Determinants of Foreign Direct Investment Inflows in Namibia

Research Assignment presented in partial fulfilment of the requirements for the degree of Masters of Management in Finance and Investments by

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DECLARATION

I, Penehafo N.T.T Hangula, declare that the entire body of work contained in this research paper is my own and have not previously been submitted for a degree at this or any other university.

Signed…….

Date…….

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ABSTRACT

This study investigates the dominant determinants of Foreign Direct Investment in Namibia. The second part of the study evaluates whether FDI received in Namibia is beneficial for the Namibian economy. The study uses two different methods to test for stationarity: Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP). The study makes use of the Ordinary Least Square (OLS) in conjunction with the cointegration (CI) and Error Correction Models (ECM) to determine the factors that influence FDI in Namibia, using data for the period of 1990- 2014. The results show that, in the short-run, Foreign Direct Investment is significantly influenced by GDP, taxes, exchange rates and Drought occurrence. The results of the second part of the study were to test whether FDI received is beneficial for the Namibian economy. The Granger causality test was used to test this relationship. The results of the Granger causality test revealed that FDI is indeed beneficial for the economy. Hence, it is significant in explaining GDP in Namibia. The study recommends a review of the administration of the current investment system, which should highlight the role of each player in the economy. The study further recommends that a good quality of governance, reduced bureaucracy, low-interest rate and well-developed infrastructure will enhance investor's confidence. Expansionary fiscal and monetary policies should be applied to stimulate GDP growth and to increase Foreign Direct Investment.

Keywords:
Foreign Direct Investment, Gross Domestic Product, Stationarity, Cointegration, Error Correction Modelling, Taxes and Exchange Rates.

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LIST OF ACRONYMS

ADF	Augmented Dickey- Fuller
BON	Bank of Namibia
BRICS	Brazil, Russia, India, China and South Africa
ECM	Error Correction Model
EPZ	Export Processing Zone
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GMM	Generalized Method Moments
GRN	Government of the Republic of Namibia
GVC	Global Value Chain
M&A	Mergers and Acquisition
MENA	Middle East and North Africa
MNC	Multinational Corporation
MNE	Multinational Enterprises
NSA	Namibia Statistics Agency
OECD	Organisation for Economic Cooperation and Development
OLI	Ownership Location Internalization
OLS	Ordinary Least Square
SAARC	South Asian Association for Regional Cooperation
SACU	Southern African Customs Union
SADC	Southern Africa Development Community
SEEC	South-East European Cooperation
UNCTAD	Unite Nations Conference on Trade and Development
VECM	Vector Error Correction Model
VAR	Vector Autoregression
PP	Phillips Perron Test
SSA	Sub Saharan Africa
NIC	Namibia Investment Centre
TNC	Transnational Cooperation
EJV	Equity Joint Venture
CJV	Contractual Joint Ventures
WFOE	Wholly Foreign Owned Enterprises
IMF	International Monetary Fund

CHAPTER 1

INTRODUCTION AND BACKGROUND OF THE STUDY

1.1 Introduction

Foreign Direct Investment (FDI) is a vital means of reserved external funding for many developing countries and is one of the most significant macroeconomic variables. Foreign Direct Investment also serves as a non-debt creating capital flow that can help bridge resource gap. Most developing countries are trying their best to attract as much Foreign Direct Investment as they can. According to the Organisation for Economic Cooperation and Development (OECD) (1996), Foreign Direct Investment can be defined as a situation where an investor has acquired control in a domestic entity in one economy or also when they have an enterprise, which is not in the country of the foreign investor. Foreign Direct Investment involves more than just ownership. Investors also have direct involvement in the management of an enterprise (see Buckley, 1997; IFC 1997).

Foreign Direct Investment creates stable and long lasting relationships between economies while encouraging the transfer of knowledge and capability between different countries. Foreign Direct Investment is viewed as a basis for generating funding for investment and an important finance vehicle for enterprise development under the right policy environment (Vinesh *et.al.* 2014). Foreign Direct Investment provides a combination of training, knowledge, management and marketing experience to the recipient countries (Jansen, 1995; OECD, 1983).

Shortly after independence in 1990, Namibia started a mission to rebuild its economy. The country became conscious of the need to attract Foreign Direct Investment, to meet the investment needs that would contribute to the development of the economy. Like its neighbours, Foreign Direct Investment (FDI) in Namibia is seen as a key component in eradicating the chronic issue of high unemployment (Lauch, 2011). The government of Namibia is thus dedicated to growing the economy and reducing unemployment. Foreign Direct Investment is, used this as a tool to realize these goals. The questions that arise are: (a) is Namibia attracting sufficient Foreign Direct Investment inflows. If so, (b) is FDI helping to stimulate economic growth, and (c) What factors attract international companies to come and

set up businesses in Namibia. In an attempt to respond to these questions, the trends in annual GDP growth are reviewed.

1.1.1 Overview of the Namibian Economy

Namibia has enjoyed abundant accomplishments since its independence in 1990, resulting from sound financial freedom, good governance, freedoms of expression and good human rights policies. In addition, the country is vulnerable to external shocks as major development relies heavily on the external market. Income distribution in Namibia is one of the most unequal in the world, with a Gini coefficient of 0.597 (2010) as presented in the household survey. The trend of the poverty rates is on a downward trend and this is signified by the fact that it was 21% in 2009 and 49% in 1993 (WBG Calculations). Namibia has an extremely high rate of unemployment, which in 2013 stood at 29.6% in 2013 (Namibia Statistics Agency, 2013).

Namibia has sustained a consistent rate of growth, with a low inflation rate, low debt, while having good earnings from exports. Namibia's economic trends are similar to those of South Africa, mainly because the Namibian Dollar pegged to the Rand on a one to one basis. This implies that when South Africa experiences economic shocks, the effects of these shocks automatically affect the Namibian Economy as well. It should be noted that the Namibian financial sector is relatively developed in comparison with the other countries in the Southern African Region. Namibia was ranked by the Global Competitiveness Survey of 2014-15 at number 54 out of 144 economies, behind 7th ranked South Africa, the 24th ranked Kenya, and the 26th ranked Mauritius in the African continent (African Economic Outlook, 2015).

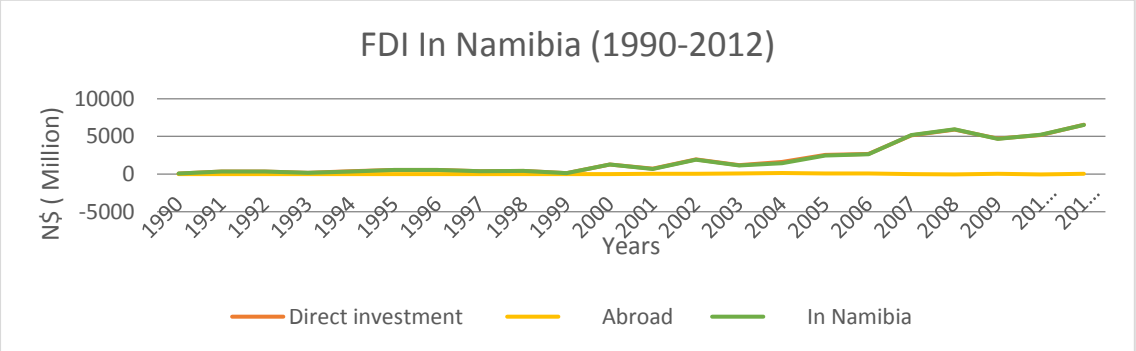
Macroeconomic policies in Namibia reduced the tremors and shocks from the financial crisis. In 2009, Gross Domestic Product (GDP) growth fell to 3%, mainly due to the reduction in the demand for Namibian Exports (diamonds, minerals and agricultural products). This decline was short-lived, as the exports rose by 5.4% per year since 2009 (NSA, 2014). The financial crises saw the fall in inflation to a 3.1% in 2011 after the Bank of Namibia implemented a loose monetary policy. Since 2012, the inflation rate has fluctuated between 5.5% and 7.5%. Because of the global financial crises, Namibia, responded with the launch of an expansionary fiscal policy with the aim of stimulating economic growth, leading to an increase of 9% for government spending in 2012. Economists estimate growth at an average increase of government spending of 26-27% for the next five years (Ministry of Finance data, 2012).

The Namibian economy is heavily reliant on the mining of raw minerals for exports. Mining sector accounts for about 11.5% of GDP, while at the same time it accounts for more than 50% of foreign exchange earnings. Namibia is rich in minerals, such as alluvial diamonds, making Namibia and it is the fourth largest producer of uranium in the world (CIA World Fact Book, 2015). Other minerals that make Namibia a resource-rich economy are zinc and gold among others. The mining sector employs around 1.8% of the population in Namibia (2015). Revenues received from SACU, which Namibia is a member account for about 30-40% of its total annual revenues. The government is unable to plan a budget that accounts for SACU share because the revenues from SACU change every year. Namibia's economy is still susceptible to volatility in the world prices uranium and other commodities.

1.2 Foreign Direct Investment Trends in Namibia

It should be noted that the Namibian government has developed several investment strategies and reforms, which include the Foreign Investment Act of 1990 (amended in 1993), the tax-free export processing zones regime through the introduction of the EPZ Act no. 6 of 1995 (amended in 1996) and special incentives specific to the manufacturing enterprises and exporters. The Namibian government is currently busy reviewing the current investment act for better effectiveness. Investment in Namibia has been growing gradually over the past two decades (as shown in figure 1). The three curves in Figure 1.1 show FDI inflows and outflows. The figure also shows that FDI inflows were relatively higher than the outflows, which could be attributed to the steady growth of the economy as shown in Figure 1.2.

Figure 1-1 Foreign Direct Investment in Namibia (1990-2011)



Source: Bank of Namibia Report (2012)

Figure 1-2 Namibian annual growth rate (percent change in Gross Domestic Product)

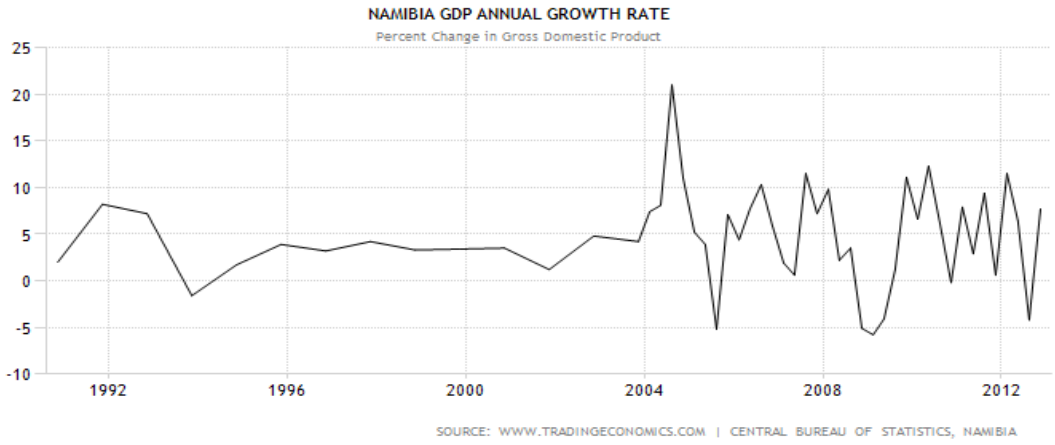
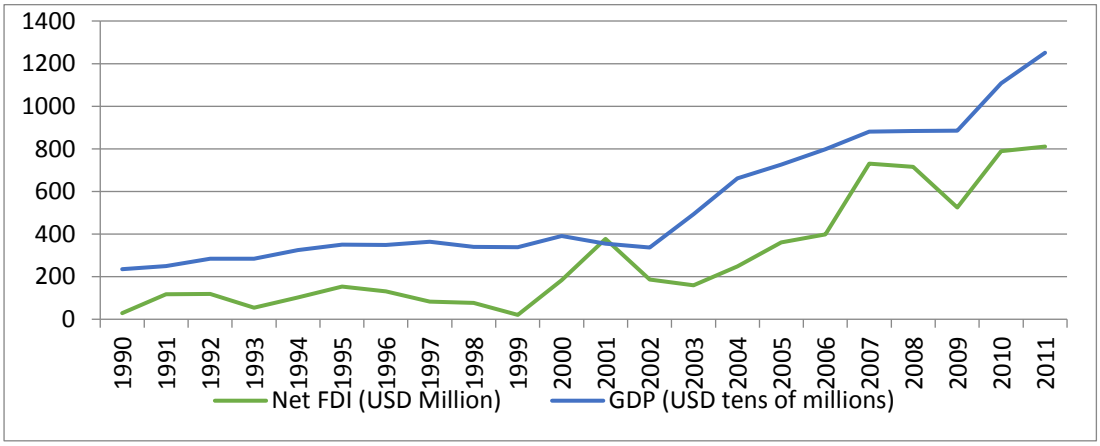


Figure 2, traces Namibia's annual GDP growth since independence in 1990 when the country started introducing growth-inducing investment policies. The Figure 12, read in conjunction with Figure 1.1, shows that, whereas FDI has been on an increasing trend since 2003, GDP growth has been very volatile. The trend in GDP growth does seem to be explained by growing FDI since the two appear to be uncorrelated. However, because GDP growth is a plot of first differences in GDP, one expects it to be trend-stationary and therefore not the best indicator when comparing it with FDI. In Figure 1.3, the GDP is plotted (in absolute values) juxtaposed against FDI flows for the same period.

Figure 1-3 Trends in Net FDI flows and GDP since 1990



Data Source: World Bank (WDI) and UNCTAD

Figure 1.3 shows that both net FDI flows and GDP were relatively flat between 1990 and 2001, but have been on an upward trend since 2002 and seem to be rising at about the same pace. The Ordinary Least Square (OLS) regression of GDP against net FDI over the period 1990 through 2011 yields, $GDP = 226.77.\,(6.30) + 1.08\,(11.63)$, where the terms in brackets are *t*-

statistics. This result shows that, all else constant, Namibia's GDP was strongly explained by net FDI. Given these preliminary findings, it is probably justified to infer that FDI flows can potentially explain Namibia's economic growth in the long run. An important question that arises from these observations is what determines FDI flows of Namibia? Answering this question will be of interest to policy makers in Namibia as well as the academic community. It is against this background that the current study attempts to establish the determinants of FDI in Namibia.

1.3 Motivation and Problem Statement

1.3.1 Motivation

Foreign Direct Investment (FDI) not only assists countries (including Namibia) with sources of funding, but it also promotes employment, management skills and decision-making skills, as well as transmission of knowledge all of which are believed to contribute towards the growth and development of the economy. To this end, the Namibian government has been trying to attract FDI by using economic policies and incentives. The latter include tax-free export processing zones (EPZ), special incentives to manufacturing enterprises and exporters, the establishment of the Namibia Investment Center (NIC) as well as various bilateral treaties and agreements.

The primary motivation for this research is to identify the factors that drive Multinational Corporations (MNCs) and other foreign investors to invest in Namibia. The study sought to establish what macroeconomic factors determine Foreign Direct Investment in Namibia, and what effects it has on the Namibian economy. Both issues have been subjected to massive research both theoretically and empirically. There are many research articles that have been written on Foreign Direct Investment, but they were mostly written on emerging economies (such as China and other Asian economies) and the developed economies. There have also been some few studies done on the sub-Saharan Africa (SSA) and other countries.

The main driver for this study is to establish the elements that motivate foreign investors to invest in Namibia. The other factor that motivates this paper is the fact that very little has been done on the determinants of FDI in Namibia. The current study is important in that it is one of the few attempts to provide literature on the determinants of FDI. While studies have been carried out on FDI determinants in SADC and around the world, Namibia has been excluded in several of these studies, Vinesh et.al. (2014) for example, wrote a paper, with the purpose

of investigating the factors related to FDI in SADC but Namibia and Angola were excluded due to unavailability of data. The policy makers in Namibia would have no benefit of scientific knowledge to inform their policy decisions on Foreign Direct Investment. This study, therefore, seeks to identify and examine the factors determining inflows of FDI in Namibia.

Nghifenwa (2009) made a recommendation in his article that there is great need to research elements and determinants of FDI in Namibia. Nghifenwa (2009) study focused more on how savings affect FDI, and this led to the recommendation that studies on the determinants of FDI in Namibia needed to be carried out. It should be noted that not much has been written on the Namibian economy on the determinants of Foreign Direct Investment.

