Veganzones-Varoudakis, 2007). The per capita GDP is measured in US dollars at current prices and current exchange rates in millions. The GDP per capita was obtained from the IMF, World Economic Outlook Database, April 2015.

#### 5.2.3.3  Macroeconomic environment

Inflation is used as a proxy for macroeconomic policy and country risk (Cevis and Camurdan, 2007; Adams, 2010). A sound macroeconomic environment positively affects long-term economic growth. The macroeconomic environment is a vital determinant, which foreign investors seek when considering investing in a host country, especially in developing countries (De Gregorio, 1992; National Bank of Rwanda, 2012). This is because inflation may pose both negative and positive effects on the economy. The negative effects of inflation may discourage investment and savings especially from foreign investors, as they will be uncertain about future inflation regimes. When inflation is rapid, the process of hoarding may also result, leading to a shortage of goods as there are concerns that prices will continue to increase in the future. Inflation may also have positive effects for foreign investors as investment in non-monetary capital projects will be encouraged (Rand Merchant Bank, 2015). Inflation is measured as annual average nominal rate. The data for the inflation variable was collected from UNCTAD Statistics.

#### 5.2.3.4  Technological infrastructure

Mobile telephones capture a host country's achievement in technological progress. Sturdy physical infrastructure is considered complementary for foreign investment and is an important determinant

in developing countries. For example, when TNCs consider investing in a host country, they require assurance that they will be able to easily connect with their suppliers and customers (Dollar *et al.*, 2006; Sekkat and Veganzones-Varoudakis, 2007; Ndikumana and Verick, 2008; Kinda, 2010; Lehnert *et al.*, 2013). The technological infrastructure is measured as the number of mobile telephones per 100 people in the host country (Ndikumana and Verick, 2008; Adams, 2010). Data for technological infrastructure was collected from the World Bank, World Development Indicators.

### 5.2.3.5   *Degree of openness*

Degree of openness is a measure of the level of integration into the world economy and represents the trade liberalisation reforms of a host country. Openness is measured as a share of trade (exports plus imports) as a percentage of GDP (De Gregorio, 1992; Cevis and Camurdan, 2007; Adams, 2010; Ndikumana and Verick, 2008). According to Lehnert *et al.*, (2013), a liberalised trade regime offered a favourable environment for growth. For example, the success of China, India and Vietnam, for example, in the past few decades, signals the benefits of adopting trade openness strategies as the backdrop of attracting FDI into a host country. Thus, the more open an economy is, the greater is the crowding-in effect of FDI. The data for trade openness was obtained from UNCTAD statistics.

### 5.2.3.6   *Human capital*

The literacy rate in a host country is a key determinant when TNCs consider investing. The literacy rates, however, present a predicament to foreign investors that consider investing in a country. To minimise on costs, and to take advantage of paying low wages to unskilled workers, foreign investors may invest in a country that has human capital with a low literacy rate. On the other hand, foreign investors may only invest in countries that have a high level of skilled human capital that have the capability, knowledge and experience to successfully do the job. Adams (2010), Dollar *et al.*, (2006), Kinda *et al.*, (2011) and Borensztein *et al.,* (1998) all found evidence that suggested that the positive effects of FDI inflow blossomed only when the recipient country had a minimum level of skilled human capital. Secondary school enrolment represents human capital. This study replicates prior studies (such as Sekkat *et al.*, 2007; Kotrajara *et al.*, 2012) that used the secondary school enrolment variable as a measure of human capital. The data for secondary school enrolment ws obtained from the World Bank, World Development Indicators.

In sum, data for the dependent variable and explanatory variables was collected from three international data sources, namely UNCTAD statistics (FDI inflow, inflation and openness); IMF World Economic Outlook database (GDP and GDP per capita); and the World Bank, World Development Indicators (mobile telephone and secondary school enrolment). Below follows a validation of the data sources, while the limitations of the data sources are also highlighted.

## 5.3      DATA VALIDATION

### 5.3.1      International Monetary Fund (IMF)

Data obtained from the IMF was extracted from the World Economic Outlook (WEO) database. The WEO database encompasses specific macroeconomic data series from the statistical appendix of the WEO report, which depicts the IMF staff analysis and forecasts of economic developments at the global level in several countries worldwide. The data is available from 1980 to the present, and data projections are given for the next two years. For some countries, data is incomplete or unavailable for certain years. Where data is incomplete or unavailable, the IMF leaves the gap blank. The WEO is released in April and September each year (IMF, 2015).

### 5.3.2      United Nations Conference on Trade and Development (UNCTAD)

UNCTAD Statistics is an integral part of UNCTAD. UNCTAD compiles, validates and processes a wide range of data collected from national and international sources, including governments, state-owned entities and private enterprises. The data dates back to 1948 for almost all economies of the world. UNCTAD's statistical work conforms to the Principles Governing International Statistical Activities, because where data is incomplete or unavailable, UNCTAD applies its expertise and methodology to make estimates. Therefore, UNCTAD always strives to issue accurate data with utmost continuity in a timeous manner. UNCTAD produces over 150 indicators and statistical time series essential for the analysis of international trade, economic trends, FDI, external financial resources, population and labour force, commodities, information economy and maritime transport.

### 5.3.3      World Bank

Data from the World Bank is compiled from officially recognised international sources, including governments, state-owned entities and the private sector. The data depicts the most current and accurate global development and it includes national, regional and global estimates. The World Bank data encompasses a wide spectrum of segments, which range from agriculture and rural development, aid effectiveness, climate change, economy and growth, education, energy and mining, environment, external debt, financial sector, gender, health, infrastructure, labour and social protection, poverty, private sector, public sector, science and technology, social development, trade, and urban development. The data type is time-series with an annual periodicity. The data is updated on a quarterly basis in April, July, September and December of each year.

Since data in the study is collected from three international data sources (IMF, UNCTAD and World Bank), these data sources collect data that is compiled manually by human beings, the data is therefore susceptible to errorsThe availability and quality of data has a great influence on the duration of the study, thus the period of the study is from 1980 until 2013. Data for all the variables (dependent and explanatory) is available for the full duration of the study from all the data sources mentioned above except for data for technological infrastructure. Data for technological

infrastructure is only available from 1990 onwards. The lack of data for technological infrastructure for the period 1980 to 1989 presents a great limitation to the data analysis for the study as it undermines the data integrity. The study used panel-data, which had the advantage of having the dimensions of both time-series and cross-section data. The frequency of the data is annual.

## 5.4    DATA ANALYSIS

In this study, the focus was on the effect of favourable investment climate variables on attracting FDI into Rwanda. As a result, the model postulated that FDI is a function of GDP, GDP per capita, macroeconomic environment, technological infrastructure, degree of openness and human capital as explicitly displayed in equation 1 below. Preceding studies showed that these explanatory variables significantly and positively influenced FDI attractiveness in developing countries (see De Gregorio,1992; Borensztein *et al.*, 1998; Gastanaga *et al.*, 1998; Sekkat *et al.,* 2007; Ndikumana and Verick, 2008; Adams, 2010;  Kinda, 2010; Kotrajara *et al.*, 2011; Lehnert *et al.*, 2013):

Y = f (GDP, GDPpc, Inflation, Mobile Phone, Openness, School Enrol)                    (1)

The study assumed that the dependent variable (FDI inflow) was a random (stochastic) variable. Therefore, the data for the dependent variable was left in its original format as is. The explanatory variables (GDP, GDP per capita, macroeconomic environment, technological infrastructure, degree of openness and human capital) were assumed to be stationary (non-stochastic) variables (Brooks, 2014). In order to get the explanatory variables to be stationary, the study performed logarithmic differentiation on the explanatory variables. According to Brooks (2014), logarithms help to simplify cumbersome calculations and to rescale the data so that their variance is more constant. This rescaling of data helps overcome a common statistical problem of heteroscedasticity. Moreover, logarithms can also help to make a positively skewed distribution closer to a normal distribution. On the differentiation aspect, the study only performed first order differentiates.