The second motivating factor was the author's desire to establish the policies and programmes that stimulate Foreign Direct Investment, for example, the Foreign Investment Act of 1990, which is currently under review. This policy mainly focuses on promoting FDI and provides a service to all investors from the initiation stage to the operational stage. The findings from this study could be used to advise the policy makers with regards to the policy decisions they make on FDI. The majority of the studies that were conducted previously considered interest rate, output (GDP), government tax policies, inflation, exchange rates and savings as the determinants of FDI, while others cover many other variables (Naude et.al., 2000)

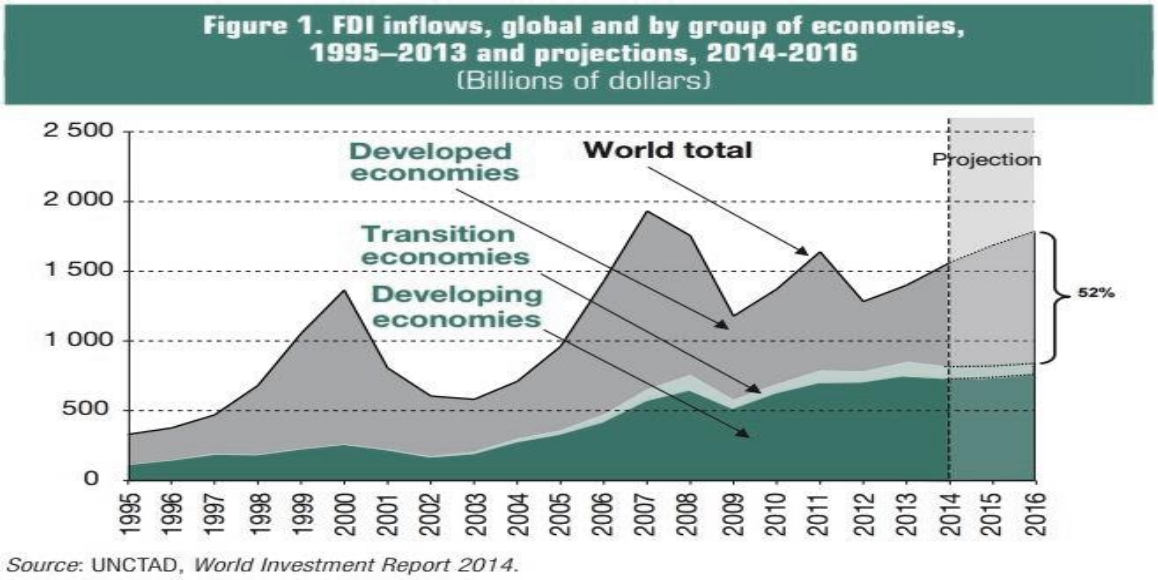
Asiedu (2006) used the Johansen cointegration and the ECM frameworks and found that openness, exchange rate, and financial development are important long-run determinants of FDI in Nigeria. The study also seeks to investigate if FDI has any impact on the Namibian economy by using the Granger causality analysis. However, several important works touched on some key developing features of FDI by treating it as either a cause of economic growth or a function of such growth through the generation and transplantation of technology, management skills and linkages to the world market (Reuber et al., 1973; Dunning 1981; Ozawa 1992; and Dunning 1994).

1.3.2 Global and Regional Trends in Foreign Direct Investment

In 2013, FDI trends started growing; Global Foreign Direct Investment inflows grew by 9% to a $1.45 trillion. Foreign Direct Investment showed progression in the developed, emerging and transition economies. Foreign Direct Investment global stock increased by 9% of total investment of $25.5 trillion. In 2014, projects by the UNCTAD, increased to $1.6 trillion. The

increase in FDI is attributed to the investment in developed economies as they receive much of the global FDI. Instability of the emerging markets, policy uncertainties and regional conflicts can still hamper the growth of FDI, which is expected to grow (The World Investment Report, 2014). Figure 1.4, shows the projected FDI trends in developed countries as well the county dispersion of FDI. From the Figure, it is abundantly clear that most of the FDI of the world went to the developed economies.

Figure 1-4 FDI inflows globally, 1995-2013 and projections, 2014-2016



FDI inflows to industrialized countries increased to $566 billion. Developed Countries account for 39% of global flows, while the developed economies take up more than half of FDI, reaching $ 778. Emerging economies took the remaining balance of $108 billion. UNCTAD reports that 550 TNC's divided amongst the developing and developed economies have affiliations with around 15000 foreign investors and assets worth over $2 trillion. In 2013, Transnational Corporations accounted for more than 160 billion. The report mentions that developing and developed economies account 11% of the total Foreign Direct Investment flows.

1.3.3 Regional FDI Trends

The FDI inflows to Africa rose by 4% to $57 billion in 2014. Regional well-developed markets and the quality of good organizational investment motivated growth. Opportunities for sustained growth of the developing middle class attracted FDI in different industries such as food, Information Technology, Tourism, Finance and Retail (World Investment Report, 2014).

Eastern and Southern African sub-regions were the top recipients of FDI in Africa. In Southern Africa, inflows rose to $13 billion, mainly due to record-high flows received in South Africa and Mozambique, which was attributed to the superior infrastructure in South Africa and investments in gas for Mozambique. FDI in East Africa rose by 15% to account for $6.2 billion because of rising flows to Ethiopia and Kenya. Kenya has a fast, pleasant and attractive business hub for investors because of its advanced human capital base and because of its market-based economy. Kenya also has the most liberal economic systems in East Africa. North Africa has seen a decrease in FDI of 7% to $15 billion. FDI dropped to $8 billion from $14 billion, due to the political instability and uncertainties with the security of the country (The World Investment Report, 2014).

Intra-African investment is increasing, led by South African, Kenyan, and Nigerian TNCs. Between 2009 and 2013, the share of cross-border Greenfield projects originating from Africa increased to 18%, from less than 10% in the preceding period. Increasing intra-African investment is in line with the leader's effort to deepen regional integration. In 2013, Kenya FDI projects increased by 40 per cent and attracted the second- highest number of FDI projects, coming second to South Africa. However, African global value chain (GVC) is mainly directed to the incorporation of raw materials exports of the developed countries' participation. In 2013, Asia's FDI inflows totalled $426 billion. In 2013, China was ranked as the second highest recipient of FDI inflows in the world.

The FDI flows to Latin America and the Caribbean reached $292 billion in 2013. The latter amount excludes offshore financial centres, which increased by 5% to $182 billion. Amongst the main recipient countries, Brazil saw a slight decline of 2%, despite an increase of 86% inflows to the primary sector. Flows to Central America and the Caribbean (excluding offshore financial Centre's) increased by 64% to reach $49 billion. However, Namibia has a long way to go, as it has not made it to the top ten best-investing destinations in Africa yet. Table 1, shows the results of a survey that ranks the top African states and provinces in terms of Foreign Direct Investment (FDI) projects for the year 2014.

Table 1-1 Top 15 Investment regions in Africa

Top 15 Investment Regions on the African Continent (FDI Projects)

Region	Country	Ranking
Gauteng	South Africa	1
Al-Qahirah	Egypt	2

Casablanca	Morocco	3
Nairobi	Kenya	4
Western Cape	South Africa	5
Lagos State	Nigeria	6
Luanda	Angola	7
Tunis	Tunisia	8
Greater Accra Region	Ghana	9
Tangier-Tetouan	Morocco	10
Algiers	Algeria	11
Kwazulu-Natal	South Africa	12
Dar es Salaam	Tanzania	13
Maputo	Mozambique	14
Eastern Cape	South Africa	15

Source: Ernest & Young 2014 Africa Attractiveness Survey

1.4 Problem statement

Although numerous studies have been carried out on the determinants of foreign direct investment in developed countries and elsewhere, very few previous studies have examined the determinants of foreign direct investment in Southern Africa and Namibia, in particular. The main reasons for the lack of research on the determinants of foreign direct investment in Southern Africa had something to do with lack of statistical data and a colonial education system that discriminated against black Africans. The study has chosen to use Namibia because it is one of the countries ranked as a middle-income country in the Southern Africa, and it will be interesting to find out the variables that explain foreign direct investment and establish if the Namibia's economic prosperity has also been responsible for attracting foreign direct investment. The latter follows from the argument that the size of the economy (in terms of its GDP) attracts foreign direct investment. The main contribution of the current study is that it is one of the few attempts to analyse the determinants of foreign direct investment in a middle-income country in Southern Africa.

1.5 Research questions

The study attempts to provide answers to the questions as to what really motivates or encourages foreign investors to invest in Namibia.

In particular, the study attempts to address the following questions.

i. What are the determinants of Foreign Direct Investment inflows in Namibia?

ii. What policies and programmes are appropriate for stimulating/ attracting Foreign Direct Investment inflows in Namibia?

1.6 Significance of Study

The results of this study may contribute to the improvement of the investment climate in Namibia. The study results may recommend some ideas and ways in which the Namibian government can attract more Foreign Direct Investment. A comparative analysis will, therefore, provide an econometric analysis of the determinants of FDI in Namibia and establish which variables, are actually significant determinants in Namibia. Hence, this study will add to Namibia's literature on the determinants of FDI. The findings of the study could also provide insights to other developing countries, especially in Africa, which are similar to the Namibia situation. The current research would also provide a basis for further research on the determinants of FDI inflows.

1.7 Delimitations of the Study

The study analyses the overall impact of Foreign Direct Investment in an economy and does not look into individual company cases, so it is macroeconomic analysis. Models used in this study do not include all the variables, due to the inherent lack of data for a developing country like Namibia. The period 1990-2014 is small and therefore imposes limitations on the credibility of the results since longer time series would have been better.

1.8 Organization of the Study

The dissertation is organized as follows. Chapter 1 covers the FDI trends and gives an overview of the Namibian economy. The trends include the global and regional trends as well as Namibia's FDI trends. Chapter 2 provides the literature review that provides more information on the potential FDI determinants. Chapter 3 gives the methodology used in the study. The same chapter also covers variable selection and the estimation procedure. Chapter 4 covers the presentation, analysis and discussion of the empirical results. The final chapter, Chapter gives the conclusion and recommendations.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter provides a theoretical background to the determinants of Foreign Direct Investment. A review of the relevant empirical literature on the determinants of Foreign Direct Investment and Foreign Direct Investment theories is undertaken first, after which the studies on the determinants of FDI are reviewed. The study reviews provide some literature of cross-country studies, which were carried out in Namibia, Africa and overseas. This section gives an overview of existing knowledge in the area of Foreign Direct Investment and its determinants.

2.2 Theoretical background

The importance of FDI emerged after the Second World War with the forces of globalization. The importance of MNCs enterprises and foreign investment during the 1950s and 60s gave impetus to many researchers to find out the theories on the behaviours of MNCs, as well as the existence of international production. A new theory on FDI, which uses an equilibrium model, increases returns to scale and imperfect competition. MNCs firm-specific advantages are mainly based on knowledge and capital, which consists of intangible assets such human capital, trademarks, and patents.

2.2.1 Eclectic (OLI) paradigm of international production

The eclectic theory can be traced as far back as the 1950's (Dunning, 2001). Dunning through his work came up with the theory incorporating the three different themes, namely: ownership, location and internalization. This theory is known as the OLI eclectic paradigm of international production. The eclectic paradigm tries to answer the reasons why a firm would be interested producing in a foreign country instead of exporting or entering into a licensing agreement with the local firms (Lim 2001:10). According to this theory, three conditions need to be satisfied if a firm or multinational enterprise (MNE) are to engage in Foreign Direct Investment.

2.2.2 Ownership advantages (O)

The ownership advantage assumes that for a firm to take part in international production, it should have a comparative advantage over other firms. This advantage can be in the form of a monopoly advantage, which has privileged access to markets through ownership of natural

resources, patents or trademarks and technology. The firm should also have large size economies, such as economies of learning, economies of scale and scope and access to capital.

2.2.3 Internalization advantages (I)

Assuming the ownership advantage that firms have, it must be beneficiary to use this advantage rather than let them loose (for example sells them). The internalization advantage refers to the choice between accomplishing expansion within the firm and selling rights off for the expansion of MNCs.

2.2.4 Location advantages (L)

According to Dunning (2001), the degree to which firms choose to locate their activities outside their national boundaries depends on the profitability of the location. Meaning that it should be more profitable to use the ownership advantage, they have in combination with at least some factor inputs located abroad. Otherwise, they should export. Therefore, location advantage refers to the question, as to whether the expansion of the firms is best attained at home or abroad. Mwale (2014) mentioned in her study that these location factors include political stability, government policies, investment incentives and disincentives, infrastructure, institutional framework (commercial, legal and bureaucratic) and skilled labour, market size and growth, macroeconomic conditions and natural resources. These factors are crucial for attracting inward FDI to Namibia, and it is mostly in this area that African countries are not efficient in as demonstrated in the literature.

2.2.5 Resources based theory

Resources based theory is a means for achieving competitive advantage by taking into account the positioning of the business. A firm's ability to earn a rate of profit in excess of its cost of capital depends upon two factors: the attractiveness of the industry in which it operates, and its competitive advantages over rivals (Mwale, 2014). The financial sources are a major condition for firms when introducing a strategic factor market and initiating a product market strategy. Firms need to think about the financial strategies, including different sources of the capital structure, the cost of capital for the enterprises as well as the effect of the dividend policy. Human resources include employees' skills, competencies, commitment, motivation and loyalty. These components are equally essential for attracting FDI. Therefore, resources, be it, financial, organizational, or human play a role in determining FDI inflows (Thanyakhan, 2008).

Vernon (1966) explains through his product **Life Development Theories** that a product goes through four stages. The first stage is innovation, and then the second is implementing and launching the product. The third stage is when the product reaches its maturity level and eventually a declining level, where it starts to lose its market share. Vernon (1966) tried to understand the shift of international trade and international investment. At the initial stage, the enterprises are more focused on the domestic market. The next stage, is when the product matures and enterprises start exporting to developed countries. At this stage, the innovating enterprises enjoy the profits of sales of the newly invented product until a rival enterprises copy and produce the same product. Later, when the demand for the product increases, the product will be standardized.

The **Heckscher-Ohlin Model** was conceived by two Swedish economists, Eli Hecksher (1919) and Bertil Ohlin. It mainly discusses international differences in labour abilities, physical capital; create useful differences that explain why trade occurs. The model highlights that countries will only export products that use the economies of scales in resources (low factors of production). It also highlights that they only import products that use the countries rare resources.

UNCTAD (2000) differentiates FDI according to the methods of entry into the host country. It highlights FDI either coming in as a new investment in buildings and other tangible assets. While the second FDI category is where foreign investors acquire or merger with an existing firm. The first category is called Greenfield FDI, while the second category is called mergers and acquisition (M & As). The key difference between cross-border M & As and Greenfield FDI is that the first category involves a conversion of assets taken from domestic to foreign hands. Mergers and Acquisitions can involve taking over part or full takeover of assets and liabilities of existing companies. The acquired company is only affected by the change in ownership, but the rest of the operations are not affected. In such a situation, profitability and capital are not affected immediately.

2.3 Empirical Literature Review

Several studies have been carried out on the determinants of Foreign Direct Investment. There are a large number of studies, which focus on factors that influence the flow of foreign capital in Namibia and elsewhere. These studies focused on economic, socio-political and institutional factors of FDI. Economic factors identify the variables related to market size, labour cost, trade openness and economic stability. Below are some of the documented views and findings by

previous researchers. Section 2.3.1, discusses the studies that were done on Namibia and elsewhere.

2.3.1 Empirical studies in Namibia

Eita and Du Toit (2007) analysed the determinants of investment in Namibia based on a classical model for the period of 1971-2007. They used the Engle-Granger two-step procedure to analyse the data because many economic variables are non-stationary. The study found that investment in Namibia could be increased by GDP, level of savings and the lagged levels of capital stock. They also contended that another way to raise FDI in Namibia would be to by decrease the user cost of capital. Eita and Du Toit (2007) recommend that expansionary fiscal and monetary policies can be used effectively to stimulate investment, while the introduction of contractionary fiscal and monetary policies would discourage and reduce the investment rate.

In another study, Shiimi and Kadhikwa, (1999) used the cointegration (CI) analysis and Error Correction Modelling (ECM) to determine the long and short-term impacts of the determinants of savings and investment in Namibia. The results of the study established that public investment, inflation, real income and interest rates were significant determinants of investment in Namibia. Further, factors such as real lending rates and government investments were singled out as important determinants of investment. Their study also revealed that Namibia's savings level has been satisfactory in accordance with the international standards. Investment performance has shown an unsatisfactory trend, which led to lower economic growth than was expected.

In another study, Harupara (1998) reported that private investment is positively related to public investment and gross domestic product in the short run. In the long run private investment is negatively related to inflation, real interest rate and the exchange rate.

A study conducted by Odada and Mumangeni (2000) used the Johansen theory of investment and concluded that real GDP was the only significant determinant of private investment in

Namibia[1]. They found that increases in real GDP lead to fairly bigger increases in private saving.

Ngifenwa (2009) analysed the determinants of investment in Namibia over the period 1960-2006. The study uses time series econometric techniques on a model based on the neoclassical theory of investment to determine the long run and short run determinants of investment in Namibia using annual data. His study makes use of ordinary least squares (OLS) technique in conjunction with the cointegration and error correction models to establish the factors that determine investment in Namibia using data for the period of 1960-2006. Ngifenwa (2009)'s results indicate that in the long run, real investment in Namibia is positively related to GDP and also to investment in uranium mines during the 1970s. Moreover, investment is negatively related to the lending prime rate and the inflation rates. In the short run, investment is positively influenced by three variables, namely real GDP, domestic savings and prime lending rates. The study recommends an appraisal of the administration of the investment regime with the view to coming up with a simpler and translucent regime. The study further recommends that the quality of governance and property rights protection be maintained to enhance investors' confidence (Nghifenwa, 2009).

Haiyambo (2013), studied whether Foreign Direct Investment inflows that comes to Namibia due to the tax incentives that are offered to multinational corporations that invest in Namibia is beneficial to the economy. The study also revealed that the richness of natural resources in Namibia might have been the key driver in attracting FDI. Other factors Haiyambo mentioned as additional important variables include trust in the economy, the functioning of the government and the availability of good infrastructure.

A study by Basu and Srinivasan (2002), investigated the determinants of Foreign Direct Investment in Africa.[2] The study argued that macroeconomic stability has been a cornerstone of Namibia's relative success in attracting FDI. The results of the study also indicated that

[1] Jorgenson Model assumes that investment by perfectly competitive firms takes place ceaselessly and optimal instantaneously to adjust the discrepancy between the optimal capital stock and in the current period and in the optimal period. The Jorgenson calls the marginal involved in using capital 'user cost of capital'. Jorgenson 1964, shows that the marginal product of capital can be derived from a Cobb-Douglas production function of the form, $Y=AK\,L^{\beta}$.

[2] Countries included in the study include Botswana, Namibia, Lesotho, Swaziland, Mauritius, Mozambique and Uganda.

political stability, favourable macroeconomic environment, sovereign judicial system, protection of property and predetermined rights, good quality of infrastructure and affiliation to South Africa as important factors that led to the latter success. They also attribute Namibia's membership to Southern Africa Customs Union (SACU) as a contributory factor to the increase in investment. Though inadequate, the existing work on the determinants of Foreign Direct Investment in Namibia is quite commendable in terms of what they have achieved so far. From the studies done on Namibia it has been established that the factors that affect investment include interest rates, output (GDP), government tax policies, exchange rates, inflation and savings.

2.3.2 Empirical literature of rest of Africa studies

According to Adefeso and Agboola (2012), the motives for Foreign Direct Investment inflows are as follows:

i. **Resource seeking:** where investors involve themselves in FDI with the motive of acquiring resources from the host country. Such resources could be in the form of natural resources or labour, which is abundant in the host country than home country of the MNC.

ii. **Efficiency seeking:** this is where investors also view Foreign Direct Investment as a means of achieving efficiency by exploiting economies of scale and scope in production.

iii. **Strategic-assets seekin**g: investors invest with the motive of preventing gains of resources to other competitors. Investors sometimes engage in FDI so, as to reduce the dominance of a particular economy by their competitors.

Adefeso and Agboola (2012) identified a positive relationship between FDI and its various determinants like degree of openness, market demand/size, oil sector, tax and the level of mobile phone penetration. While on the other hand, a negative relationship exists between FDI and the consumer price index, exchange rate and external debt in Nigeria over the period of study (1970-2009). The implication from the above is that the positive role played by natural resources-seeking FDI, which advocates that the Nigerian government should not only increase its budget, but also maintain a sound investment environment by ensuring political and social stability. In Nigeria, there are two dominant sectors that make up most of the FDI received, which is the oil sector that accounts for 79% and the tourism sector that accounts for 38% of the total FDI flows.

The results by Adefeso and Agboola (2012) are corroborated by the results of a study carried out by Wafure and Nurudeen (2010) on the determinants of FDI in Nigeria. Warfare and Nurudeen (2010) found that the market size of the host country is the most significant factor in attracting FDI to Nigeria. Political instability appears to have a positive impact on FDI. This is reflected by the situation in Nigeria's oil sector, which has continued to attract more foreign investment, regardless of the political situation in the country. Depreciation of the exchange rate will have a positive influence on FDI, as it boosts Foreign Direct Investment inflows to the host country. Warfare and Nurudeen (2010) also found that infrastructural development does not have a significant influence on the level of FDI.

Lesotho (2006) carried out a study on the determinants of investment in Botswana. The study proved that in the short run, private investment in Botswana was determined by public investment, bank credit and real interest rate. In the long run, private investment is determined by GDP growth and real exchange rate, which is almost similar to the results obtained by studies that were carried out in Namibia. A further study by Bende-Nabende (2002) found that market growth, export-oriented policy is the dominant long-term determinants of Foreign Direct Investment in sub-Saharan Africa. There has been evidence of significance between Foreign Direct Investment and the level of openness of the economy, market size, natural resources, and education level. Natural resources are perceived as a major determinant that attracts FDI in the SADC region in both the short- and long runs (Vinesh et.al, 2014). They also established that education was a deterministic variable to investment, which was found to have long-term effects on the level of Foreign Direct Investment for SADC. The study goes on to mention that FDI is not only beneficial in increasing foreign currency inflows and employment, but that it also helps a developing country to rapidly emerge from a low level to more admirable standards. An interesting result that was pointed out in the analysis is where there is a negative relationship is between the level of infrastructure and the level of FDI flows in the short run. These results contradict what previous researches on FDI found. For instance, in the SADC case, the spread of the level of FDI increases as infrastructure increases.

The study conducted by Naude et.al (2000), found that investment in South Africa was determined by factors such as the size of labour cost, certainty of environmental and firms' efficiency. In addition, Rusike (2007) investigated the trends and determinants of inward Foreign Direct Investment in South Africa. The variables used as determinants s of FDI were

the financial development, market size, and openness, exchange rate, government size and inflation rate. The study used the Johansen cointegration and the ECM framework, which indicated that openness, exchange rate and financial development are important long run determinants of FDI. The market size emerged as an important short-term effect. The variance decomposition analysis showed that shocks to FDI, imports, and the exchange rate significantly explains the variation in FDI in both the short- and long run.

Zampini (2008) reported that South Africa has been the main beneficiary of the FDI in the SADC region, because of its superior physical infrastructure and financial market. According to Zampini (2008), the generous incentives often attract footloose type of investors who do not have long-term perspectives, which in the end might not be beneficial for the economy. Small countries lacking natural resources can improve their chance of attracting FDI by investing more into institutional development and the policy environment. Regional cooperation may enhance FDI in SSA. There are three reasons for this; firstly, regionalism promotes political stability, by restricting membership to legitimately elected governments. Secondly, regionalism encourages countries to coordinate their policies collectively. Thirdly, regionalism enlarges the size of the market, and therefore attracts more FDI (Asiedu, 2006).

Obida et al (2010) explored the determinants of Foreign Direct Investment in Nigeria. The study included variables such as market size of the host country (proxied by GDP), deregulation, political instability, openness to foreign trade (proxied by the ratio of exports to imports), exchange rate, inflation rate and infrastructure (Capital expenditure on transport and telecommunication) as potential determinants of FDI. The market size of the host country, deregulation, exchange rate depreciation and political stability were found to be the principal determinants of FDI in Nigeria.

Using the Dunning's Eclectic Paradigm as an analytic framework and Zambia as a case study, Mooya (2003) tried to identify the determinants of FDI in Zambia. The study has identified a number of constraints that militate against increased FDI inflows. The most severe of these are macroeconomic, because Zambia has an extremely low GDP. This is because the real GDP per capita has been declining for the period under review. High levels of inflation created an unstable business environment for businesses. Given the importance of markets in determining FDI, these factors must be regarded as a major constraint. However, Mooya (2003) also notes that Zambia's privatization programme is widely acknowledged as one of the most successful

in the world, with over 90 percent of the economy now in private hands. The study also revealed that the FDI policies for Zambia have improved greatly.

Mbekeani (1997) examined the relationship between FDI and economic growth by examining the trend relationships of the two variables and the macroeconomic determinants of FDI. Mbekeani (1997) found that market size, changes in the level of GDP, manufacturing profitability, relative production costs, availability of skilled labour, United States interest rate and large external debts are the main determinants of FDI.

A study by Anyanwu (2011) analysed what determine FDI inflows to Africa and found that there is a positive relationship between market size and FDI inflows to Africa. Trade openness was also found to have a positive impact on FDI flows, while financial development was found to have negative effects on FDI inflows into Africa. Anyanwu (2011) also found that extraordinary government consumption expenditure attracts FDI inflows to Africa because greater FDI goes where international donations channelled in Africa. Agglomeration has a solid positive impact on FDI inflows in Africa, as well as the natural resource endowment. Lastly, the study finds that East and Southern African sub-regions gain higher levels of inward looking FDI.

The study by Clarke and Logan (2008) illustrates that FDI is highest amongst countries that have less political risk and better physical infrastructure than those that have an unstable political status. The majority of the studies show that FDI flows are greater amongst countries with a weaker currency and a small population. In addition, Clarke and Logan (2008) find that FDI flows are concentrated in industries where resource exploitation is most likely, such as one-time privatization of assets in telecommunications, and where there is the greatest potential to earn foreign exchange such as tourism, mining and quarrying and petroleum sectors.

Mohamed and Sidiropoulos (2010) used a panel of 36 countries (12 MENA countries and 24 other developing countries) to investigate the determinants of FDI. The key determinants of FDI inflows in MENA countries were found to be the natural resources, the size of the economy, the government size and institutional variables.[3] The study further reveals that policy

[3]MENA countries are Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Malta, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, West Bank and Gaza, and Yemen.

makers in MENA region should remove all trade barriers, improve their financial systems as well as their institutions.

Woldemeskel (2008) conducted a study on the determinants of FDI in Ethiopia, as well as some other African countries. The study revealed that the performance of an African country in attracting Foreign Direct Investment is closely related to the level of their natural resource. For example, countries, which have an abundance of resources, like petroleum, attract more FDI, regardless of their economic situation in that country. Business environment, economic development and political stability were found to be the relevant factors determining FDI in the middle-income countries. The study went on to argue that there is a minimum level of development required for the least developed countries to be able to attract FDI. The author adds that the essential parts of the whole reforms to attracting FDI are macroeconomic stabilization, the relaxation of the investment laws, the reorganization and simplification of the business regulations within that economy.

Using data of different firms across 77 developing countries, Kinda (2010) studied the factors affecting Foreign Direct Investment. The factors that discourage investors from doing business in such countries are poor physical infrastructure, institutional problems and financing limitations. Restrictions within the investment climate were also proved bad for FDI.

Arbatli (2011) studied a sample of 46 countries for the period of 1990-2009, to study the determinants of FDI inflows to developing market economies. Using a partial adjustment model, the set of explanatory variables used to explain cross-country and over-time variation in FDI inflow was split into two groupings, global push factors and country-specific pull factors. The country-specific pull factors were grouped into four categories, fixed or physical factors, political factors, macroeconomic and policy variables. The results of this study revealed that global push factors and economic policies had a significant effect on FDI inflows in emerging economies. Domestic conflict and political stability were found to be negatively significant variables in determining FDI.

Mahembe (2014) studied the relationship between Foreign Direct Investment inflows growth in 15 different countries in the SADC region for the period of 1980-2012. Using panel data analysis, the results of the study showed that there is no evidence of a connection in either direction in low-income countries. However, middle-income countries' panel, exhibited

evidence of a causal flow from GDP to FDI in both the long- and short-run. The rising economic growth of the SADC region has been attracting FDI, especially in middle-income countries.

Mwale (2014) conducted a research to investigate the determinants of Foreign Direct Investment in Zambia for the period (1990-2011). The study used time series data in an ordinary least squares (OLS) framework to establish the significance and relevance of FDI determinants in the Zambian economy. The empirical analysis found that the major determinants of FDI in Zambia are resource availability, trade openness, infrastructure development and macroeconomic fundamentals such as real effective exchange rate. An implication that the study revealed was that FDI in Zambia is not only driven by factors such as natural resources even though Zambia relies on the mining sector a large extent. The study also went on to say that, the determinants that are significant in one country might not be significant in another.

2.3.3 Empirical Literature beyond Africa

Janicki and Wunnava (2004) reported that Foreign Direct Investment does not always benefit the host country. Their paper looked into the key determinants of FDI in transitional economies in Europe. They reported that if a country wants to enjoy the benefits that the international investors have to offer, it must continually adjust its economic and political agenda to suit the needs of the international investors. A shortcoming of this study is that the study only focused on FDI as a tool for accelerating the growth and development of economies, and it did not look at all important factors, such as transport infrastructure, which are also important determinants of FDI in most transition economies.

A study by Anuchiworawong and Thampanishvong (2014) looked at the impact of natural disasters on Foreign Direct Investment in Thailand, out of which three major insights emerged. The first major findings from the study are that natural disasters negatively affect FDI with some time lag. They also found that a weaker Thai currency increases FDI in Thailand, because of lower costs of acquiring production facilities. They also found that there is a two-way relationship between FDI and economic development. As a result, it is important for policymakers to plan for greater disaster risks to be able to attract larger inflows.

Benacek et al. (2000) found that there is evidence that domestic- market-oriented and export-oriented investors behave differently, and that they can have an implicit and dissimilar impact on the host economy. FDI has improved the growth potential of the economies, but this improvement was mainly within the foreign firms rather than through increased capital investment or technological spillovers into domestic firms (Benacek et al. 2000).

In China, the importance of FDI determinants moves over time (Sun et al., 2002). It was established that wages had a positive relationship with FDI before 1991, but has had a negative relationship after that. Before 1991, local GDP in China had no significant impact on the overall GDP of China, but after 1991, it becomes highly positive. Sun et.al (2002) emphasizes that high labour quality and good infrastructure, attract foreign investors in the host country. Sun et al. (2002) further went on to state, that a country's political stability and its openness to the foreign world would add largely towards attracting foreign capital. In Mexico, the location of investment may also be influenced by the risk perceptions as perceived risk plays a significant role in the determination of Foreign Direct Investment (Slemod, 1990). This is a point that the current study looks at; to determine whether the perception of risk associated with developing countries affects the decisions for investors to bring their investments in Namibia as a developing country.

Some researchers found a relationship between institutional quality and FDI that is the quality of institutions has a potential effect on FDI in the less developed countries (Wei, 2000). Foreign Direct Investment has been linked to the GDP of the recipient country and contrariwise related to the distance between the countries as well as the labour cost in the host countries (Bevan and Estrin, 2004). The affiliation with the EU is also termed as an important determinant of FDI in transition economies. Evidence from this study illustrates that an announcement on compliance prospects are likely to escalate FDI inflows to countries that were analysed.

There has been practical evidence that an increased in FDI, does not always lead to higher economic growth. A positive relationship was found between FDI and economic growth (De Gregorio, 1992; Oliva and Rivera-Batiz, 2002). Some authors have found that it only enhances growth under definite conditions, which is when the host country education level exceeds certain thresholds:

- When domestic and foreign capital is complimented and when the country has achieved a certain level of income.

- Enhancement can also be achieved if the country is open for trade (Balasubramanyam et al., 1996).
- When a country has a well-developed financial sector (Alfaro et al., 2004).

In disagreement with other authors, Carkovic and Levine (2002) conclude that the relationship between FDI and growth is not strong (Borensztein et al., 1998: de Mello, 1990: (Blomstrom et al., 1994).

Alfaro (2003) states that in the primary sector FDI tends to have a negative influence on the growth of the economy, while investment in the manufacturing sector exerts a growth in the economy. Results from the service sector are ambiguous. Alfaro (2003), found that the nature of the economy of the host country is a strong determinant for Foreign Direct Investment. The level of quality of institutions in a country is thought to be a major contributor to the flow of FDI into a country. Surprisingly, some authors have been fascinated to study the link between the quality of local institutions and FDI. This link is seen as a channel through which institutions can encourage productivity growth. Virtuous institutions are supposed to apply their positive stimulus towards the expansion of the economy through, the promotion of investment in general, in turn, leading to little uncertainty and higher probable rates of returns.