The FDI attractiveness is estimated using a Least Square method, using EViews ® statistical package – this model is adequate to explain the relationship between Rwanda's investment climate and FDI attractiveness. The regression model attempts to explain the movements in the FDI inflow with reference to movements in one or more explanatory variables (Brooks, 2014). The complete model is specified below as:

$$\text{FDI inflow} = a_0 + a_1\,d\log(\text{GDP}) + a_2\,d\log(\text{GDPpc}) + a_3\,d\log(\text{infl}) + a_4\,d\log(\text{Mobile})$$
$$+ a_5\,d\log(\text{Open}) + a_6\,d\log(\text{School enrol}) + \mu$$

Where the following notions were used:

| | |
|---|---|
| FDI inflow | **=** FDI as a percentage of GDP |
| dlog(GDP) | = differential log of GDP |
| dlog(GDPpc) | = differential log of GDP per capita |

| dlog(Inflation) | = differential log of inflation |
|---|---|
| dlog(mobile) | = differential log of mobile telephone |
| dlog(open) | = differential log of trade openness |
| dlog(school enrolment) | = differential log of secondary school enrolment |
| α0 | = Intercept |
| α1- α6 | = Coefficients |
| μ | = Error Term |

The error variable (μ), is also known as the stochastic disturbance term. It will account for the variance between the predicted and actual values of the dependent variables. Coefficients $a_1, a_2,$ $a_3, a_4, a_5$ and $a_6$ are partial regression coefficients or partial slope coefficients of the regression equation. They measure the change in the mean value of the dependent variable, FDI inflow, given as a change in any of the explanatory variables.

Table 5.1 below displays a summary of all the explanatory variables that were included in the regression model. The summary table also displays the expected sign (whether positive or negative) of the coefficient of the variables and the a *priori* expectation of the variables in the regression model after running the Least Square regression on EViews ®.

**Table 5.1: Summary of the explanatory variables and a priori expectation**

| Variable | The expected sign on the coefficient | Reason for inclusion in study and a *priori* expectation |
|---|---|---|
| GDP | Positive | • GDP provides a representation of the market size of Rwanda.<br>• High GDP indicates better market opportunities, rising productivity and profitability in Rwanda. |
| GDP per capita | Positive | • GDP per capita displays the relative performance of Rwanda.<br>• An increase in per capita GDP indicates growth in Rwanda and tends to translate as an increase in productivity. |
| Inflation | Negative | • Inflation represents Rwanda's macroeconomic policies and country risk.<br>• High levels of inflation reflect unsustainable monetary and exchange rate policies |
| Mobile Telephone | Positive | • The number of mobile phones per capita proxies the availability of infrastructure in Rwanda.<br>• Increased mobile telephones indicate Rwanda's rising technological infrastructure. |
| Degree of openness | Positive | • Openness represents trade liberalisation in Rwanda<br>• Liberalisation introduces increased competition, provides more market opportunities and allows for more technology transfers. |

| Human Capital | Positive | • Secondary school enrolment proxies the human capital premise in Rwanda. |
|---|---|---|
| | | • Rising levels of secondary school enrolment results in an increased educated human capital. |

Source: Cevis and Camurdan (2007) and RMB Global Markets Research (2015).

## 5.5    SUMMARY

An important aspect of any good quality research work is the thorough selection of variables that will be examined, the availability of the data for the chosen variables, the time period of the study (keeping in mind that the longer the timeframe, the better is the study), and, most importantly, the data sources and the validity of the data sources. This study selected FDI inflow as the dependent variable and GDP, GDP per capita, macroeconomic environment, technological infrastructure, degree of openness and human capital as the explanatory variables.

This study assumed the dependent variable to be random (stochastic), while the explanatory variables were assumed to be stationary (non-stochastic). To transform the explanatory variables into a fixed nature, the study performed logarithmic differentiation on all the explanatory variables. Lastly, a summary of the variables in conjunction with the expected sign on the coefficient of the variables and the a *priori* expectations were highlighted in this chapter. The next chapter presents the regression model results, main findings as well as the recommendations for consideration.

# C H A P T E R  6
# F I N D I N G S

## 6.1    INTRODUCTION

This chapter presents and discusses in detail the empirical results of the impact of an improved investment climate on attracting FDI into Rwanda. The study examined the data using a statistical programme termed EViews®. Since descriptive statistics provide a succinct summary of data, the study first presents and discusses the descriptive statistics of the empirical results. The study then methodically analyses the inferential statistics of the empirical results by first focusing on the overall performance of the regression model followed by the effects that each explanatory variable had on attracting FDI inflows in Rwanda.

## 6.2    MAIN FINDINGS

Residuals are the deviations of the data from the model. Under the null hypothesis and under the model assumptions, residuals should be normally distributed and independent. In order to check the error variables, the study examined the residuals. Figure 6.1 depicts the residual plot. Such a residual plot allows for checking for outliers. Outliers are points that do not fit with others. Outliers have the potential to have major effects on an analysis and can easily lead to incorrect conclusions. In the study, most of the points are scattered close to each other and closer to the mean of zero (note that residuals for any factor level always add up to zero). Outliers are present in this study. The outlier points are slightly far from the other points as highlighted by the red circles in figure 6.1 below. It is important to make mention that there will almost always be some residuals larger than the others in absolute terms. In terms of the study, the data has been entered correctly, and one possible explanation for the outliers may be the missing data for technological infrastructure as explicitly stated in Chapter 5. The missing technological infrastructure data for the period 1980 to 1990 has been taken as zero in the regression model. Overall, the outliers in the study have minor differences. The detailed residuals plot is added as Appendix A of the research report.

In order to check the effect of the individual points, the study deleted the technological infrastructure variable from the model and then reran the regression model without the technological infrastructure variable. As depicted in Figure 6.2 below, the pattern of the residuals, when excluding the technological infrastructure variable from the regression model, is almost identical to the pattern of the residuals in Figure 6.1 which includes all the explanatory variables in the model. Therefore, the study concluds that the technological infrastructure variable did not affect the conclusion of the overall model and thus this is no cause for concern.

RESIDUALS
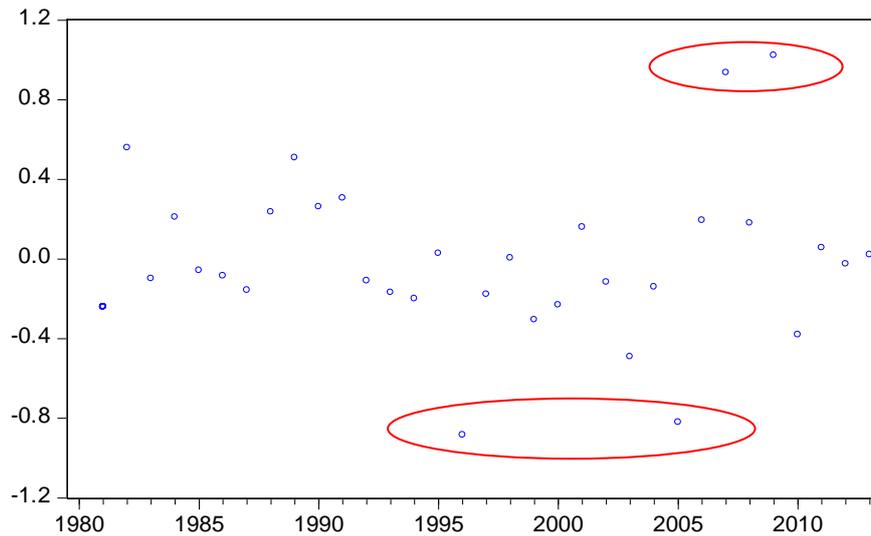


**Figure 6.1: Residuals dot plot 1980-2013**

Source: Author's own regression analysis.

RESIDUALII
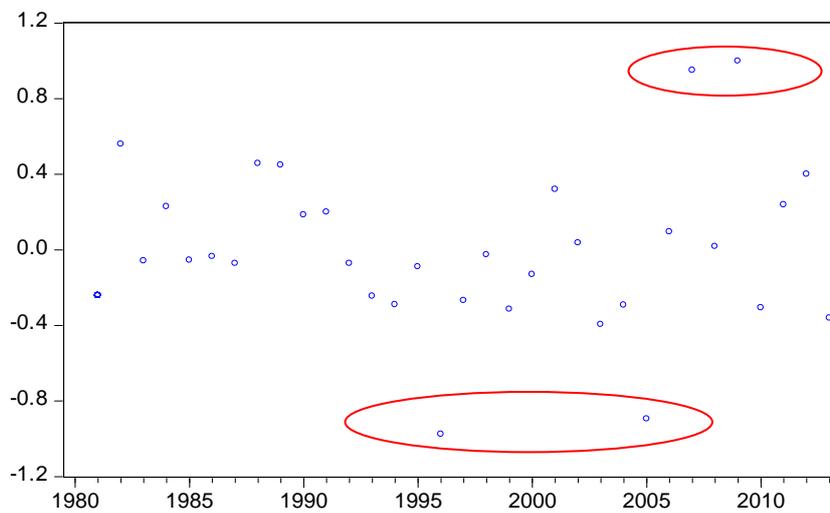


**Figure 6.2: Residuals dot plot excluding technological infrastructure explanatory variable 1980-2013**

Source: Author's own regression analysis.

## 6.3    ANALYSIS

### 6.3.1    Durbin-Watson test statistic

The Durbin-Watson (DW statistic test) detects the presence of autocorrelation in the residuals from the regression analysis. The value of DW ranges between 0 and 4. When DW = 0, perfect positive autocorrelation in the residuals is present. When DW = 2, there is no presence of autocorrelation in

the residuals. When DW = 4, there is the presence of perfect negative autocorrelation in the residuals. In this study, DW = 1.80 (see Table 6.1 below), which is marginally less than 2; therefore, this is evidence of low positive autocorrelation in the study.

## 6.3.2     R-squared

The study deems it necessary to have some measure of how well the regression model actually fits the data.  This measure is dubbed 'goodness of fit statistic' and it is represented by the R-squared. R-squared values range from 0 to 100. An R-squared of 100 indicates that the model perfectly explains the data and an R-squared of 0 indicates that the model has no explanatory power.

**Table 6.1: Summary of regression model**

Dependent Variable: FDI INFLOW
Method: Least Squares
Sample (adjusted): 1981 2013
Included observations: 33 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| GDP | 4.970790 | 1.697253 | 2.928726 | 0.0070 |
| GDPPC | 4.355281 | 1.097159 | 3.969600 | 0.0005 |
| INFLATION | -2.426683 | 1.671148 | -1.452106 | 0.1584 |
| MOBILE_TELEPHONE | 0.029422 | 0.024470 | 1.202388 | 0.2400 |
| OPENNESS | -0.098621 | 0.054973 | -1.793984 | 0.0845 |
| SCHOOL_ENROLMENT | 0.116605 | 0.067745 | 1.721217 | 0.0971 |
| C | 1.044114 | 0.804191 | 1.298341 | 0.2056 |

| | | | |
|---|---|---|---|
| R-squared | 0.658955 | Mean dependent var | 0.788476 |
| Adjusted R-squared | 0.580252 | S.D. dependent var | 0.682781 |
| S.E. of regression | 0.442360 | Akaike info criterion | 1.392445 |
| Sum squared resid | 5.087737 | Schwarz criterion | 1.709886 |
| Log likelihood | -15.97534 | Hannan-Quinn criter. | 1.499254 |
| F-statistic | 8.372713 | Durbin-Watson stat | 1.809565 |
| Prob(F-statistic) | 0.000041 | | |

Source: Author's own regression analysis.

Although a good regression will give a high R-squared, problems can arise and a high R-squared does not necessarily mean a good fit.  As displayed in Table 6.1 above, the R-squared is 65.89 per cent for this study, indicating a moderately high explanatory power of the investment climate variables in attracting FDI into Rwanda. This means that about 65.89 per cent of the FDI attractiveness in Rwanda is explained by the investment climate variables. The study also cautions some limitations of the R-squared, and Brooks (2014) affirmed that the R-squared never declines, but instead it increases when more explanatory variables are added to the regression model. As a point of illustration, the study added an extra explanatory variable to the regression model, gross national income (GNI), as a measure of wealth in Rwanda. With the addition of the GNI variable, the R-squared increasesd to 66.03 per cent from 65.89 per cent (see Table 6.2 below).

**Table 6.2: Summary of regression model with additional explanatory variable (GNI)**

Dependent Variable: FDI INFLOW
Method: Least Squares
Sample (adjusted): 1981 2013
Included observations: 33 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| GDP | 4.979359 | 1.727454 | 2.882485 | 0.0080 |
| GDPPC | 4.252327 | 1.160975 | 3.662720 | 0.0012 |
| INFLATION | -2.477029 | 1.707782 | -1.450436 | 0.1594 |
| MOBILE_TELEPHONE | 0.028790 | 0.024979 | 1.152555 | 0.2600 |
| OPENNESS | -0.097356 | 0.056081 | -1.735978 | 0.0949 |
| SCHOOL_ENROLMENT | 0.115352 | 0.069051 | 1.670524 | 0.1073 |
| GNI | 0.202655 | 0.626125 | 0.323666 | 0.7489 |
| C | 1.024624 | 0.820617 | 1.248602 | 0.2234 |

| | | | | |
|---|---|---|---|---|
| R-squared | 0.660378 | Mean dependent var | | 0.788476 |
| Adjusted R-squared | 0.565284 | S.D. dependent var | | 0.682781 |
| S.E. of regression | 0.450178 | Akaike info criterion | | 1.448870 |
| Sum squared resid | 5.066507 | Schwarz criterion | | 1.811659 |
| Log likelihood | -15.90635 | Hannan-Quinn criter. | | 1.570937 |
| F-statistic | 6.944470 | Durbin-Watson stat | | 1.788522 |
| Prob(F-statistic) | 0.000123 | | | |

Source: Author's own regression analysis.

### 6.3.3    Adjusted R-squared

Given the misleading trait of the R-squared, the adjusted R-squared aims to redress this issue. The adjusted R-squared often takes into account the loss of degrees of freedom associated with adding extra explanatory variables (Brooks, 2014). The adjusted R-squared for the study is 58 per cent (see Table 6.1), indicating a reasonable fit of the regression model to the data. As expected, the adjusted R-squared is always lower than the R-squared as it is an unbiased estimate of the population R-squared. In addition, the adjusted R-squared increases only if the new explanatory variable improves the regression model more than would be expected by chance. With the addition of the GNI variable to the regression model in Table 6.2, the adjusted R-squared declines from 58.02 per cent to 56.52 per cent. The issue of adding more explanatory variables as highlighted in Chapter 5 is the problem of multicollinearity.

### 6.3.4    F-statistic and standard of error and sum of squared residual

The F-statistic of the model is statistically significant at one per cent significance level (p-value of 0.000041) (see Table 6.1).

The standard error of regression (SE) is the measure of the accuracy of predictions. Because the SE values indicate that the observations are closer to the fitted lines, the smaller the S.E. values the better. The SE value of the regression model is 0.44, which is significantly small (see Table 6.1).