The European transition economies have also been studied by a few authors, as Bevan and Estrin (2004). The later studied the determinants of FDI in Western countries, mainly the European Union (EU), extending into the Central and Eastern Europe. The findings of this study highlight that the unit labour is negatively linked FDI, which supports the notion that foreign investors are not cost sensitive. Bevan and Estrin (2004) state that FDI is attracted by large economies, while the benefits from overseas production decrease with distance from the source economy. This implies that investment in the EU region has been of both market and efficiency seeking. FDI flows to these emerging economies were not influenced significantly by the market evaluations of country-specific risks. An explanation for this is that important elements in the companies' evaluation of risks are already contained in other variables.

China is one of the largest recipients of FDI (UNCTAD, 2001), making it interesting for many researchers who wanted to look at the key factors that attract FDI which have made it one of the biggest recipients of FDI in the developing nations. Ali and Guo (2005) identified the key

elements of FDI in China to be complex and very broad, leading them to try to understand how the location of host country countries contributes to investment. Ali and Guo (2005) found that the size of the trading market is one of the most important factors that attract FDI in China. This is in line with both theory and previous studies conducted for that country. Another vital element is the policies used to lower labour costs in China. Ali and Guo (2005) also concluded that foreign firms are not only interested in taking advantage of the location advantages, but they are also driven a whole gamut of factors. China experiences three types if different investment, namely, Equity Joint Venture (EJVs), Contractual Joint Ventures (CJVs) and Wholly Foreign Owned Enterprises (WFOEs). This is difficult to incorporate in the current study due to the unavailability of data.

Despite the large amounts of FDI flowing into the manufacturing industries, which has resulted in the 68.8% increase of FDI (MOFTEC, 2001), not many researchers have embarked upon looking further into how this could be explained. Sun et al. (1999) and Liu (2000) observed the relationship between FDI and productivity in the year 2000. Some other results from studies on FDI in China show that developing the education level and skills of Chinese workers attracts investment. The high illiteracy level in China is therefore viewed as a factor that hampers investment. Hence, it was advisable to introduce a programme to address this burning issue (Coughlin and Segev, 1999). Studies made on the effect of productivity on FDI, have, maintained, however, that there is no relationship between FDI and productivity in any sector. The studies also highlight that productivity has very little impact on the decisions of the MNEs to set up a corporation.

There are other papers that show the importance of the scope of the host country characteristics and the policy environment which an MNEs uses, as a big element in explaining FDI (Ethier and Markusen, 1996). There has been a mixture of findings in different papers in developing and developed countries. Blomstrom and Sjoholm (1999), Liu (2000), Xu (2000), established that international investor's ownership has a positive link with the host country's productivity. Some studies found conflicting results, with a negative link between foreign ownership and FDI (Haddad (1993); Zukowska-Gagelmann (2002) Djankov and Hoekman (2000); Konongs (2001) and Aitken and Harrison (1999).

Tsai (1994) studied the determinants of Foreign Direct Investment and its impacts on the economy, which revealed that the market size hypothesis receives stronger support than the growth hypothesis. This is consistent with other researchers that have researched on the same topic. They also found that trade balance's effects on the inflow of FDI are quite robust. Factors affecting economic growth appear to change over time. The rate of growth was the key element for economic growth in the seventies, but it is the domestic savings that are mainly responsible for economic growth currently. Tsai (1994) sums up his study by saying that the findings that say that the theory of FDI is very important to economic growth might be exaggerating the significance of FDI.

Previous researchers have shown that it is vital to evaluate the exact nature of the link between Foreign Direct Investment and economic growth. Given the fact that there are many ways through which economic growth can be achieved it is important to identify these ways through which increased economic growth can be achieved. One the theory that explains how growth is achieved is the Neoclassical Growth Theory. The Neoclassical Growth Theory by Solow (1956) tried to simplify the growth model, into a production function and also explains the key variables that would lead to steady growth rates. The Endogenous Growth theory, on the other hand, contributes directly or indirectly to economic growth. Other researchers found that FDI affects donor country's economic growth through new contributions. Foreign Direct Investment can also grow through new skills and tools, ensuring theatre are FDI leaks into the domestic economy (Krugman, 1979; Feenstra and Markusen, 1994) and (de Mello and Sinclair, 1995).

According to International Monetary Fund (IMF), in 1995 EU GDP took up much of intra FDI of 4.5%. The IMF further stated that more variables needed to be used such as financial incentives and political instability because in most studies they are excluded. Cheng and Kwan (2000) indicate that improvements in primary education, which make citizens to be able to read and write, are what the investors may be interested in. There are many ways the governments of countries can bring in more FDI, namely; use tariffs, taxes, a good regulatory system and revitalization trade policies (Barnes and Davidson, 1994; Curwen, 1997). Having had sufficient experience with training from the MNCs, the host countries can devise some ways that can help in accelerating the inflows of FDI.

Botric and Skuflic (2006) analysed the determinants of FDI on the SEEC-7 countries during the period 1996-2002 and found that FDI level is not sufficient in explaining GDP, as it gives mixed signals in different conditions. They concluded that increasing trade with other economies, enhances development and this makes the SEEC-7 economies stronger and this helps attract more FDI. However, there were some issues that were not tackled in this paper, for example, the business climate was not considered for this particular study and such a factor could be very important in attracting FDI.

Studies in the BRICS (Brazil, Russia, China and South Africa) economies, reveals that most of the FDI in BRICS economies is received from market-seeking corporations. Market size has been a major determinant of FDI flows as shown by most previous empirical studies (Mohamed and Sidiropoulos 2010; Leitao and Faustino 2010; Lv et.al, 2010; Hailu 2010; Schneier and Matei 2010; Bhavan et.al, 2011).

Amal et al. (2010) examined FDI elements in Latin America, with emphasis on the role of certain variables in the investment decisions of multinational companies. The study used the 27 largest developing countries, including eight in Latin America for the period from 1996 to 2008. The explanatory variables that were used are similar to those employed in the African studies reviewed. Their study reveals that conditions for macroeconomic growth, stability and economic openness are highly relevant for the determinants of FDI. Political stability was found to influence FDI growth positively, which underscores the importance of political stability to investment growth. One of the variables that were found to be negatively related to FDI flows is government effectiveness, which implies that governments were not effective in attracting FDI to their economies.

Yang et al., (1997), researched the determinants of Foreign Direct Investment (FDI) inflow in Australia. Political factors are seen as important elements in this study. Frey (1985), used inflation to assess the stability status of the economy. While Bajo-Rubia and Sosvilla-Rivera (1994) recommend that inflation is not a good for FDI.

Foreign Direct Investment has also been studied from the side of the role it plays on the different sectors of the economy of the host country. One particular study was carried out by Aykut and Sayek (2007), who examined the effects of the different sectoral FDI on the economic growth. Foreign Direct Investment in the primary sector is predicted to affect the

local economy negatively. The study finds that when primary sector FDI increases, it could prove fatal for the local economy. Contrary to the primary sector, manufacturing sector increases the level of economic growth. The findings from this study give recommendations that countries should not only focus on drawing more FDI, but should look into policies, which maximizes the benefits of FDI to the economy.

Alfaro (2003) conducted a study to examine whether different sectors of the economy matter when it comes to Foreign Direct Investment. The study concluded that sectors of the economy do matter to a certain extent. His results are in agreement with those of Aykut and Sayek (2007) in terms of sectoral importance. However, Alfaro (2003) found that the service sector effects are unclear. The study revealed a strong relationship between FDI and the various macroeconomic variables. Additionally, the World Investment Report (2001:138) maintains that in the primary sector, the connection between foreign and local suppliers is very restricted, while manufacturing had a wide distinction of undertakings in the economy. Another conclusion that is made from the study is that the nature of the economy is an equally important element.

Although most studies on FDI have focused on the aggregate macro-level FDI flows, there are studies that have analysed the determinants of investment sectorally. For example, Walsh and Yu (2010) found that that the primary sector FDI has no strong correlations with GDP growth, but if the aggregate FDI variable is used it shows a strong positive correlation with GDP growth.

Another by Walsh and Yu (2010), breaks down FDI inflows into different investment sectors. They make their analysis using the GMM dynamic approach to avoid the endogeneity problem. The study also evaluates macroeconomic, developmental and qualitative elements of FDI using a sample of emerging markets and developed economies. Looking at the agglomeration and clustering effects, the study concludes that secondary and tertiary sectors benefit from FDI. They also contend that a weaker exchange rate attracts more FDI in the manufacturing sector, while also reducing FDI in the tertiary sector. Open economies and those that are growing at rapid rates attract more FDI in the tertiary sector. Flexible labour markets and developed financial markets were found to spur FDI in the secondary industry. They also found that growing infrastructure leads to more FDI inflows in the tertiary sector. In addition, they also found that the level of education has very little influence on the level of Foreign Direct

Investment received. However, this could have been misleading because the study used the enrollment figures in schools as a proxy for education.

Kowalewski and Radio (2014) analysed the determinants of FDI and entry modes for Polish firms and established that the key motive for FDI in Polish firms were market seeking. Resource seeking motive did not have any significance in any sector except the service sector.

Industrial development of the host country is a determinant of Greenfield FDI (Kowalewski and Radio, 2014) in Poland.[4] The latter results are consistent with the findings of Dunning and Lundam (2008) (Uppsala model (Johanson and Vahlne, 1977)).

Awan et al. (2011) analysed the determinants of Foreign Direct Investment in a commodity-producing sector in Pakistan. The study used the Augmented Dicky Fuller (ADF) test to check for unit roots levels, and then specified and estimated the Co-integration and Error Correction model for FDI. The study found that macroeconomic variables play an important role in attracting FDI inflows to Pakistan (a commodity producing country). A similar study was conducted by Guesmi and Teulon (2014), who found that macroeconomic variables were the dominant factors in explaining FDI. The study also found that when the economy is not stable, FDI is affected negatively.

The review of the above studies, whether country-specific or cross-country analyses revealed that the determinants of FDI vary based on methodologies, approaches, proxies, sample sizes, etc. Furthermore, the review has shown that the relationships between FDI and its determinants in literature vary in different studies in the same countries or in different countries. However, the studies have managed to identify the potential determinants of FDI, namely; the market size, natural resources, infrastructure development, and macroeconomic variables (such as GDP, inflation rate, exchange rate, financial development, etc.).

[4] According to UNCTAD (2006), greenfield FDI refers to the investment projects that entail the establishment of new production facilities such as offices, buildings, plants and factories, as well as the movement of intangible capital (mainly in services).

2.4 Chapter Summary

2.4.1 Theoretical review summary

This section summarizes the theoretical and empirical review. The product life cycle theory argues that firms set up production facilities abroad for products that have already been standardized and therefore mature in the home markets (Vernon 1966). The different theories of Foreign Direct Investment also argue that the factors that attract international investors to host countries are based on the OLI framework. The OLI paradigm (Dunning 1980, 1993) provides an ownership, location and internalization advantage-based framework to analyse why, where and how MNCs would invest abroad.

2.4.2 Empirical Summary: Africa and Outside Africa

Foreign Direct Investment is one of the most researched topics around the world. Most of the studies show findings or results, which are congruent. According to Dunning, motives behind Foreign Direct Investment are resources, efficiency and availability of strategic assets. One of the major determinants of FDI that almost every empirical review indicates as a major factor is the openness of the economy of the host country and the market size of the host country. Countries with an abundance of natural resources attract more FDI, and most investors are interested in accessing these resources. The review also reveals that in the short run public investment, bank credit, and real interest rate are determining factors for FDI and in the long run GDP is a major determinant. Studies done in South Africa conclude that physical infrastructure and development of the financial market play a major role in attracting FDI. Studies that were conducted in SADC reveal that when a country is associated with SADC membership, they stand a better chance of attracting FDI. Political stability, a weaker currency, good trade regime and institutional quality are amongst the other determinants of FDI established from empirical evidence. Major economies such as China get more FDI due to the sizes of their population, lower wages and market size. International investors prefer to invest in economies that are affiliated to the European Union (EU); hence, membership to the EU is a determining factor. An additional factor that attracts FDI is Government stability.

2.4.3 Summary of literature in Namibia

Studies conducted in Namibia established that the main determinants of FDI are the openness of the economy, GDP of the host country's inflation rate, public investment, etc. Namibia is a country that has a vast amount of natural resources, and these have been reported as a major

determinant of FDI in Namibia. In addition, Government stability, good infrastructure, macroeconomic stability and political stability are the other important determinants of FDI. It is important to note that the determinants of FDI vary from region to region and from country to country (Van der Walt and De Wet, 1995). It is therefore possible to carry out several studies on the determinants of FDI on the same country and get diametrically opposed results.

2.4.4 Gap in the existing literature: Namibia

There has not been much empirical literature done to analyse the determinants of FDI in Namibia. The objective of conducting this research is to supplement the current literature in the following ways. To the best of my knowledge, very little work has been done on the determinants of Foreign Direct Investment (FDI) in Namibia. Therefore, this study aims to analyse the role that macroeconomic factors play on FDI inflows in Namibia for the period 190 to 2014.

CHAPTER 3

DATA AND METHODOLOGY

3.1 Introduction

The current chapter briefly explains the data and methodology that are used in the study. Section 3.2 explains all the variables that are used in the model that is developed and estimated. Section 3.2.1 specifically explains the how the dependent variable is defined and measured for the purposes of the current study. Section, 3.2.2 also explains how the independent variables are defined and measured. Section 3.3 explains the methodology used to carry out the estimations related to the current study. Section 3.4 discusses the model, and Section 4.0 concludes the chapter.

3.2 Data

3.2.1 The Dependent Variable

The dependent variable in this model is the Namibian net FDI inflows. The explanatory variables that are used are country-specific. The data for the explanatory variables were retrieved from the World Bank (2009) and the World Development Indicators. The source of the dependent variable, which is net FDI inflows, is taken from the Organization for Economic Cooperation and Development (OECD) International Direct Investment Database. The data used below are annual FDI data with observations from 1990 to 2014, which gives 24 annual observations for the study. The analysis focuses on Namibian middle-income diversified economy. While an ideal analysis would use Foreign Direct Investment level data, classified by industry, it should be noted that this type of data is not available for Namibia, hence the use of the aggregate net FDI inflows.

3.2.2 The Explanatory Variables

The study uses the following explanatory variables in logs:

- Market size (LNGDP) is the logarithm of the absolute value of real GDP per capita, (in current international dollars) for Namibia. Other researchers, such as Globerman and Shapiro (1999), Naudé and Krugell (2007), and Maniam (2007) used this variable. A positive relationship is expected between Foreign Direct Investment and market size (GDP)

because the bigger the economy, the more eager the international investors are willing to set up business in that economy.

- Taxes (LNTAX), is the logarithm of total annual taxes. The tax levels of the host country can negatively affect the decision to invest or not to invest by foreign investors. A negative relationship is expected between taxes and Foreign Direct Investment (Kemsley, 1998; Billington, 1999).
- Inflation (LNINF) is the logarithm of Namibia Consumer Price Index (CPI). The inflation rate will be used to quantify the stability level in the economy (Naudé and Krugell, 2007) predict that the relation would be negative.
- Real exchange rate (LNREXC) is also affected Foreign Direct Investment. The higher the exchange rate of the local currency against the United States dollar the lower are the FDI inflows. Therefore, a negative relationship is expected between the exchange rate and Foreign Direct Investment (Walsh and Yu, 2010).
- Real wages (LNRWG) are the logarithm of Namibia real wages. Lesser wages are seen as a motivating factor in attracting more FDI. Skabic, and Orlic (2007) and Globerman and Shapiro (1999), found a negative correlation between labour costs and FDI. Since the wages are not readily available in Namibia, the study uses the formula derived from Akanbi and Du Toit (2011).
- Lending rates (LNINT) are the proxy for the interest rates used in this study. Higher interest rates imply that the cost of money is expensive in the economy. Investors prefer to invest their money in countries where the cost of money is not that expensive. That is the main reason why most international investors want to invest their money in economies like India and China (Zhao and Du, 2007).
- A dummy variable for drought (DUMD) was also used because most of the economic variables perform poorly if there is a drought in the drought prone economy of Namibia. This dummy variable takes on a value of 1 for all the years a drought was experienced and 0 otherwise. The coefficient of this dummy variable is expected to have a negative sign implying that the drought affects Foreign Direct Investment and other economic variables negatively.

The host countries' market size and growth potential, and inflation proxies for macroeconomic stability are proxied by GDP per capita (GDPPC) and real GDP. A multicollinearity relationship exists between these variables, at least in some cases, which would make

specifications, including some of them slightly difficult to interpret. In this study, one of these variables is used to avoid this problem.

Table 3-1 Correlation test between LNGDPPC and LNGDP

	LNGDPPC	LNGDP
LNGDPPC	1	0.9966
LNGDP	0.9966	1

3.3 Model Specification

In this section, the study discusses the theoretical framework upon which the determinants of Foreign Direct Investment will be estimated. The regressions to be used include the one for the long run (cointegration) and another one in the short run (ECM). All the steps that are taken to make the estimations are explained systematically below.