The residual sum of squares (RSS) is a measure of the amount of error remaining between the data and the model. A small RSS indicates a tight fit of the model to the data. The RSS of the study is 5.08 (see Table 6.1), which is somewhat small. Overall, the study is confident that the model is good enough for making accurate and meaningful conclusions. Therefore, the study concludes that the model performed well.

## 6.4    PERFORMANCE OF THE EXPLANATORY VARIABLES IN RELATION TO ATTRACTING FDI INFLOWS

### 6.4.1    Real GDP growth

The results in Table 6.1 show that real GDP growth is positively related to FDI inflows in Rwanda. The coefficient of the real GDP growth is statistically significant at the one per cent significance level (p-value of 0.0070), signifying that for every one per cent increase in GDP growth, FDI inflow will, on average, increase by about 4.97 per cent. Overall, the study is 99 per cent confident that GDP has high explanatory power for the increased attractiveness of FDI inflow to Rwanda. The coefficient of GDP also possesses the correct sign (positive sign) based on the study's a *priori* expectations summarised in Chapter 5, Table 5.1. Moreover, GDP is an important factor when investors consider investing in a foreign country. To illustrate the importance of GDP, the study excluded the GDP variable from the model as depicted in Table 6.3 below. The results found that the adjusted R-square plunged by roughly 20.30 per cent (from initially 58.02 per cent as depicted in table 6.1 to 46.24 per cent as depicted in table 6.3, after the exclusion of the GDP variable), reflecting the importance of real GDP when investors seek frontier markets to diversify their foreign investment portfolios and enhance their returns.

**Table 6.3: Summary of regression model, excluding GDP explanatory variable**

Dependent Variable: FDI INFLOW
Method: Least Squares
Sample (adjusted): 1981 2013
Included observations: 33 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| LGDPPC | 4.719721 | 1.233595 | 3.825990 | 0.0007 |
| LINFLATION | -2.029467 | 1.884926 | -1.076683 | 0.2911 |
| MOBILE_TELEPHONE | 0.064675 | 0.024110 | 2.682505 | 0.0123 |
| OPENNESS | -0.112378 | 0.061984 | -1.813028 | 0.0810 |
| SCHOOL_ENROLMENT | 0.095896 | 0.076246 | 1.257725 | 0.2193 |
| C | 1.629682 | 0.881492 | 1.848777 | 0.0755 |

| | | | | |
|---|---|---|---|---|
| R-squared | 0.546444 | Mean dependent var | | 0.788476 |
| Adjusted R-squared | 0.462452 | S.D. dependent var | | 0.682781 |
| S.E. of regression | 0.500599 | Akaike info criterion | | 1.616944 |
| Sum squared resid | 6.766189 | Schwarz criterion | | 1.889036 |
| Log likelihood | -20.67957 | Hannan-Quinn criter. | | 1.708495 |

| F-statistic | 6.505913 | Durbin-Watson stat | 1.285365 |
| Prob(F-statistic) | 0.000433 | | |

Source: Author's own regression analysis.

### 6.4.2  GDP per capita

The results in Table 6.1 show that GDP per capita is positively related to FDI inflows in Rwanda. The coefficient of the GDP per capita is statistically significant at the one per cent significance level (p-value of 0.0005), signifying that the increase in GDP per capita  has high significant explanatory power for the increased attractiveness of FDI inflow to Rwanda. This suggests that for every one per cent increase in GDP per capita, FDI inflows to Rwanda will, on average, increase by 4.35 per cent. Overall, the study is 99 per cent confident that GDP per capita significantly contributes to FDI attractiveness in Rwanda. The coefficient of GDP also possesses the correct sign (positive sign) based on the study's *a priori* expectations.

### 6.4.3  Inflation

The model found that inflation was inversely related to FDI inflows, meaning that for every one per cent decrease in inflation, FDI inflows will increase by 2.42 per cent (see table 6.1). However, the coefficient of inflation is not statistically significant at ten per cent significance level (p-value = 0.1584). Therefore, it is important to caution that while FDI flows may increase in Rwanda when the level of inflation declines, the increase in FDI inflows may not necessarily be due to the decline in inflation, but may be due to other statistically significant factors that are positively correlated to FDI. Moreover, the inflation variable possesses the correct sign (negative sign), based on the study's a *priori* expectations.

The inverse relationship between inflation and FDI inflow was expected as explicitly presented in Chapter 5, under the study's a priori expectations in Table 5.1. This is because high levels of inflation reflect unsustainable monetary and exchange rate policies, thus posing negative effects on a country's economy (RMB Global Market Research, 2015). The negative effects of inflation have the potential to discourage investments and savings, especially from foreign investors, as investors will be uncertain about future inflation regimes. For example, when inflation is rapid, the process of hoarding may result, whereby producers obtain and hold scarce resources and subsequently sell these scarce resources at a much later time to customers at a higher price for a higher profit. The hoarding of resources leads to a shortage of goods since producers anticipate that prices will continue to increase in the future.

### 6.4.4  Mobile telephone

The results in Table 6.1 show that mobile telephone is positively related to FDI inflows in Rwanda. This suggests that a one per cent increase in telephone infrastructure levels in Rwanda will, on average, result in the increase of FDI flows by 0.02 per cent. However, the coefficient of mobile telephone is not statistically significant at ten per cent significance level (p-value = 0.2400). While

an improvement of technological infrastructure in Rwanda may have a positive effect on attracting FDI into the country, the improvement of technological infrastructure does not have any explanatory power. The coefficient of mobile telephone possesses the correct sign (positive sign) based on the study's a *priori* expectations.

### 6.4.5 School enrolment

The results in Table 6.1 show that secondary school enrolment is positively correlated to FDI inflows in Rwanda. This suggests that a one per cent increase in secondary school enrolment levels in Rwanda will, on average, result in the increase of FDI flows by 0.11 per cent. The coefficient of secondary school enrolment is statistically significant at ten per cent significance level (p-value of 0.0971). The coefficient of secondary school enrolment possesses the correct sign (positive sign) based on the study's a priori expectations.

### 6.4.6 Openness

The results in Table 6.1 found that openness was inversely correlated to FDI inflows in Rwanda. This suggests that a one per cent decrease in the degree of openness will, on average, result in a 0.09 per cent increase in FDI inflow into Rwanda. Moreover, the coefficient of openness is statistically significant at ten per cent significance level (p-value of 0.0845). The coefficient of openness does not possess the correct sign (negative sign) based on the study's a *priori* expectations. In essence, the study suggests that the strong positive correlation between GDP and FDI inflows and GDP per capita and FDI flows may have distorted the explanatory power of the openness variable, thus making the openness variable to have a negative effect on FDI attractiveness.

An overwhelming number of prominent authors such as Adams (2010) and Sekkat and Veganzones-Varoudakis (2007), found evidence that alluded that openness of an economy played a critical role in aiding the attraction of FDI inflows, which may subsequently lead to increased economic growth predominantly in developing countries. However, the study found evidence, which was aligned to De Gregorio's (1992) findings in that there was no significant effect of the openness of an economy on attracting FDI.

### 6.5 SUMMARY

The overarching results of the regression model found the model to be good enough for making accurate and meaningful conclusions. This is against the backdrop of a moderately high R-squared of 65.89 per cent, with an adjusted R-squared of 58.02 per cent, as depicted in Table 6.1. The SE of the model also indicated that the observations were closer to the fitted lines, with the SE value of the regression model being equal to 0.44, which was significantly small.

Lastly, the RSS of the model was relatively small (RSS equal to 5.08), indicating a tight fit of the model to the data. Overall, the study concludes that the model performed exceptionally well.