3.3.1 Static Ordinary Least Squares (OLS) Estimation

Economic analysis maintains that there is a long-run equilibrium relationship between the economic variables involved in this study. Applied econometric analysis tries to evaluate these long-run relationships indirectly by studying the constancy doctrine of the variables involved, in terms of the means and variances being persistent while not dependent on time (Gujarati, 2003). The empirical relationship can be expressed as

$$Y_t = \alpha + X_t \beta + \varepsilon \qquad [5]$$

Where Y_t is Foreign Direct Investment in levels

α and β are parameters to be estimated

X_t is well defined as observable variables representing factors affecting Foreign Direct Investment in a country.

While t year -period

ε_t is a random error term with a mean of zero.

This represents the depth of the error and unmeasured and immeasurable factors (Ghura and Goodwin, 2000). Oshikoya (1994), Ghura and Goodwin (2000) employed this specification when investigating the determinants of Foreign Direct Investment. This formula helps in identifying which variables should be used in our model. Outcomes from these models must be read with caution, as they may be spurious given problems associated with the type of time series data, which was not taken care of in this case. Most of the macroeconomic time series data are characterised by nonstationary processes (Harris, 2000). Under these circumstances, the conventional t and F tests based on these estimation methods are no longer valid, giving misleading inferences (Harris, 2000).

3.3.2 Cointegration Technique

One way to avoid the problem of specious regression, the unit roots should be first-differenced before running a regression (Harris, 2000). Even though this can help solve the question of baseless regressions, Gujarati (2003), indicates that valuable information concerning the long-run relationships among the series postulated by economic theory can be removed following this methodology. As a result, researchers in the field after several reviews include verification of non-stationary and co-integration of the variables.

The first thing we do when testing for unit roots is to determine the order of integration of each variable. Cointegration needs the variables to be of the same order of integration. Augmented Dickey-Fuller (ADF) unit root testing procedure is used to test for stationarity of the variables (Dickey and Fuller, 1979). The size of the coefficient λ is the one that is determined by the following equation.

$$\Delta Y_t = \alpha_0 + \mu t + \lambda Y_{t-i} + \alpha_i \sum_{i=1}^{n} \Delta Y_{t-i} + \varepsilon_t \qquad [6]$$

Where, *t* denotes the time trend

Y Is the variable of interest that we are testing for?

If the null hypothesis is accepted in this case, it implies that$|\lambda| = 0$, which would reinforce the presence of a non-stationary process.

Establishing the stationarity levels and cointegration is the next step that is taken. Individual time series can be non-stationary, but their linear combinations can be stationary if the variables

have the same order of integration (Engle and Granger, 1987). This happens because steadiness forces have a trend to keep such variables together in the long term. If this is the case, the series are cointegrated, and it implies that an error correction term exists, which suggests that there are short-term deviations from the long-term relationship as implied by cointegration (Harris, 1995). In addition, the researcher should difference the non-stationary series to achieve stationarity , and this leads to some loss of long-term properties of the series. It is then advised to test for cointegration among these non-stationary series by using a multivariate approach propounded by Johansen (1988).

Co-integration analysis is defined as a group of variables that drift together, although individually, they are non-stationary in the sense that they tend to fluctuate over time (Harris, 2000). This common drifting of variables makes linear relationships between these variables over a long period thus transforming into equilibrium relationships of economic variables (Gujarati, 2003). If these linear relationships do not hold over a long period, then the corresponding variables are not co-integrated (Harris, 2000). Cointegration analysis is a method used in the estimate the long-run or, equilibrium parameters in a relationship with non-stationary variables and is used for the structure of the dynamic. Error-Correction Models (ECM) to verify the validity of underlying economic theories in the short run (Harris, 2000). This approach uses equation 2 as the starting point.

3.3.3 Error Correction Model Technique

Some studies compile, in a single model both the short and long run determinants of Foreign Direct Investment (Fielding, 1997; Agrawal, 2001). For that, an Error Correction Model (ECM) can be used. This approach enables the long run equilibrium relationship and the short-run dynamics to be estimated simultaneously (Gujarati, 2003). This type of technique helps to correct the potential bias in the estimation of the coefficients in models with differences that do not take into account co-integration relationships (Agrawal, 2001). When these long-term restrictions are ignored, there could be an omitted variable bias (Gujarati, 2003).

Harris (2000) summarises the four desirable features of ECM as follows: It avoids the possibility of spurious correlation among strongly trended variables. The long-run relationships that may be lost by expressing the data in differences to achieve stationarity are captured through the inclusion of lagged levels of the variables on the right-hand side. The specification attempts to distinguish between short-run (first-differences) and long-run (lagged-levels)

effects. It provides a more general lag structure and does not impose too specific of a structure of the model.

This study pledges to both approaches. The current study starts with OLS approach is used as a starting point, with the co-integration and ECM techniques approach complementing it because it provides some instrument in dealing with the problems identified in the time series data. An advantage of co-integration analysis is that through building an error correction model (ECM), the dynamic co-movement among variables and the adjustment process towards long-term equilibrium may be examined (Harris, 2000). An ECM can be constructed that takes into account the short-run dynamic variables included in the cointegrating regression. If co-integrating relationships exist among a set of I (1) variables, then Granger Representation Theorem suggests that there is a dynamic error correction representation of the data (Harris, 2000:69). The next section develops the model to be estimated.

3.4 The Model

The long run model is given by the following:

$$LNFDI_t = \alpha_0 + \beta_1 LNGDP_t + \beta_2 LNTAX_t + \beta_3 LNRWG_t + \beta_4 LNCPI_t + \beta_5 LNEXC_t + \beta_6 LNINT_t + \beta_7 DMUD_t + \varepsilon_t. \quad [7]$$

Where Foreign Direct Investment ($LNFDI$) is the dependent variable of Foreign Direct Investment. The explanatory variables are gross domestic product ($LNGDP$), total taxes collected ($LNTAX$), real wages ($LNRWG$), price inflation ($LNCPI$), real exchange rate ($LNEXC$), lending rates ($LNINT$) and dummy for the drought years, which takes on a value of 1 for each drought year and 0 otherwise. Oshikoya (1994); and Mlambo and Oshokoya (2001) have employed this specification in most studies that were carried out. The lagged level of foreign direct investment will not be included in the long run model, but it is in the ECM denoted by equation [8].

$$\Delta LNFDI_t = \alpha_0 + \beta_1 \Delta LNFDI_{t-1} + \beta_2 \Delta LNGDP_t + \beta_3 \Delta LNTAX_t + \beta_4 \Delta LNRWG_t + \beta_5 \Delta LNCPI_t + \beta_6 \Delta LNEXC_t + \beta_7 \Delta LNINT_t + \beta_8 DMUD_t + \beta_9 ECT_{t-1} + \varepsilon_t \quad [8]$$

The study also tests for Granger causality between Foreign Direct Investment and Economic Growth. The way model [8] has been specified appear to propose that causality flows from

economic growth to Foreign Direct Investment, which suggests that economic growth leads to growth in the whole economy. Nonetheless, it could be that Foreign Direct Investment could also be causing economic growth, and this is why using the Granger causality test is vital as it aids in defining the direction of the relationship. The hypotheses that are tested are as follows:

H0: foreign direct investment does not Granger cause economic growth.
H1: foreign direct investment Granger causes economic growth.

H0: economic growth does not Granger cause foreign direct investment.
H1: economic growth Granger causes foreign direct investment.

3.5 Chapter Summary

The current chapter discusses the methodology used in the study to establish the determinants of FDI in Namibia. The methods discussed in this chapter are the static OLS and the techniques of cointegration and Error Correction Modelling. Cointegration and error correction modelling provides the tools to measure both the long-run relationship and the short-run deviations from the equilibrium long run relationship. To determine both the long run and short run behaviour of Foreign Direct Investment, a Foreign Direct Investment function will be developed and estimated in levels to determine the long-run behaviour. The long run model is used to generate errors that are then used in the ECM model as the error correction term. The next stage will be to re-estimate the model using lagged and differenced variables to get the Error Correction Model.

CHAPTER 4

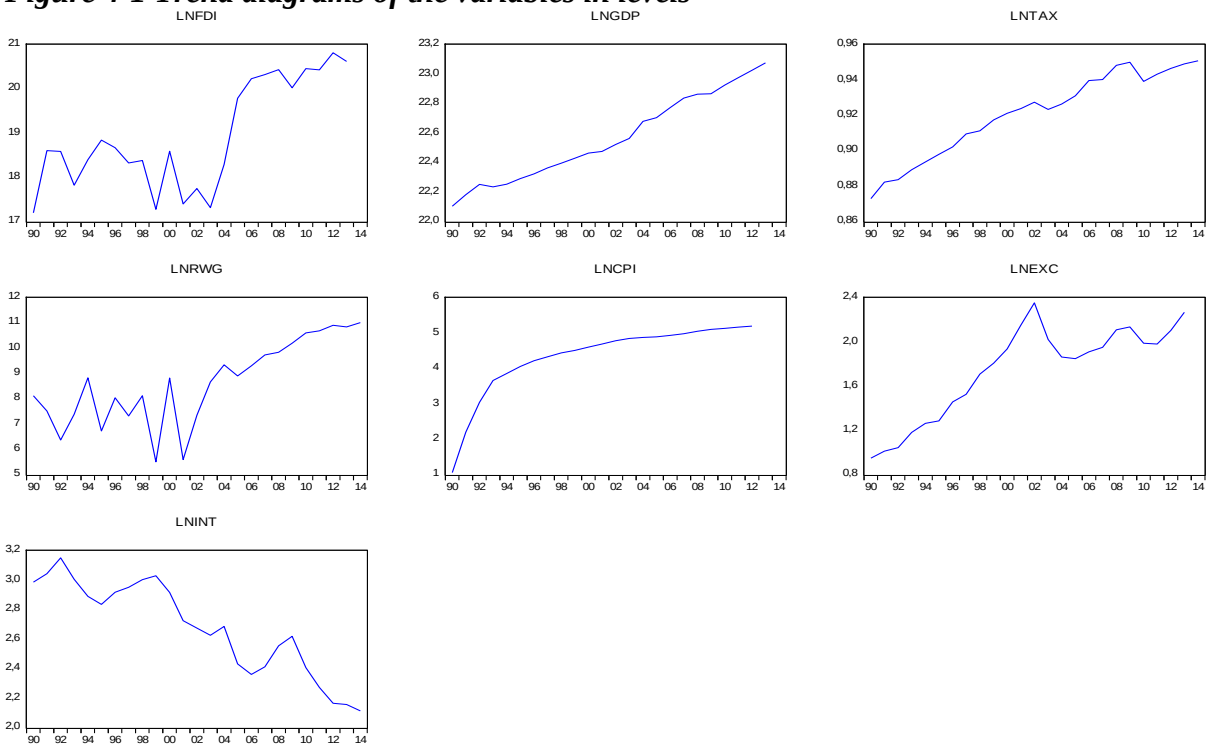
ESTIMATION AND DISCUSSION OF RESULTS

4.1 Introduction

In this chapter, the results of the empirical analysis mainly comprised of regression results are presented. The chapter commences by analysing the trend diagrams of the variables used in the study and then go on to test for unit roots using the Augmented Dickey-Fuller (ADF) test and the Phillips-Peron (PP) test. The study makes use of the cointegration technique where it commences by estimating the long-run model after which it generates the errors, which are tested for unit roots. The fact that the residuals from the model were found to be integrated of order zero gave the researcher the green light to specify and estimate the error correction model. The chapter discusses the findings and also incorporates an appropriate conclusion.

4.2 Estimated Results

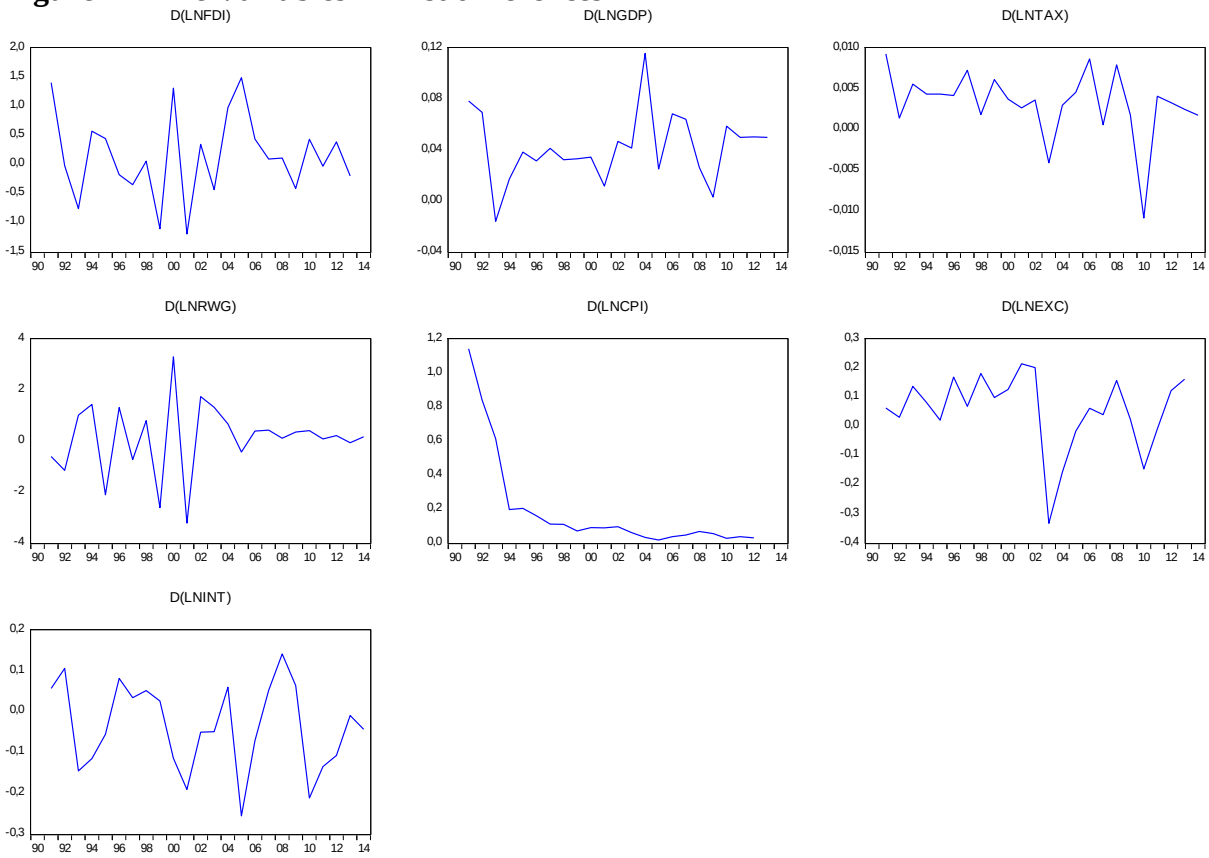
Figure 4-1 Trend diagrams of the variables in levels



Source: Author's computation

Figures in Figure 4.1 show that the variables are not stationary in levels, implying that they have unit roots. This means that they have to be differenced once to achieve stationarity. Logarithm of Foreign direct investment (LNFDI) and the logarithm of real wages (LNRWG) only develop upward trends after 2002 and before that, they appear to be stationary. In addition, all the variables exhibit upward trends except the logarithm of interest rates, which appears to have a downward trend for the entire period. Figure 4.2, shows the first differences of the variables and they all seem to suggest that all the variables are stationary in first differences. Since this is an informal test for unit roots, the study uses the formal tests such as the Augmented Dickey-Fuller test and the Phillips-Peron tests to come up with credible unit root test results.

Figure 4-2 The Variables in first differences



Source: Author's computation

Unit root tests are used to test formally for stationarity, and the order of integration of the variables and the results are summarized in Table 4.1. The unit root results show that all the variables are non-stationary in levels; and that they become stationary after being differenced once. All the variables included in the model need to be differenced once to become stationary. The variables are used in levels in the long run model and in first differences in the error

correction model. The variables are tested for stionarity using both the Augmented Dickey-Fuller and Phillips-Perron tests, which both indicate that all the variables become stationary after being differenced once.

4.2.1 The Stationarity Tests

Table 4-1 The ADF and PP Unit Root Tests

Variable	Model	Augmented Dickey Fuller Test (ADF)		Phillips-Peron Test (PP)		Order of Integration
		Levels	First Difference	Levels	First Difference	
LNFDI	Trend	-1.770220	-4.079117***	-1.748038	-4.079117***	I (1)
	Constant	-2.703869	-4.192292**	-2.705178	-4.192292**	
	None	7.117403	-2.005661**	6.674711	-1.777821*	
LNGDP	Trend	-1.48731	-6.229905***	-1.488112	-6.242893***	I (1)
	Constant	-2.19634	-6.174209***	-2.278037	-6.226038***	
	None	0.899581	-6.212799***	0.899581	-6.112373***	
LNTAX	Trend	-2.110626	-5.235536***	-4.163516**	-5.256219***	I (1)
	Constant	-2.025590	-4.247204***	-1.967360	-6.136569***	
	None	3.753842	-3.713963***	3.903149	-3.699087***	
LNRWG	Trend	-0.464653	-10.31171***	-1.742056	-14.18301***	I (1)
	Constant	-2.583590	-10.27874***	-4.694998***	-27.59129***	
	None	0.909531	-10.26246***	0.072454	-10.96486***	
LNCPI	Trend	-1.261333	-7.691392***	-11.09841***	-30.16557***	I (1)
	Constant	-22.2418***	-5.334599***	-41.59339***	-19.68666***	
	None	1.446986	-8.748166***	1.063736	-12.36238***	
LNEXC	Trend	-1.513473	-3.287245**	-1.511265	-3.175077**	I (1)
	Constant	-2.176429	-3.248813**	-1.569359	-3.086769	
	None	1.676866	-2.908914***	1.676866	-2.886081***	
LNINT	Trend	-0.098725	-3.767580***	-0.173020	-3.676909**	I (1)
	Constant	-3.598125*	-4.724740***	-2.764957	-3.658871**	
	None	-1.667710*	-3.435753***	-1.596810	-3.468268***	

*** (**) [*] represent significance at the 1% (5%) [10%], respectively

Source: Author's compilation

4.2.2 The Long run model

Table 4.2, shows that results of the long run model of the determinants of Foreign Direct Investment in Namibia. All the coefficients of the long run model have the correct signs, which are in line with a priori assumptions. The only worrisome issue is that the standard error of the logarithm of GDP, which is very large; and this is likely to make the parameters of the model unstable. The other thing that can be noted is that the results of the model are not spurious using the rule of thumb developed by Granger and Newbold (1974), implying that further analysis using that data can be conducted. Even the dummy variable (DUMD) meant to capture the possible indirect effects of droughts on FDI through their effects on economic growth has the correct sign. However, one cannot do a detailed analysis of the long-run model since the

variables are cointegrated and the best model that can be analysed is the Error Correction Model (ECM).

Table 4-2: The long run model (Dependent Variable: D (LNFDI))

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-59.17457	30.29132	-1.953516	0.0697*
LNGDP	1.172726	2.056020	0.570386	0.5769
LNTAX	-0.63485	0.95869	-2.055476	0.0577*
LNRWG	-0.028659	0.115452	-0.248237	0.8073
LNCPI	-0.130037	0.229970	-0.565453	0.5801
LNEXC	-2.871068	0.856228	-3.353159	0.0044**
LNINT	0.517240	0.872265	0.592985	0.5620
DUMD	-0.716600	0.280538	-2.554376	0.0220**
R-squared	0.905859	Mean dependent var		18.86951
Adjusted R-squared	0.861926	S.D. dependent var		1.184578
S.E. of regression	0.440169	Akaike info criterion		1.464890
Sum squared resid	2.906225	Schwarz criterion		1.859845
Log likelihood	-8.846237	Hannan-Quinn criteria.		1.564220
F-statistic	20.61934	Durbin-Watson stat		2.290794
Prob (F-statistic)	0.000001			

Included observations: 23 after adjustments:
Note: (*), (**) and (***) show significance at 10%, 5% and 1%, respectively.
Source: Author's compilation

4.2.3 The Error Correction Model (ECM)

After having estimated the long-run model, the study established that the variables in the model are cointegrated using the stationarity (cointegration test) of the error term which becomes stationary in levels. This is what led to the development and estimation of the Error Correction Model results that are presented in Table 4.3. The results of the Error Correction Model show that all the signs of the coefficients of the error correction model are correct except for the sign of the coefficient of total taxes, which is the opposite of what the economic theory suggests. Additionally, real GDP, taxes, and exchange rates are significant in explaining foreign direct investment. The coefficient of the exchange rate is 0.22, which means that if real effective exchange rate index increases by 1% FDI inflows will increase by about 22%. This value shows FDI is very responsive to changes in exchange, that is if the exchange rate changes, FDI changes as well. The results also show that a 1% increase in taxes leads to a 49 percent decrease in FDI. The results also show that the dummy variable created also take into account the indirect effect of the drought on FDI through its effect on economic growth exhibit a negative sign because when the country experiences drought, economic growth is affected negatively

and this makes the country less attractive as an investment destination for FDI. Therefore, FDI inflows are negatively affected.

Table 4-3: The Error Correction Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	-0.271312	0.234141	-1.158752	0.2711
D (LNFDI (-1))	0.001484	0.131677	0.011272	0.9912
D (LNGDP)	0.819540	0.360042	2.327215	0.0401**
D (LNTAX)	0.492904	0.240395	2.050	0.0384**
D (LNRWG)	-0.064601	0.068986	-0.936437	0.3692
D (LNCPI)	-0.139997	0.400611	-0.349459	0.7333
D (LNEXC)	0.227941	0.730749	4.283***	0.0034***
D (LNINT)	-0.891094	0.782021	-1.139476	0.2787
DUMD	-0.406033	0.217454	-1.867209	0.0887*
ECT (-1)	-0.520071	0.258074	-3.727603	0.0006***
R-squared	0.880530	Mean dependent var		0.105256
Adjusted R-squared	0.782782	S.D. dependent var		0.692636
S.E. of regression	0.322814	Akaike info criterion		0.882275
Sum squared resid	1.146300	Schwarz criterion		1.379666
Log likelihood	0.736115	Hannan-Quinn criteria.		0.990221
F-statistic	9.008161	Durbin-Watson stat		2.140677
Prob (F-statistic)	0.000629			

Dependent Variable: D (LNFDI)
Note: (*), (**) and (***) show significance at 10%, 5% and 1%, respectively.
Source: Author's compilation

The long-run equation (see Appendix B for the full set of VECM results) is as follows:

$$LNFDI = 3.35(7.97)LNGDP - 153.19(-14.51)LNTAX - 0.96(-13.61)RWG + 9.40(23.77)LNCPI + 3.86(8.486)LNINT \quad [9]$$

Equation [9] shows that is real GDP is positively and significantly related to FDI. This is in line with what economic theory hypothesises. The equation also shows that taxes and real wages are negatively and signifcantly related to FDI. This implies that higher real wages and higher taxes act as a disincentive to FDI inflows. The sign on the CPI is the only one that appears to be wrong because it is supposed to be negative. Interest rates are postively related to FDI. This is true in the case of financial FDI because financial FDI is flows to countries where the rate of returns are higher. However, in the case of companies that want to invest in brick and motor a country where interest rates are lower is the most attractive since this makes

borrowing costs lower. In summary, we can conclude that the long run model performs reasoanbly well.

The results in Table 4.3 show that real GDP significantly explain foreign direct investment at the 5 percent level of significance. In addition, the coefficient of real DP is positive, and this implies that when real GDP increases in Namibia FDI also increases. More specifically, a 1 percent increase in real GDP leads to an 82 percent increase in FDI.

It should be noted that taxes, real wage, exchange rate, inflation and interest rates all act as disincentives to foreign direct investment when they escalate. Of these variables, only taxes and exchange rates are significant in explaining foreign direct investment as alluded to above. This means that when taxes and exchange rates escalate in Namibia, they significantly lead to a decrease in foreign direct investment. It should also be noted that although the other variables in the model have the correct signs they are not significant in explaining foreign direct investment. The latter variables include the lagged value of FDI, real wages, the consumer price index and interest rates.

The diagnostic tests in the Error Correction Model all appear to suggest that the estimated model is good. First, the adjusted coefficient of determination is 78.3 percent, which means that 78.3 percent of the variation in foreign direct investment is explained by the exogenous variables included in the model; and the other 11.7 percent is explained by the other important variables not incorporated in the model. Second, the F-statistic for overall significance shows that the model estimated is robust at the 1 percent level of significance. This implies that the estimated results can be relied upon. Finally, the Durbin-Watson statistic of 2.14068 means that the estimated model does not suffer from autocorrelation.

The other variable, which is significant in explaining FDI in Namibia, is the dummy variable for drought. These results show that the recurrence of droughts in Namibia could have led to significant falls in FDI inflows. The results in Table 4.3 also show that the error correction term (ECT (-1)) has a negative coefficient (-0.520071) which is significant at the 1 percent level. This result means that FDI adjusts towards its long-run equilibrium at the rate of 52 percent, which means that it will be able to get to its long run equilibrium in the next year (see Gujarati, 2010).

In summary, the results indicate that economic growth or real GDP, taxes, exchange rates and the drought recurrence in Namibia are the only factors that significantly affect FDI in Namibia. This is not to say that the other factors do not have a role in explaining FDI, because the size of the sample that has been used to come to this conclusion is rather small which would imply that if more observations were included in the sample this could lead to better results which may make more variables significant.

4.2.4 Additional Diagnostic Tests

Tables 4.4, shows the additional tests that were conducted to test the performance of the model that would also give some light as to whether we should accept these results or not. The results in Figure 4.4 summarise the residual tests for normality, autocorrelation and heteroscedasticity. In all the cases we accept the null hypothesis if the probability value is greater than 5%. Therefore, in all the cases above, we accept the null hypothesis implying that the residuals from the model are normally distributed, not serially correlated and not heteroscedastic. These results suggest that the Error Correction Model errors are free from the heteroscedasticity and autocorrelation problems and those they are normally distributed. These diagnostic test results suggest that the Error Correction Model estimated has results that can be relied upon based on these three and other tests alluded to earlier. The null hypotheses that were tested for each of these three diagnostic tests are summarized below:

H_0: the residuals are normally distributed.

H_0: the residuals are not serially correlated.

H_0: there is no heteroscedasticity in the residuals.

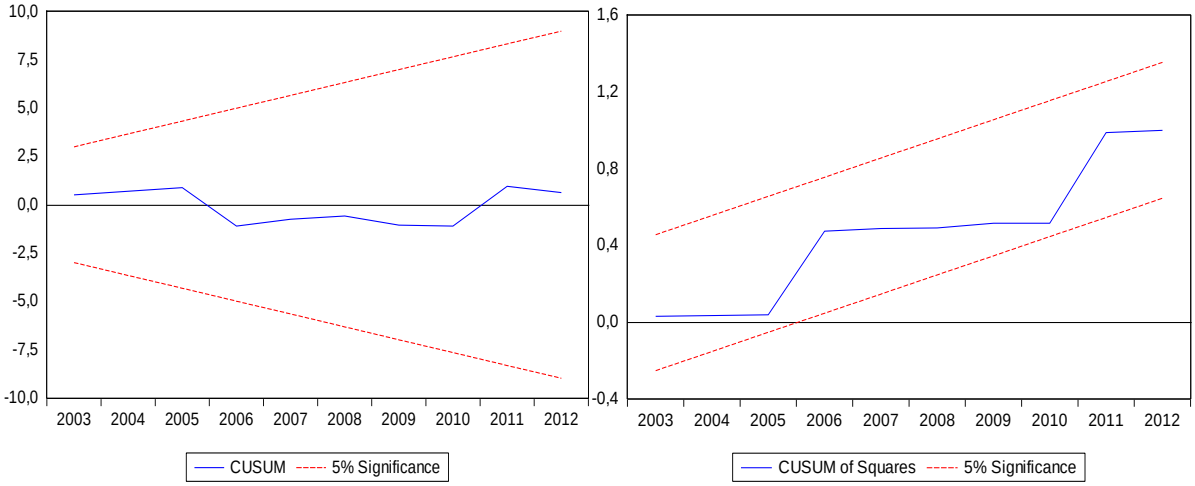
Table 4-4 Additional Diagnostic Tests

Test	Value (Probability)
Jarque-Bera normality test	0.645299 (0.724228)
Breusch-Godfrey Serial Correlation LM Test	0.424562 (0.8087)
Heteroscedasticity Test: Breusch-Pagan-Godfrey	14.64084 (0.1457)
Heteroscedasticity Test: ARCH	0.249393 (0.6175)

Source: Author's compilation

Figure 4.3, shows the results of the CUSUM and the CUSUM of squares tests. These two related tests show that the parameters in the error correction model are stable, which rules out misspecification errors. All the blue lines lie within the red upper, and lower bounds implying parameter stability of the model specified and estimated.

Figure 4-3 CUSUM and CUSUM of squares test



Source: Author's compilation

4.2.5 The Pairwise Granger Causality Tests

Results in Table 4.5 show that there is a bidirectional causality between real gross domestic product and Foreign Direct Investment, i.e., Foreign Direct Investment has an influence on gross domestic product (economic growth) and vice versa. This means that economic growth in Namibia can be FDI-led and that Foreign Direct Investment in Namibia can be economic growth led. What this implies is that policies that target the growth of investment or the growth of economic growth all benefit the economy in one way or the other as they lead to the growth of the other variable not targeted.

Table 4-5: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
LNGDP does not Granger Cause LNFDI	22	5.29395	0.0012
LNFDI does not Granger Cause LNGDP		4.25745	0.0095

Source: Author's compilation

4.2.6 Chapter Summary

The main purpose of the study was to determine the factors that affect FDI in Namibia. The study established that FDI appears to be affected significantly and positively by economic growth. In addition, FDI appears to be significantly and negatively affected by the recurrent droughts that Namibia experiences. Another ancillary drive of the study was to find out the

effects of Foreign Direct Investment on GDP, where we seek to find out whether FDI inflows in Namibia are beneficial for the economy. To test this theory, we use the Granger causality test. The results of the test, as shown above, indicate that FDI has a positive effect on the economy; at the same time, the results also show that a growing economy has a positive effect on FDI. Hence, FDI is significant in explaining the growth in the economy.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The objective of this study was, first, to determine the factors that attract international investors into investing in Namibia. Second, it was to evaluate whether this Foreign Direct Investment received in Namibia is beneficial for the economy that does it lead to an increase in the GDP of the country or does a high GDP attract more FDI. The regression results show that economic growth or real GDP and the drought recurrence, are the principal determinants of FDI in the long run. While in the short run only GDP is a significant determinant of FDI. The results have also exhibited that there is a negative relationship exists between FDI and inflation, interest rate, and exchange rate. The fiscal policy should be tapped up to increase the economic activities in the country to boost GDP. The second part of the analysis was to investigate whether FDI received is beneficial for the economy. The Granger causality test was used, and its results reveal that FDI is indeed beneficial for the economy. The Granger test reveals that FDI received plays a part in explaining the growth in GDP of Namibia.

5.2 Discussion of the results

In this section, the study attempts to compare the results from the previous studies with the results of the current study. The results obtained in the current study appear to be different from what Eita and Du Toit (2007) obtained. Eita and Du Toit (2007) found that investment in Namibia is explained by GDP, level of savings, the lagged capital stock and the decrease in the user cost of capital. It should be noted that the current study agrees with Eita and Du Toit (2007) on the effect of GDP on investment despite the fact that they specifically studied the determinants of investment and not foreign direct investment.

Shiimi and Kadhikwa (1999) studied the determinants of savings and investment in Namibia and established that public investment, inflation, real income, and the interest rate were significant determinants of investment in Namibia. Once again, real income whose proxy is real GDP was found to be a significant determinant of investment in Namibia. The other determinants that Shiimi and Kadhikwa (1999) found significant are inflation and interest rates,

which are insignificant in the current study. The current study, however, found taxes and exchange rates as additional variables that affect foreign direct investment. In addition, Ngifenwa (2009) analysed the determinants of investments in Namibia over the period 1960-2006 and found that in the long run, real investment in Namibia was positively related to GDP and investment in uranium mines in the 1970s, while it is negatively related to the lending prime rate and the inflation rates. However, in the short run, investment is positively influenced by three variables, namely, real GDP, domestic savings, and prime lending rates. Once again, Ngifenwa (2009) agrees with the current study on the effect of GDP on investment, but as far as the other variables such as inflation and interest rates re concerned, they are at variance.

Haiyambo (2013), evaluated whether Foreign Direct Investment inflows that come to Namibia because of the tax incentives, to foreign investors would be beneficial for the economy. She found that the richness in natural resources, investor trust, and good infrastructure are the important determinants of foreign direct investment in Namibia. The clear-cut differences between this study and the current study could be explained by the fact that Haiyambo used the survey technique and not time series data.