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Regarding the relationship between the dependent variable (FDI inflows) and the explanatory variables, the study found GDP, GDP per capita, mobile telephone and school enrolment to be positively correlated to FDI inflows. Of all the explanatory variables, GDP, GDP per capita and school enrolment were the only explanatory variables that were statistically significant at the one per cent and ten per cent significance level. Based on the results in Table 6.1, GDP had the most significant effect on FDI attractiveness into Rwanda. Inflation and degree of openness on the other hand, were inversely related to FDI inflows into Rwanda.  Inflation was not statistically significant at the ten per cent significance level, while openness was statistically significant at the ten per significance level.

Overall, it is evident that GDP plays an important role in encouraging FDI flow into Rwanda. The next chapter will articulate policy implications from the findings of this chapter and recommend possible intervention by the government of Rwanda that could help improve the effectiveness of FDI flow into the country.

# C H A P T E R   7

# S U M M A R Y ,   C O N C L U S I O N   A N D   R E C O M M E N D A T I O N S

## 7.1     INTRODUCTION

This chapter provides a consolidated conclusion to the study, firstly, by presenting a summary of the main findings of the theoretical and empirical analysis. The chapter then outlines the policy implications of the research findings from both a global and local perspective. Moreover, this chapter also brings to the fore priorities to be considered in the future together with recommendations for consideration. Lastly, this chapter outlines areas that should be considered for further research, building on the findings of this research assignment.

## 7.2     SUMMARY OF MAIN FINDINGS

As stated in Chapter 1, this study set out to evaluate the effect of an improved investment climate on attracting FDI inflows into Rwanda. The main purpose of the study was to ascertain whether the World Bank Rwanda Investment Climate Reform Programme had been effective in enhancing FDI inflows into Rwanda. Before delving into the determinants that attracte FDI inflows into Rwanda, the study laid the foundation by understanding what FDI is, its generic makeup, how it evolved over the years, and its trends. First, the study found that there is no single definition for FDI, but, however, that two traits characterise FDI, namely that FDI is a more stable source of foreign investment, and, secondly, that investment through FDI is for the long-haul.

The study further found that FDI is comprised of three categories: equity capital, which is new investment in a company; loans from affiliates or from shareholders; and retained earnings. The study also found that the mode of entry of FDI is an important feature of the structure of foreign investment. While there are three modes of entry for FDI to enter a host country, which include Greenfield investments, cross boarder M&As and private equity, Greenfields investments have consistently been the predominant mode of entry, followed by M&As and, lastly, private equity. The reason for the dominance by Greenfields investments is that these are viewed as a friendlier and more collaborative way of investing in a host country, because in a Greenfield investment, the parent company establishes a new company in a foreign country by constructing new amenities from the ground up.

M&As, on the other hand, are perceived as 'hostile' in that they buy out companies and merge them to form a single company. In worst cases, after a M&A investment, people lose their jobs after the new company has merged. Private equity is a significantly more expensive and time-consuming form of investment as it requires active management and control by the shareholders.

The study also found that FDI fluctuated over the years against the backdrop of the dot.com bubble in 2000, booming U.S. housing prices in the mid-2000s, the global financial crisis in 2007/2008, instability of the global economy in 2012, and more recently, the Ebola virus outbreak in West Africa, Eurozone crises in Europe and quantitative easing regimes in the U.S.

The study also found that developed countries were traditionally the countries that received the greatest FDI inflow, until more recently when developing countries superseded developed countries as the countries that received the greatest FDI inflow.

In terms of what the future holds for FDI, UNCTAD forecasts improvements in total global FDI flows that with will reach US$1.4 trillion in 2015, US$1.5 trillion in 2016, and US$1.7 trillion in 2017. Overall, the study confidently confirmed that FDI has indeed emerged as the single most sought-after source of development finance, predominantly in developing countries, since countries that have received increased FDI inflows, such as China and India, have enjoyed strong growth and development of their economies.

When focusing on the explanatory variables, the study found three statistically significant variables, namely GDP, GDP per capita and school enrolment to FDI inflow in Rwanda. Going by order of relevance in the study, GDP was the most prominent significant variable. It is not by chance that GDP is the most noticeable significant variable, because GDP is the single best indicator of economic growth. When investors consider investing in foreign markets, they are generally concerned about the performance of a country's economy, because a very strong economy – reflected by positive GDP growth rates – typically means superior profit returns for their investments and vice versa. GDP gauges the health of a country's economy by depicting the overall performance of an economy. The robustness of GDP to FDI inflow could possibly be explained by the following reasons: (i) GDP enables investors to judge whether a country's economy is contracting or expanding; and (ii) GDP also enables investors to establish whether a threat such as a recession or an increase in inflation is approaching. This suggests that due to the demand for heightened FDI inflows into Rwanda, policymakers in Rwanda must endorse sound macroeconomic policies reflected, amongst others, by a stable exchange rate, low inflation rate and sustained growth. These enabling policies will encourage FDI to be attracted into the country.

The study also revealed that GDP per capita and secondary school enrolment were positively correlated to FDI inflow and were statistically significant. When focusing solely on the GDP per capita variable, this implies that as the per capita GDP levels rose, FDI inflows also increased in Rwanda. The upsurge of GDP per capita signals growth in Rwanda and translates this as an increase in productivity. This suggests that as Rwanda becomes more productive, as reflected by the increase in output, more FDI flow will be attracted into the country. When shifting focus to secondary school enrolment, the study found that as the level of secondary school enrolment increased, Rwanda would receive higher benefits from FDI. The results of the study supported the findings of Dollar *et al.,* (2006); Kose *et al.,* (2006); Borensztein *et al.,* (2008); Ndikumana and

Verick (2008), and  Kotrajara *et al.*, (2011), who strongly emphasised that in order for host countries to enjoy maximum benefits associated with FDI inflows, the host countries require the presence of skilled human capital. Overall, it is evident that GDP, GDP per capita and secondary school enrolment constitute key factors for the attractiveness of Rwanda as a preferred investment destination as far as FDI is concerned.

## 7.3    POLICY IMPLICATIONS

### 7.3.1    Globally

Although structural reforms take time, they deserve the necessary efforts given their significant impact on economic growth and development potential in developing countries and LDCs. Therefore, In terms of economic policy, the message to policymakers is twofold. Firstly, GDP growth constitutes a key factor for the attractiveness of FDI inflow. Secondly, improvements in government expenditure on infrastructure, financial development, good governance, political and economic stability, amongst other factors, are important complementary components to FDI attractiveness.

When viewing this issue from a global perspective, it is important to highlight that most developed markets have well-established favourable investment climates. Given the advanced development of transition economies, these economies are also well on their way to embracing sound investment climates with adequate infrastructure, well-developed financial markets, high literacy rates, low corruption rates and good governance. Therefore, policymakers of developing countries, LDC and structurally vulnerable and island economies should pay more attention to structural reforms for improving the investment climates in these countries.

Countries in the latter economies also have great economic growth potential as they remain unexploited and are endowed with natural resources, especially countries in SSA. Given the growth potential of these countries, a substantial amount of investments will be required to realise the growth potential; therefore, it is in the best interest of governments in developing countries, LDC countries and structurally vulnerable and island countries to facilitate and create opportunities that will result in these countries enjoying favourable investment climates. With favourable investment climates, these countries will be able to attract the much-needed FDI inflows into their respective countries.

### 7.3.2    Rwanda

It is clear that Rwanda is committed to enhancing its economy. It has taken radical strides to improve its investment climate through partnership with the World Bank. However, the battle is only half won, because now Rwanda must focus increasingly on other complementary factors such as developing a sound and transparent financial market, improving the quality of education, increased government expenditure on infrastructure, fast and efficient technological connectivity, and

diversifying its economy away from tea and coffee in order to realise further growth prospects. All these fundamental factors will not only enhance Rwanda's investment climate further, but will significantly position Rwanda to realise its dream of transitioning into a lower middle-income economy by 2020 and subsequently further improving its competitiveness position in the world economy.

## 7.4    PRIORITIES GOING FORWARD

As highlighted in the earlier chapters by Dollar *et al.*, (2006), Kose *et al.*, (2006), Ndikumana and Verick (2008), Kinda (2010), Kinda *et al.*, (2011), and Kotrajaras *et al.*, (2011), adequate infrastructure is vital for host countries to enjoy the maximum benefits associated with FDI inflows. Rwanda, however, is among the countries that have the most deficient and dilapidated infrastructure in SSA. The genocide has without a doubt had more negative effects than meet the eye, because not only were people killed, but infrastructure was also destroyed and left neglected. When drawing focus on the deficiency of infrastructure in Rwanda, Rwanda is ranked in the bottom ten countries with the worst transport-related infrastructure as measured by the World Bank Logistics Performance Index (see Appendix B) (Jones and Viros, 2014).

In terms of the urban road network, less than 25 per cent of Rwanda's urban network is considered to be in a good condition, while over 60 per cent is considered to be in a poor condition. When comparing Rwanda to other LDCs, such as Burkina Faso, Rwanda competes dismally as over 75 per cent of Burkina Faso's urban road network is considered to be in a good condition (see Appendix C) (Foster and Briceno-Garmendia, 2010).

In terms of power infrastructure, the Africa Progress Report (2015) shows that less than 20 per cent of Rwanda's households have access to electricity. This electrification rate is significantly lower than the 32 per cent average rate for SSA (see Appendix D). Despite this poor figure for access to electricity, there has been great improvement in the electrification rate in Rwanda, because in 2010 less than ten per cent of households in Rwanda had access to electricity (see Appendix D), and by 2014 about 18 per cent of the Rwandan population had access to electricity (Eberhard, Rosnes, Shkaratan and Vennemo, 2011; Africa Progress Report, 2015).

The drawbacks of poor infrastructure include long travel times, high transportation costs, poor production output, high inefficiencies, increased prices of products and decreased competitiveness of an economy among other factors. Therefore, expenditure on both electricity and transport infrastructure have to be prioritised urgently in Rwanda, because a country's economy is greatly dependent on reliable and available electricity in order to keep up with production output and a safe good quality road network in order to reach markets with ease. Seeing that electricity and road infrastructure has a great influence on Rwanda's economic growth, and economic growth (as measured by GDP) is the most statistically significant explanatory variable that attracts FDI flow into the country, the study emphasises that the government of Rwanda must prioritise and focus

more on investing in physical infrastructure as this shift in focus will complement the investment climate in Rwanda.

## 7.5      RECOMMENDATIONS

In addition to deficient infrastructure, the Rwandan government allocates about six per cent as a share of GDP to infrastructure in the country (see Figure 7.1 below), which is significantly lower when compared to other LDCs such as Ethiopia and Liberia that allocate about 14.5 per cent and 17 per cent respectively as a share of their GDP to infrastructure development (Foster, 2008). Furthermore, when observing the infrastructure budgets of South Africa, Botswana and Mauritius as depicted in Figure 7.1 below, these countries have the most satisfactory infrastructure in SSA, yet these countries still allocate a substantial amount to infrastructure development as a percentage of their GDP (averaging between eight to ten per cent as percentage share of GDP for these countries combined).
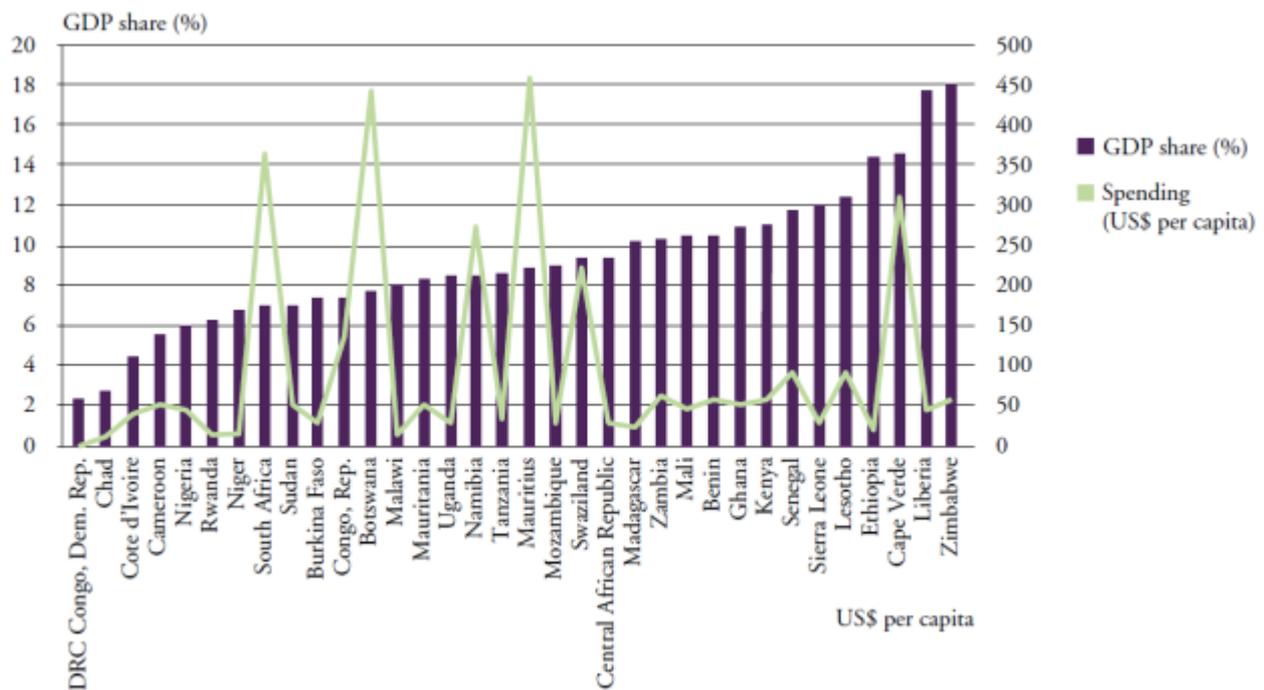


**Figure 7.1: Fiscal flows devoted to infrastructure in Africa**

Source: Foster (2008).

The picture is even more gloomy for a share of spend allocated to road transport per annum, because Rwanda only allocates around one per cent as percentage share of GDP to road transport (see Figure 7.2 below). Therefore, the study highly recommends that the government of Rwanda should shift their focus towards infrastructure expenditure with significant focus on electricity and road development. This shift in focus will aid Rwanda in improving efficiencies, output and productivity, which is vital for the economic growth of the country, because increased economic growth will attract more FDI inflow into the country.
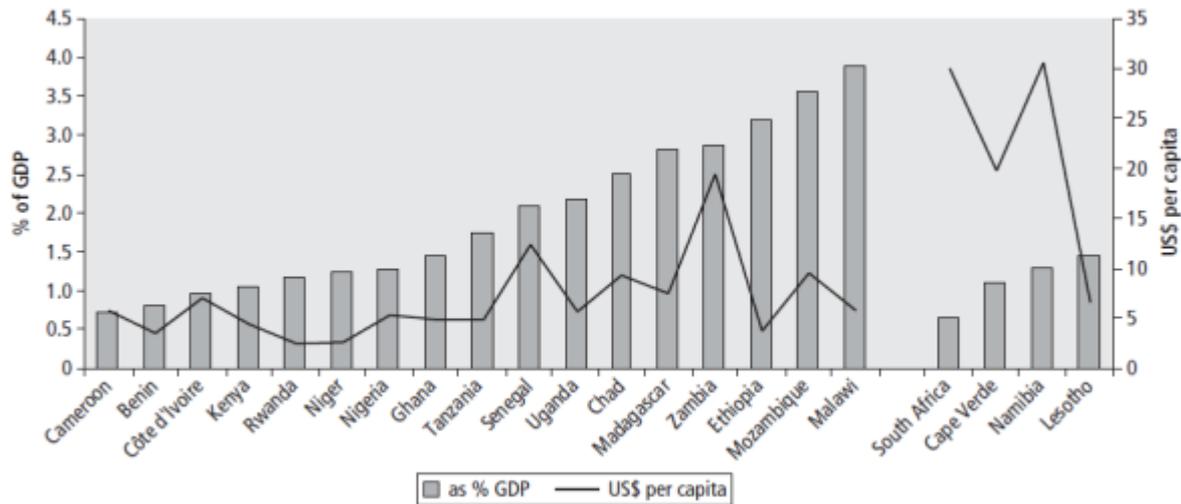
**Figure 7.2: Average annual spend on road transport in Africa 2001-2005**

Source: Foster and Briceno-Garmendia (2010).