Basu and Srinivasan (2002) found that interest rate, output (GDP), government tax policies, inflation and savings are the determinants of investment in Africa. In the same vein, Naude *et.al.* (2000) found that openness, exchange rate and financial development are important long-run determinants of FDI in South Africa. Lastly, Asiedu (2006) established that the market size of the host country, deregulation, exchange rate depreciation and political stability were estimated as the principal determinants of FDI in Nigeria. According to the latter three studies, some of the variables that are important in explaining foreign direct investment are the interest rate, GDP, tax policies, openness, exchange rates, financial development, market size and political stability. The three variables that were found important in explaining FDI in Namibia, which were also important in the three latter studies include GDP, tax and exchange rates. It should be noted that the discrepancies in the results reported above have something to do with the sample sizes, the methodologies used and the choice of the explanatory variables.

5.3 Recommendations

The findings of the study exposed the importance of sustainable growth of GDP (market size), as an important determinant of Foreign Direct Investment both in the short run and long run. It is recommended, therefore, that continuous efforts should be put in place, to increase the

country's Gross Domestic Product (GDP). Foreign investors would be driven when they are confident that the host country offers the product market that is needed. Therefore, the government should maintain policies that help in achieving this by creating an enabling environment or incentives for boosting production activities.

Namibia has managed to sustain sound macroeconomic and political stability since independence. Expansionary fiscal policy, such as a well-maintained national budget expansion is highly recommended. On the other hand, inflation affected FDI negatively, even though it is not significant. This means that monetary policy should be used to control money supply and hence inflation.

The government and its institutions need to articulate and sustain predicable economic policies and political responses, as these are reflected as a prerequisite in attracting FDI inflows. Namibia has a smaller and less developed financial market. Hence the government should come up with policies that can develop and grow the financial market. The government should also look into investing in infrastructure (power, transportation, and roads) to increase the competitiveness of the environment for investment and hence economic growth (GDP). The government, via its agency (the Namibia Investment Centre), should make sure that the Investment Act of 1990, which was amended in 1993, which is under review at the moment caters for all the parties involved in the investment process. Finally, it should be noted that the major constraint of this study was the unavailability of data for a longer period. Thus, the study recommends that as more information becomes available, the current study can be replicated to compare and see if the results will differ significantly.

REFERENCES

Adefeso H. A, and Agboola A. A, (2012). *Determinants of foreign direct investment inflows in Nigeria: An empirical investigation*. International Business, Management, Vol. 6, no.1.

Agarwal, D. R. (2001). *Foreign direct investment and economic development: A comparative case study of China*, Mexico and India. Socioeconomic Development in the, 21, 257-288.

Agiomirgiankis, G.M., Asteriou, D & Papathoma, K. (2003). *The determinants of foreign direct investment: a panel data study for the OECD countries.* (Report No. 03/06). London, UK: Department of Economics, City University London. http://openaccess.city.ac.uk/1420/

Aitken, B.J. and Harrison, A.E. (1999). *Do Domestic Firms Benefit from Direct Foreign Investment? Evidence from Venezuela. American Economic Review*, Vol, 89 (3), pp. 605-618

Akanbi, O. A., & Du Toit, C. B. (2011). *Macro-econometric modelling for the Nigerian economy: A growth–poverty gap analysis*. Economic Modelling, *28* (1), 335-350.

Alfaro, L, (2003). *Foreign Direct Investment and Growth: Does the Sector Matter.* Harvard Business School. http://www.grips.ac.jp/teacher/oono/hp/docu01/paper14.pdf

Alfaro, L., Chanda, A., Kalemi-Ozcan, S. and Sayek, S. (2006). *How does Foreign Direct Investment promote Economic Growth? Exploring the Effects of Financial Markets on Linkages.* NBER Working Paper Series. No.12522. http://www.nber.org/papers/w12522

Ali, S and Guo, W. (2005). *Determinants of FDI in China*. Journal of Global Business and Technology. Vol. 1 (2).

Almal, M, Thiago. B and Raboch. H. (2010). *Determinants of Foreign Direct Investment in Latin America.* Journal of Globalization, Competitiveness and Governability. 4 (3), pp. 116-133.

Anuchitworawong C. & Thampanishvong K. *Determinants of foreign direct Investment in Thailand: Does Natural disaster matter?* International Journal of Disaster Risk Reduction (2014), http://dx.doi.org/10.1016/j.jdrr.2014.09.001

Anyanwu, John C. (2011). *Determinants of Foreign Direct Investment Inflows to Africa, 1980-2007*. Working Papers Series Nº136. African development Bank, Tunis, Tunisia, http:/www.afdb.org/

Anyyanwu, J.C. (2012). *Why Does Foreign Direct Investment Go Where It Goes?: New Evidence From African Countries.* Annals of Economics and Finance, Vol. 13-2, pp. 425-462. http://www.researchgate.net/publication/227388361

Arbatli, E. (2011). *Economic Policies and FDI Inflows to Emerging Market Economies.* IMF Working Paper, WP/11/192.

Asiedu, E. (2002). *On the Determinants of Foreign Direct investment to Developing countries: Is Africa Different?*. World development, Vol. 30, no. 1, pp. 107-119.

Awan M.Z, Khan B. and Zaman K. (2011). *Economic determinants of Foreign Direct Investment (FDI) in commodity producing sector: A case study of Pakistan*. African Journal of Business Management Vol.5 (2), pp. 537-545. http://www.academicjournals.org/AJBM

Aykut, D and Sayek, S. (2007). *The Role of the Sectoral Composition of Foreign Direct Investment on Growth.*

Bajo-Rubio, O. and Sosvilla-Rivera,S. (1994). *An Econometric Analysis of Foreign Direct Investment in Spain, 1964-89*, Southern Economic Journal, 61, 104-120.

Balasubramanyam, V.N, Salisu, M, & Sapsford, D. (1996). *Foreign Direct Investment and Growth in EP and IS Countries.* Economic Journal. Vol.106, pp. 92-105.

Basu, A and Srinivasan, K. (2002). *Foreign Direct Investment in Africa- Some Case Studies.* IMF Working Papers. WP/02/61.

Benacke,V, Gronick,M, Holland,D, Sass,M, (2000). *The determinants and impact of foreign direct investment in central and Eastern Europe: A comparison of surveys and econometric evidence*. Journal of United Nations. New York, Vol. 9, no. 3, pp 163-212.

Bende-Nabende, A. (2002). *Foreign direct investment determinants in Sub-Saharan Africa: A co-integration analysis*, Economics bulletin, Vol. 6, pp. 1-19.

Bevan, A.A. and Estrin, S. (2004). *The determinants of foreign direct investment into European transition economies.* Journal of Comparative Economics, Vol. 32, pp. 775-787. www.elsevier/locate/jce

Bhavan,T., Xu, Changsheng., and Zhong, C. (2011). *Determinants and Growth Effects of FDI in South Asian Economies: Evidence from Panel Data Analysis*. International Business Research, Vol. 4 (1)

Billington, N. (1999). *The location of foreign direct investment: an empirical analysis*. Applied economics, *31*(1), 65-76.

Blomstrom, M., Lipsey, R.E., & Zejan, M. (1994). *What Explains Developing Country Growth?*. National Bureau of economic Research, Inc NBER Working Papers: 4132.

Blonigen B.A. and Piger J. (2011). *Determinants of Foreign Investment*. NBER Working paper Series. Cambridge, http://www.nber.org/papers/w1604

Borensztein, E. De Gregorio, J., & Lee, J-W. (1998). *How does foreign direct investment affect economic growth?*. Journal of International Economics. Vol.45, pp.115-135.

Botric, V. and Skuflic, L. (2006). *Main Determinant of Foreign Investment in the Southeast European Countries.* Transition Studies Review. Vol, 13 (2), pp. 359-377

Buckley, P.J., Clegg, J., Forsans, N. and Reilly, K.T. (2001). *Increasing the Size of the Country: Regional Economic Integration and Foreign Direct Investment in a Globalized Economy*. Management International Review, Vol. 41 (3), pp. 251-274

Busse, M & Hefeker, C. (2005). *Political Risk, Institutional and Foreign Direct Investment.* World Bank Development Economics Research Group Trade.

Busse, M. (2004).*Transitional Corporations and Repression of Political Rights and Civil Liberties: An Empirical Analysis*. Kyklos, Vol.57, No.1, pp. 45-66

Carkovic, M and Levine, R. (2003). *Does Foreign Direct Investment Accelerate Economic Growth?*. University of Minnesota, Working paper.

Central Intelligence Agency (CIA), 'The World Fact book: Namibia'. (2015).

Christiansen, T. (2012). *Assessing Namibia's performance two decades after independence Part II: Sectoral analysis.* Journal of Namibian Studies, 11 (2012): 29-61.

Clarke, R. and Logan, T.M. (2008). *Emerging FDI Patterns in the CARICOM Region*. Journal of International Business Research, Vol. 8, no. 1, pp. 16-23

Coughlin, C.C & Segev, E. (1999). *Foreign Direct Investment in China: A Spatial Econometric Study*. Federal Reserve Bank of St. Louis Working Papers. Working Paper 1999-001A, http://research.stlouisfed.org/wp/1999/1999-001.pdf

De Gregorio, J. (1992). *Economic Growth in Latin America*. Journal of Development Economics, Vol. 39, 1, pp. 58-84

De Mello, L.R. (1999). *Foreign Direct Investment-led Growth: Evidence from the Time Series and Panel Data.* Oxford Economics Papers, vol51, 1, pp.133-51

De Mello, L.R. and Sinclair, M.T. (1995). *Foreign direct investment, joint venture and endogenous growth.* Department of economics, University of Kent, UK

Dickey, D. A., & Fuller, W. A. (1979). *Distribution of the estimators for autoregressive time series with a unit root*. Journal of the American statistical association, 74 (366a), 427-431.

Djankov, S and Hoekman, B. (2000*). Foreign Investment of Productivity growth in Czech Enterprises.* World Bank Economic Review.14, 1. http://ideas.pepec.org/a/aea/aecrev/v89y1999i3p605-618.html

Dunning, J. H. and Lundan, S.M. (2008). *Institutions and the OLI Paradigm of the Multinational Enterprise.* Asia Pacific Journal of Management, Vol. 25, No. 4, 2008. Available at SSRN: http://ssrn.com/abstract=1490986

Dunning, J.H. (1980). *Toward an eclectic theory of international production: some empirical tests.* Journal of International Business Studies, Vol. 11 (1), pp. 9-31

Dunning, J.H. (1993*). Multinational Enterprises and the Global economy*. (Harlow: Addison-Wesley).

Dunning, J.H. (2001). *The Eclectic (OLI) Paradigm of International Production: Past, Present & Future.* International Journal of the Economics of Business, Vol. 8. Issue.2. pp.173-190. http://www.tandfonline.com/doi/abs/10.1080/13571510110051441?journalCode=cijb20

Eita, J.H & Du Toit, C.B. (2007). *Explaining the investment behavior of the Namibian economy*. A conference paper, Pretoria, University of Pretoria.

Engle, R. F., & Granger, C. W. (1987). *Co-integration and error correction: representation, estimation, and testing.* Econometrica: journal of the Econometric Society, 251-276.

Ernest & Young. (2015). *EY's attractiveness survey-Africa 2015 Making Choices*. www.ey.com/sgafrica 2015

Fielding, D. (1997). *Adjustment, trade policy and investment slumps: Evidence from Africa*. Journal of Development Economics, 52 (1), 121-137.

Gastanaga, V., Jeffrey, N. and Bistra, P. (1998). *Host Country Reforms and FDI Inflows: How Much Difference Do They Make?*. World Development, Vol.26, No.7, pp. 1299-1314

Ghura, D., & Goodwin, B. (2000). *Determinants of private investment: a cross-regional empirical investigation*. Applied Economics, *32* (14), 1819-1829.

Globerman, S., & Shapiro, D. M. (1999). *The impact of government policies on foreign direct investment: The Canadian experience*. Journal of International Business Studies, 513-532.

Guesmi K, Teulon F. (2014). *Determinants of Foreign Direct Investments in South Asian Association for Regional Cooperation*. Ipag Business School, http://www.ipag.fr/fr/accueil/la-recherche/publications-WP.html.2014-213

Gujarati, D. N. (2003). *Basic Econometrics*. 4th. New York: McGraw-Hill.

Gujarati, D., & Porter, D. (2003). *Multicollinearity: What happens if the regressors are correlated.* Basic Econometrics, *363*.

Hailu, Z.A. (2010). *Impact of Foreign Direct Investment on Trade of African Countries*. International Journal of Economics and Finance, Vol, pp.122-133

Haiyambo, E. (2013). *Tax Incentives and Foreign Direct Investment: The Namibian Experience:* A thesis for a master in International Business, Harold Pupkewitz Graduate School of Business at Polytechnic of Namibia, Namibia.

Harms, P. and Ursprung, H. (2002). *Do Civil and Political Repression Really Boost Foreign Direct Investment?*. Economic Inquiry, Vol.40, No. 4, pp. 651-663

Harris, R. I. (1995). *Using cointegration analysis in econometric modelling* (Vol. 82). London: Prentice Hall.

Harupara, G.E. (1998). *Macroeconomic determinants of private investment in Namibia*: Dissertation for a Master of Science in Economic Policy Analysis, Addis Ababa University, Addis Ababa.

Jadhav, P. (2012). *Determinants of foreign direct investment in BRICS economies: Analysis of economic, institutional and political factor*. Procedia- Social and Behavioral Sciences 37 (2012). pp. 5-14, www.sciencedirect.com

Jenkins, C and Thomas, L. (2002). *Foreign Direct Investment in Southern Africa: Determinants, Characteristics and Implication for Economic Growth and Poverty Alleviation.* University of Oxford and London School of Economics, October.

Jensen, N. (2003). *Democratic Governance and Multinational Corporations: Political Regimes and Inflows of Foreign Direct Investment.* International Organization, Vol.57, No.3, pp. 587-616

Johansen, S. (1988). *Statistical analysis of cointegration vectors*. Journal of economic dynamics and control, *12* (2), 231-254.

Kemsley, D. (1998). *The effect of taxes on production location*. Journal of Accounting Research, *36*(2), 321-341.

Kersan-Skabic, I., & Orlic, E. (2007). *Determinants of FDI inflows in CEE1 and Western Balkan countries (Is accession to the EU important for attracting FDI?)*. Economic and Business Review for Central and Southeastern Europe, 9 (4), 333.

Konings, J. (2003). *The Effects of foreign direct investment on domestic firms*. Economics of Transition, Vol, 9, Issue, 3, pp. 619-633

Kowwalewski,O and Radio,M. (2014). *Determinants of foreign direct investment and entry modes of polish multinational enterprise: A new perspective on internalization.* Elsevier, pp.365-374, http://dx.doi.org/10.1016/j.postcomstud.2014.10.003

Krugman, P.R. (1979). *Increasing returns, monopolistic competition and international trade*. Journal of International Economics, Vol, 9, pp. 469-479

Leitao, N.C. and Faustino, H.C. (2010). *Determinants of Foreign Direct Investment in Portugal*. Journal of Applied Business and Economics, Vol.11 (3)

Lesotlho,P. (2006). *An investigation of the determinants of the determinants of private investment: A case study of Botswana.* A mini-thesis for a master in Economics, University of Western Cape, Cape Town.

Lim, E. (2001). *Determinants of and relationship between Foreign Direct Investment and growth: A summary of recent Literature.* IMF working Paper, no.175. Washington, DC

Lv, L., Wen, S. and Xiong, Q. (2010). *Determinants and performance index of foreign direct investment in China's agriculture*. China Agricultural Economic Review, Vol.1 (1), pp. 36-48

Mahembe, E. (2014).*Foreign Direct Investment Inflows and Economic Growth in SADC Countries- a Panel Data Approach*. A thesis for a Master of Commerce in Economics, University of South Africa, South Africa.

Maniam, B. (2007). *An empirical investigation of US FDI in Latin America*. Journal of International Business Research, 6(2), 1-16.

Mbekeani, K. K. (1997). *Foreign Direct Investment and Economic Growth*. South Africa National Institute for economic Policy Occasional Paper. South Africa

Mohamed, S.E, and Sidiropoulos, M. G. (2010). *Another look at the Determinants of Foreign Direct Investment in MENA countries: An Empirical Investigation*. Journal of Economic Development, Vol. 35 (2)

Mooya, M.M. (2003). *Determinants of foreign direct investment, theory and Evidence, with Zambia as a case study*. Polytechnic of Namibia.

Mwale, T. (2014). *The Determinants of Foreign Direct Investment in Zambia (1990-2011).* A Dissertation for a degree of Master of Arts in Economics, University of Zambia. Zambia.