## 7.6    FURTHER RESEARCH

For future research on the impact of a favourable investment climate on attracting foreign direct investment, it is recommended that further research should be conducted in other least-developed countries in SSA. While different countries are faced with their own unique challenges, there is great potential for other LDCs to learn from Rwanda's investment climate reform programme.

The great advantage for other LDCs is that they do not have to invent the wheel, but can rather learn from Rwanda, including the shortcomings to avoid. The benefit of Rwanda sharing notes with other LDCs will enable SSA to be more integrated, to eliminate silo mentality and, most importantly, to improve synergies in order to improve the economic conditions in SSA.

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# A P P E N D I X   A :

## RESIDUAL PLOT 1981-2013

**Table A.1: Residual Plot 1981-2013**

```
 obs    Actual    Fitted   Residual  Residual Plot
1981   1.14733   1.38747  -0.24013‖       . * |    .      |
1982   1.31705   0.75879   0.55826‖       .   |    . *    |
1983   0.67288   0.77213  -0.09924‖       .  *|    .      |
1984   0.85003   0.64059   0.20943‖       .   |*   .      |
1985   0.76300   0.82020  -0.05720‖       .  *|    .      |
1986   0.81587   0.90080  -0.08493‖       .  *|    .      |
1987   0.72836   0.88455  -0.15619‖       . * |    .      |
1988   0.80984   0.57339   0.23645‖       .   |  * .      |
1989   0.58627   0.07750   0.50877‖       .   |    .*     |
1990   0.29761   0.03567   0.26195‖       .   | * .       |
1991   0.23905  -0.06701   0.30606‖       .   |  *.       |
1992   0.27175   0.38056  -0.10881‖       .  *|    .      |
1993   0.29796   0.46693  -0.16897‖       . * |    .      |
1994   8.3E-05   0.19893  -0.19885‖       . * |    .      |
1995   0.15382   0.12624   0.02758‖       .   *    .      |
1996   0.15776   1.04109  -0.88333‖  *    .   |    .      |
1997   0.13682   0.31428  -0.17746‖       . * |    .      |
1998   0.34889   0.34384   0.00505‖       .   *    .      |
1999   0.09056   0.39660  -0.30603‖       .*  |    .      |
2000   0.45721   0.68829  -0.23107‖       . * |    .      |
2001   1.10469   0.94396   0.16072‖       .   |*   .      |
2002   0.08942   0.20595  -0.11653‖       .  *|    .      |
2003   0.25458   0.74636  -0.49178‖     *.    |    .      |
2004   0.36860   0.50849  -0.13988‖       . * |    .      |
2005   0.30837   1.12783  -0.81946‖  *    .   |    .      |
2006   0.98496   0.79082   0.19414‖       .   |*   .      |
2007   2.20118   1.26559   0.93558‖       .   |    .    * |
2008   2.17096   1.99065   0.18032‖       .   |*   .      |
2009   2.25923   1.23605   1.02318‖       .   |    .    * |
2010   0.75264   1.13247  -0.37983‖       .*  |    .      |
2011   1.67151   1.61571   0.05580‖       .   |*   .      |
2012   2.24996   2.27533  -0.02537‖       .   *    .      |
2013   1.46146   1.43967   0.02180‖       .   *    .      |
```

Source: IATA, 2011c: 4.

A P P E N D I X   B :

W O R L D   B A N K   L O G I S T I C S

P E R F O R M A N C E   I N D E X :

T R A N S P O R T   R E L A T E D

I N F R A S T R U C T U R E

**Table B.1: World Bank Logistics Performance Index: Transport-related infrastructure**

| BOTTOM 10 COUNTRIES | LPI |
|---|---|
| Congo, Rep. | 1.27 |
| Djibouti | 1.51 |
| Burundi | 1.68 |
| Libya | 1.75 |
| Haiti | 1.78 |
| Eritrea | 1.83 |
| Nepal | 1.87 |
| Rwanda | 1.88 |
| Gambia | 1.9 |
| Iraq | 1.92 |

Source: Jones and Viros (2014).

# A P P E N D I X   C :

## DISTRIBUTION OF ROAD NETWORK LENGTH ACROSS CONDITION CLASSES IN AFRICA
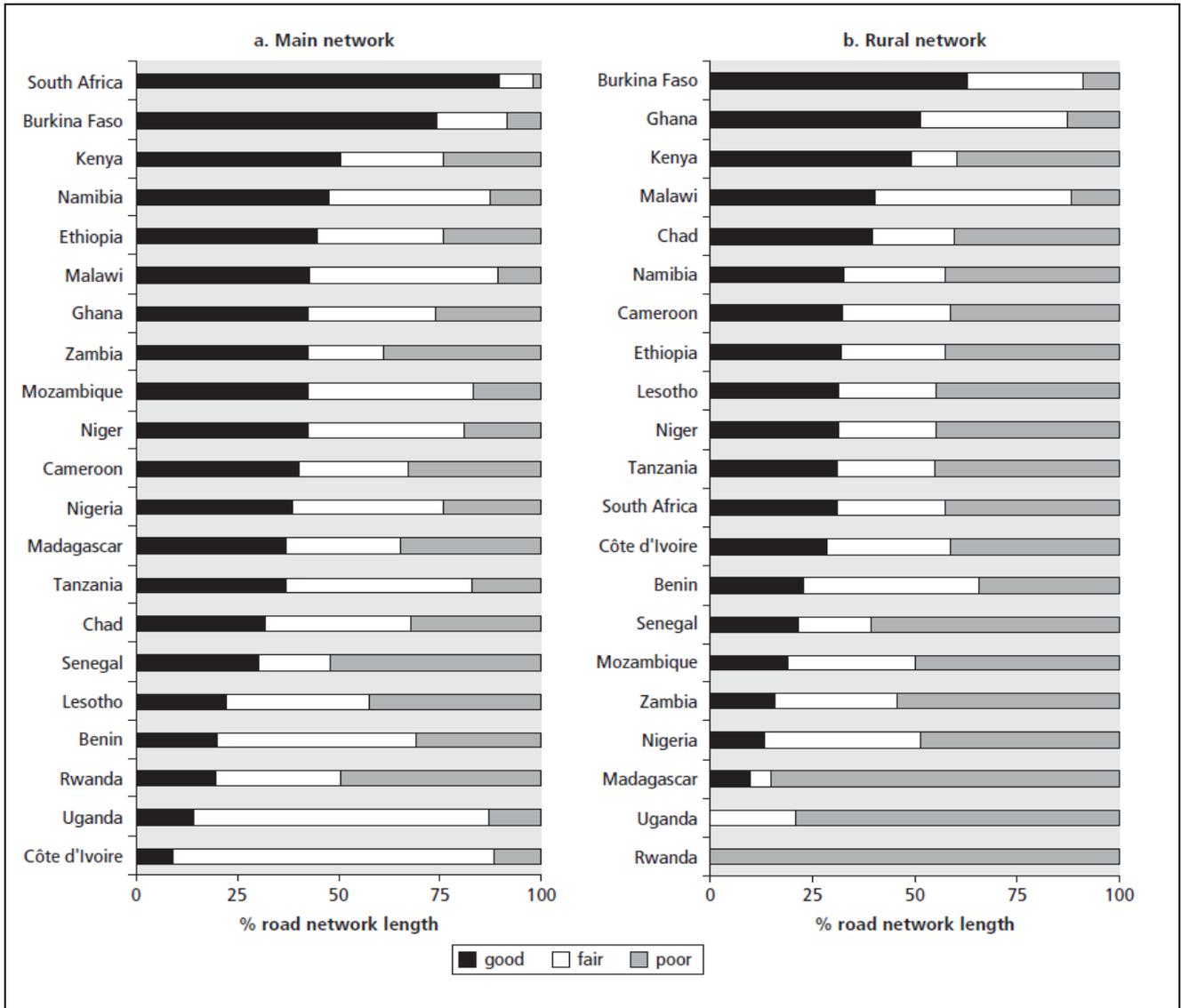


**Figure C.1: Distribution of road network length across condition classes in Africa**

Source: Foster and Briceno-Garmendia (2010).

# A P P E N D I X   D:

## ACCESS TO ELECTRICITY BY COUNTRY
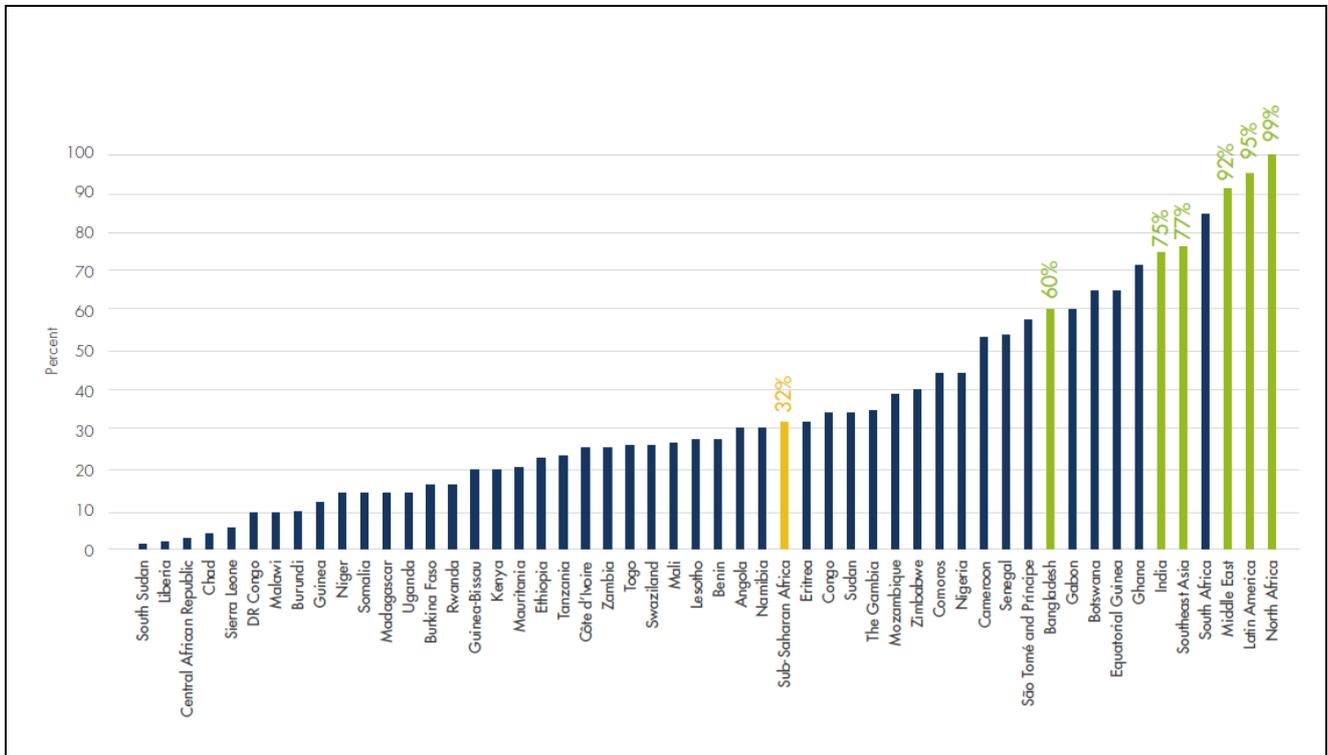


**Figure D.1: Access to electricity by country**

Source: Africa Progress Report (2015).
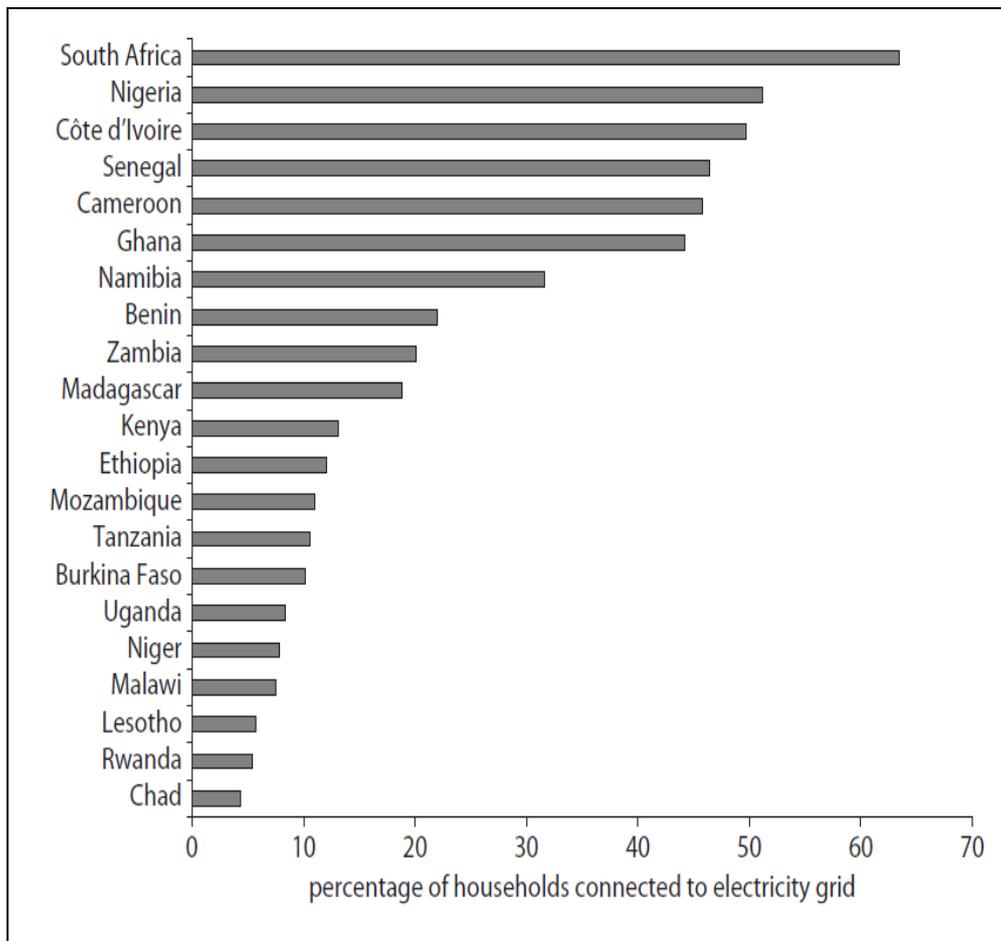
**Figure D.2: Electrification rates in Africa**

Source: Eberhard, Rosnes, Shkaratan and Vennemo (2011).