Namibia Statistics Agency (NSA). (2011). *National Accounts 2000-2011*. Windhoek. Namibia

Naudé, W. A., & Krugell, W. F. (2007). *Investigating geography and institutions as determinants of foreign direct investment in Africa using panel data*. Applied economics, 39(10), 1223-1233.

Naude, W., Oostendorp, R and Serumaga-Zake P. (2000). *Determinants of investment and exports of the South African manufacturing firms: Firm-Level survey results*. A conference paper, Oxford University, St Catherine's College.

Nghifenwa, F.N. (2009). *The factors influencing Investment in Namibia: A case study of the Namibian Economy.* A thesis for a Master of Science in Economics, University of Namibia, Namibia.

Obida, G, W and Nurudeen, A. (2010). *Determinants of Foreign Direct Investment in Nigeria: An Empirical Analysis.* Global Journal of Human Science. Vol. 10. Pp26-34.

OECD, (1996). OECD *Detailed Benchmark Definition of Foreign Direct Investment*, Third Edition.

Oliva, M.A and Rivera-Batiz, L.A. (2002). *Political Institutions, Capital Flows, Developing Country Growth: An Empirical Investigation*. Review of Development Economics, Vol. 6, 2, pp. 225-47

Oshikoya, T. W. (1994). *Macroeconomic determinants of domestic private investment in Africa: An empirical analysis.* Economic development and cultural change, 42(3), 573-596.

Ozawa, T. (1992). *Foreign Direct Investment and Economic Development*. Transitional Corporations, Vol. 1, No.1.

Phiri, M and Odhiambo, O. (2015). *Namibia 2015*. African Economic Outlook. AfDB,., UNDP 2015.

Quere, A.B., Coupet, M. and Mayer, T. (2005). *Institutional Determinants of Foreign Direct Investment.* University of Paris.

Reiter, S.L. and Steensma, H.K. (2010). *Human Development and Foreign Direct Investment in Developing Countries: The Influence of FDI Policy and Corruption*. World Development. Vol.38, Issue. 12, pp. 1678-1691

Reuber, G.L., Crookell, H., Emerson, M and Gellens-Hammons, G. (1973). *Private Investment in Development*. Clarendon Press, Oxford

Robinson, W. I., & Harris, J. (2000). *Towards a global ruling class?* Globalization and the transnational capitalist class. Science & Society, 11-54.

Rusike G.T. (2007). *Trends and Determinants of Inward Foreign Direct Investment in South Africa.* A thesis for MA, Rhodes University. South Africa.

Schneider, F. and Frey, B.S. (1985). *Economic and Political Determinant of Foreign Direct Investment.* World development, Vol. 13, No. 2, pp. 225-250.

Schneider, K.H and Matei, I. (2010). *Business Climate, Political Risk and FDI in Developing Countries: Evidence from Panel Data.* International Journal of Economics and Finance, Vol, 2 (5)

Shiimi, W.I & Kadhikwa, G.M. (1999). *Savings and investment in Namibia*. Bank of Namibia's occasional paper, Bank of Namibia, Windhoek, Namibia. http://www.bon.com.na/CMSTemplates/Bon/Files/bon.com.na/5c/5cb7aa02-0047-4612-9flc-ad634bd45bc.pdf

Shiwayu, R.I. (2014). *Investigating the determinants of investment in Namibia*. A research paper for Bachelor of Science in Economics, Polytechnic of Namibia, Namibia.

Slemod, J. (1990). *Tax Effects on Foreign Direct Investment in United States: Evidence from a cross-country comparison,* in A Razin and J Slemod (eds) Taxation in global Economy, NBER, Cambridge.

Solow, R.M. (1956). *A contribution to the theory of economic growth.* Quarterly Journal of Economics, pp.65-94

Sun, Q., Tong W. and Yu Q. (2002). *Determinants of foreign direct investment across China*. Journal of International Money and Finance. Vol.21.pp.79-113. www.elsevier.com/locate/econbase

Thanyakhan, S. (2008). *The Determinants of FDI and FPI in Thailand: A Gravity Model Analysis.* A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy. Lincoln University, New Zealand

Tsai, P.L. (1994). *Determinant of Foreign Direct Investment and Its Impact on Economic Growth*. Journal of Economic Development. Vol.19, No.1, pp. 137-163.

UNCTAD, World Investment Report 2014

UNCTAD, World Investment Report 2015

Van Der Walt, J. and De Wet, G. (1995). *The Prospects for Foreign Investment in South Africa*. University of Pretoria

Vernon, R. (1966). *International Investment and International Trade in the Product Cycle*. The Quarterly Journal of Economics. MIT Press. United States.

Vinesh S.R., Boopendra S and Hemraze D. (2014). *Determinants of foreign direct investment in SADC: and empirical analysis.* The Business & Management Review, Vol. 4, no.4.

Walsh, J.P & Yu, J. (2010). *Determinants of Foreign Direct Investment: A Sectoral and Institutional Approach*. IMF Working Paper. WP/10/187.

Wei,S-J. (2000). *Local Corruption and global capital inflows*. Brookings Pape.Econ.Act.2000; 0(2): pp.303-346.

Woldemeskel S.M. (2008). *Determinants of Foreign Direct Investment in Ethiopia. A thesis for A Master's of Science in Public Policy*, Maastricht University. The Netherlands.

Yang, J. Y.Y., Groenewold, N and Tcha M, J. (1997). *The Determinant of Foreign Direct Investment in Australia.* Discussion Paper 97.23. The University of Western Australia, Nedlands, Western Australia 6907.
https://ecompapers.biz.uwa.edu.au/paper/PDF%20of%20Discussion%20Papers/1997/97-23%20Yang,%20J.Y.Y-Groenewold,%20N-Tcha,%20M.pdf

Yu, J., & Walsh, M. J. P. (2010). *Determinants of foreign direct investment: a sectoral and institutional approach* (No. 10-187). International Monetary Fund.

Zampini, D. (2008). *Developing a balanced framework for foreign Direct Investment in SADC: a decent work perspective.* Monitoring Regional Integration in Southern Africa Yearbook 2008.

Zhao, C., & Du, J. (2007). *Causality between FDI and economic growth in China*. Chinese economy, *40*(6), 68-82.

Zukowska-Gagelmann, K. (2002*). Productivity Spillovers from Foreign Direct Investment in Poland*. Economic Systems, Forthcoming

APPENDIX A: DATA USED

Year	FDI	GDP	GDPPC	expt	IMP	Trop	TAXT	CPI	EXC	POP	WC	FDV
1990	29567265	3.63E+10	25678.97	1.09E+09	75.06824	43.33625	1.66E+09	3.99427	2.587321	1415447	9.23E+08	781.5781
1991	120449858	3.93E+10	26815.22	1.21E+09	74.12357	43.76554	2.23E+09	4.531104	2.761315	1466152	1.25E+09	804.539
1992	118232232	4.21E+10	27840.39	1.34E+09	82.78432	42.78052	2.46E+09	5.067938	2.852014	1513689	1.52E+09	828.8296
1993	55267528	4.15E+10	26596.07	1.24E+09	85.54218	47.0779	2.78E+09	10.36746	3.267742	1559480	1.58E+09	905.3752
1994	97977966	4.22E+10	26275.25	1.31E+09	91.1347	44.46767	3.14E+09	15.66698	3.550798	1605828	1.76E+09	962.9908
1995	153015438	4.38E+10	26501.2	1.41E+09	104.2504	45.09705	3.61E+09	20.9665	3.627085	1654214	2.09E+09	1118.656
1996	128693897	4.52E+10	26526.94	1.42E+09	107.7909	45.9095	4.11E+09	26.26602	4.299349	1705349	2.65E+09	1307.428
1997	90972979	4.71E+10	26816.94	1.34E+09	113.1047	43.1897	5.11E+09	31.56554	4.607962	1758097	2.83E+09	1456.272
1998	96232390	4.87E+10	26906.52	1.23E+09	106.3559	41.87344	5.5E+09	36.86507	5.528284	1809920	3.16E+09	1550.21
1999	1592530.1	5.03E+10	27103.27	1.23E+09	103.8638	41.96833	6.6E+09	42.16459	6.109484	1857320	3.62E+09	1586.827
2000	118862678	5.21E+10	27449.25	1.32E+09	100	40.87775	7.47E+09	47.46411	6.939828	1897953	3.96E+09	1684.511
2001	36137622	5.27E+10	27297.22	1.18E+09	99.82255	41.17806	8.06E+09	52.76363	8.609181	1931005	4.51E+09	1670.453
2002	51232317	5.52E+10	28213.64	1.07E+09	94.85401	46.00316	9.2E+09	62.57348	10.54075	1957749	4.71E+09	1789.443
2003	33258076	5.76E+10	29071.54	1.26E+09	127.7625	43.38681	8.65E+09	67.03882	7.564749	1980531	5.12E+09	2245.305
2004	88203579	6.46E+10	32276.47	1.83E+09	154.5814	39.81204	1.04E+10	69.81197	6.459693	2002745	5.45E+09	2566.356
2005	168030168	6.63E+10	32696.42	2.07E+09	166.3154	40.44947	1.19E+10	71.40504	6.359328	2027026	5.89E+09	2953.798
2006	187933802	7.1E+10	34550.77	2.65E+09	186.1026	45.4683	1.57E+10	74.94756	6.771549	2053915	6.21E+09	3080.445
2007	118470165	7.57E+10	36319.63	2.92E+09	227.1334	50.48234	1.7E+10	79.85504	7.045365	2083174	6.73E+09	3450.233
2008	409927524	7.77E+10	36708.82	3.14E+09	280.0452	54.35427	2.12E+10	87.11757	8.261223	2115703	7.56E+09	4053.000
2009	463866164	7.79E+10	36190.48	3.15E+09	321.3422	52.34676	2.23E+10	95.35168	8.473674	2152357	9.05E+09	3873.000
2010	755714065	8.26E+10	37653.85	4.03E+09	359.4128	47.75728	1.79E+10	100	7.321222	2193643	1.08E+10	4312.000
2011	712307885	8.68E+10	38749.22	4.41E+09	425.4007	45.52616	2.08E+10	105.0056	7.261132	2240161	1.27E+10	4645.000
2012	595211781	9.12E+10	39796.83	4.37E+09	468.2034	43.41103	2.37E+10	112.0641	8.209969	2291645	11.64274	5099.000
2013	558328983	9.64E+10	41072.61	4.62E+09	487.8206	42.42114	2.66E+10	118.3407	9.655056	2346592	11.75962	5817.000
2014	493302263	1.03E+11	42666.82	4.76E+09		39.90046	2.95E+10	124.6721	10.85266	2402858	11.80037	5933.000

APPENDIX B: VECM RESULTS

Vector Error Correction Estimates
Date: 03/18/16 Time: 09:28
Sample (adjusted): 1992 2012
Included observations: 21 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
LNFDI(-1)	1.000000
LNGDP(-1)	3.347429 (0.41978) [7.97426]
LNTAXT(-1)	-153.1897 (10.5554) [-14.5129]
LNRWG(-1)	-0.960541 (0.07059) [-13.6072]
LNCPI(-1)	9.397054 (0.39540) [23.7662]
LNINT(-1)	3.856710 (0.45450) [8.48552]

Error Correction:	D(LNFDI)	D(LNGDP)	D(LNTAXT)	D(LNRWG)	D(LNCPI)	D(LNINT)
CointEq1	-0.221764 (0.13562) [-1.63524]	-0.013009 (0.00592) [-2.19581]	0.000928 (0.00095) [0.98034]	0.271244 (0.21760) [1.24654]	-0.020029 (0.00904) [-2.21511]	-0.035902 (0.02427) [-1.47930]
D(LNFDI(-1))	-0.521659 (0.28439) [-1.83432]	-0.031820 (0.01242) [-2.56118]	0.000762 (0.00199) [0.38362]	-0.727772 (0.45631) [-1.59491]	0.015878 (0.01896) [0.83738]	-0.009361 (0.05089) [-0.18393]
D(LNGDP(-1))	7.315350 (3.96134) [1.84668]	0.746650 (0.17306) [4.31450]	0.043744 (0.02765) [1.58181]	5.170984 (6.35607) [0.81355]	0.646005 (0.26411) [2.44594]	-0.498508 (0.70892) [-0.70319]
D(LNTAXT(-1))	2.774198 (32.7031) [0.08483]	1.142952 (1.42867) [0.80001]	0.051288 (0.22830) [0.22465]	27.73828 (52.4728) [0.52862]	-1.128472 (2.18040) [-0.51755]	0.765207 (5.85251) [0.13075]
D(LNRWG(-1))	-0.106959	0.004007	-0.000155	-0.439076	-0.020480	-0.018829

	(0.11063)	(0.00483)	(0.00077)	(0.17750)	(0.00738)	(0.01980)
	[-0.96684]	[0.82909]	[-0.20114]	[-2.47361]	[-2.77657]	[-0.95108]
D(LNCPI(-1))	-3.128849	-0.150620	0.012586	3.028449	0.386453	-0.443664
	(1.70585)	(0.07452)	(0.01191)	(2.73708)	(0.11373)	(0.30528)
	[-1.83418]	[-2.02114]	[1.05690]	[1.10645]	[3.39787]	[-1.45331]
D(LNINT(-1))	-1.756802	-0.203670	-0.010315	-1.450774	0.058122	0.226932
	(1.31910)	(0.05763)	(0.00921)	(2.11653)	(0.08795)	(0.23607)
	[-1.33182]	[-3.53432]	[-1.12017]	[-0.68545]	[0.66087]	[0.96131]
R-squared	0.356086	0.215951	0.149157	0.650298	0.967199	0.216390
Adj. R-squared	0.080123	-0.120070	-0.215490	0.500425	0.953142	-0.119443
Sum sq. resids	6.178279	0.011791	0.000301	15.90594	0.027464	0.197868
S.E. equation	0.664308	0.029021	0.004638	1.065898	0.044291	0.118884
F-statistic	1.290341	0.642672	0.409045	4.339007	68.80314	0.644338
Log likelihood	-16.95114	48.79406	87.30451	-26.88049	39.91601	19.18142
Akaike AIC	2.281061	-3.980387	-7.648048	3.226714	-3.134858	-1.160135
Schwarz SC	2.629235	-3.632213	-7.299874	3.574888	-2.786684	-0.811961
Mean dependent	0.105256	0.040122	0.003059	0.161080	0.142602	-0.041798
S.D. dependent	0.692636	0.027421	0.004206	1.508049	0.204609	0.112363

Determinant resid covariance (dof adj.)	4.17E-15
Determinant resid covariance	3.66E-16
Log likelihood	194.4217
Akaike information criterion	-13.94492
Schwarz criterion	-11.55744

APPENDIX C: PLAGIARISM DECLARATION

THIS DECLARATION IS TO BE ATTACHED TO ALL ASSIGNMENTS

Student details	
Student Number:	Student name:
Email address:	

Assignment details	
Course Code:	Course Name:
Assignment no.	Due date:
Assignment topic *(as given in the coursepack)*:	

Student Declaration

I am aware that plagiarism (the use of someone else's work without their permission and/or without adequately acknowledging the original source) is wrong and is a violation of both the General Rules for Student Conduct and the Plagiarism Policy of the University of the Witwatersrand.

I am aware that it is wrong and is a violation of both the General Rules for Student Conduct and the rules of the Wits Business School for a student to submit for a course, unit, or programme of study, without the written approval of the course instructor or the programme director, all or a substantial portion of any work for which credit has previously been obtained by the student or which has been or is being submitted by the student in another course, unit, or programme of study in the University or elsewhere.

I confirm that this assignment my own unaided work except where I have explicitly indicated otherwise.

I confirm that this assignment has not been, nor will be submitted in whole or in substantial part in another course, unit, or programme of study in the University or elsewhere without the written approval of the course or unit instructor or the programme coordinator.

I confirm that I have followed the required conventions in referencing the words and ideas of others in this assignment.

I confirm that I understand that this assignment may at any time be submitted to an electronic
plagiarism detection system, and may be stored electronically for that purpose.

I confirm that I have received a copy of the University's Plagiarism Policy S2003/351B and a copy of the General Rules for Student Conduct and Code of Conduct C2010/27.

I confirm that I understand that any and all applicable policies, procedures, and rules of the University and of the School may be applied if there is a belief that this assignment is not my own new and unaided work, or that have failed to follow the required conventions in referencing the words and ideas of others, and I understand that application of the policies, procedures, and rules may lead to the University taking disciplinary action against me.

Note: The attachment of this statement on any electronically submitted assignments will be deemed to have the same authority as a signed statement.

Student Signature:	Date: