INVESTIGATING THE CAUSAL RELATIONSHIP BETWEEN FOREIGN DIRECT
INVESTMENT AND ECONOMIC GROWTH IN NAMIBIA

A THESIS SUBMITTED IN PARTIAL FULFILMENT

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HILYA VULIKENI IITA

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SUPERVISOR: PROF ESAU KAAKUNGA (UNAM)

ABSTRACT

The study investigated the causal relationship between economic growth and foreign direct investment in Namibia. It used annual secondary time series data covering the period between 1980 and 2016 for the following variables: economic growth, foreign direct investment and manufacturing. The study employed Vector Error Correction (VECM) Model to analyse the data. The time series properties of the data were analysed using Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) unit root tests. The existence of the long-run relationship between the variables was assessed through Johansen cointegration test whereas, the nature of the causal relationship between the variables was tested by employing Granger causality test.

Firstly, the results of ADF and PP unit root tests showed that all the variables considered for the study are integrated of order zero i.e. $I(0)$. This confirms that, the three variables have zero means, constant variance and uncorrelated residual over time. Secondly, the Johansen cointegration based on Maximum Eigen and Trace statistic results revealed the presence of cointegration among the variables at 5% level of significance, implying a long-run relationship between the variables. Finally, the Granger causality test results prove a bidirectional causality between economic growth and foreign direct investment, whereas, manufacturing was found to Granger causes economic growth, a case of unidirectional causality since the results indicated that economic growth does not Granger causes manufacturing in Namibia.

The study concluded that, foreign direct investment and manufacturing are the engine of growth in Namibia and economic growth is an important factor that determines the level of foreign direct investment in the country. It is therefore recommended that the Namibian government should work toward the development of new national policies and economic strategies to stimulate economic growth and foreign direct investment. The government should also implement the policies and initiatives that are currently in place so that foreign investors are attracted to the country. This in the end promotes economic growth. In addition, the government should strengthen its measures to increase the share of manufacturing sector in the economy.

Keywords: Foreign Direct Investment, Economic Growth, Vector Error Correction Model (VECM), Unit Roots, Cointergration, Granger Causality and Namibia

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DEDICATION

This thesis is dedicated to my late mother, Teopolina Amadhila. Mommy, you accidentally left me at the point in life when I needed you the most, a time I was busy with my master's coursework, leaving me with no any other source of encouragement rather than myself. However, I managed just well although it was never easy. It is further dedicated to my son, Ethan Mulilo, may this inspire you to strive for best things life can offer you dearest son. I love you.

DECLARATION

I, Hilya Vulikeni Iita, hereby declare that this study is my own work and is a true reflection of my research, and that this work, or any part thereof has not been submitted for a degree at any other institution.

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ACRONYMS

ADF   Augmented Dickey Fuller

EPZ   Export Processing Zone

FDI   Foreign Direct Investment

GDP   Gross Domestic Product

MITSMED   Ministry of Industrialisation, Trade and SME Development

NDP   National Development Plan

NIC   Namibia Investment Centre

PP   Phillips-Perron

RGDP   Real Gross Domestic Product

TIPEEG   Targeted Intervention Program for Employment and Economic Growth

VECM   Vector Error Correction Model

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CHAPTER ONE: INTRODUCTION

1.1 Background of the study

A sustainable economic development of any country is determined by its investment level, which in turn depend on the saving rate of such country. However, most of the African countries' saving rates are very low. According to Dovi (2008) Sub-Saharan Africa has the lowest saving rates among the developing countries of the World. Although the saving rate figures differ from country to country, the gross domestic savings in Africa averaged about 18% of the region's gross domestic product (GDP) in 2005. This was in comparison with 25% in South Asia and nearly 43% in East Asia as well as in Pacific countries. In addition, World Bank (2007) as cited by United Nations (2007) explained that, the saving rate for Sub-Saharan Africa has been changing over the years. The rates increased gradually from 18% to 24.3% of GDP from 1960 to 1974 before it reached the highest level of 26% in 1980. The region then experienced what came to be known as Africa "saving collapse" when the saving rate fell under 15% in 1992 (Eldabawi & Mwega, 2000 as cited by United Nation, 2007).

Although there has been a tentative recovery from the saving collapse phenomenon, the saving rates remained low for the region. The low saving rates thus made it difficult for countries to finance their own developmental projects aimed at enhancing economic growth of the region (Suleiman, Kaliappan & Ismael, 2013). Some empirical and theoretical literature revealed that foreign direct investment (FDI) can positively contribute to economic growth.

Foreign direct investment is an investment made by a country or an entity in one country into a company or entity based in another country. In addition, International Monetary Fund (2004) further regarded foreign direct investment as the 'ownership or control of 10% or more of an enterprise's voting securities' (P.4).

Foreign direct investment continues to have a considerable influence in the world economy. For this reason, it is considered to be a key factor in fostering economic growth of the host country. As a result, FDI has become an important component of various economic strategies developed by countries around the world.

The purpose of the investors is to gain an effective voice that will enable them to partake in the management of such enterprises. Foreign entities that make investment are normally referred to as direct investors whereas, an enterprise or a subsidiary in which direct investment is made is designated as direct investment enterprise. Foreign direct investment take various forms. One of the direct investment form is the acquisition of already existing firms or the establishment of new companies in the host country, which is normally referred to as Greenfield investment (Gursoy & Kalyoncu, 2012).

Over the last three decades, foreign direct investment has appeared as one of the most important source of globalization and an important promoter for economic growth in the world. According to Goldberg (2009) a huge amount of FDI is seen to flow to developing countries through multinational companies, with more than half of these flows received by businesses within developing countries by 2005. As postulated in theory and according to Bank of Namibia (2006) foreign direct investment is considered to be one of the important drivers of economic growth. This is attributed to the fact that

it improves technical process for the host countries through foreign expertise transfer. In addition, foreign direct investment improves the competitiveness of countries in the domestic economy as it advances technology as well as improves the quality of products and processes in a given sector of the economy. Overall, it reduces unemployment which then results in reduced social problems of the country.

However, one thing for sure is that the benefits of FDI do not accrue automatically and equally across countries, sectors and local communities. Instead, the extent of these benefits is determined by the nature and design of the country's national policies which is considered to plays an important role in attracting FDI to developing counties and for ensuring that a county is reaping the full benefits of FDI for its developmental purposes.

According to Bank of Namibia (2006) Namibia has witnessed a high increase in FDI inflows in the 2000s. However, the transition of these foreign direct investment into economic growth was not easily realised but rather it has been slow. In addition, the expectation of FDI to help complement domestic investment has not been fully realised in the country.

As stated by Bank of Namibia (2006) foreign direct investment is an important element in complementing the country's saving rates. Although there are plenty of benefits associated with FDI in host countries as outlined above, countries may need to take into consideration the costs associated with the flows of FDI. Some of the costs associated with the flows of FDI include deterioration in the balance of payments (BOP) caused by the repatriation of profits to the foreign investor's country of origin, lack of positive linkages between foreign investors and the local communities, potential harm of

environmental impact especially of extractive and heavy industries, competition of foreign affiliates with domestic firms which might results in domestic firms losing out on investments to foreign investors and the possibility of crowding out effect of domestic investment.

Economic growth is defined as an increase in the country's gross domestic product (GDP) which is the total monetary value of goods and services produced by the country over a specific period of time. It is conventionally measured as the percentage rate of increase in real gross domestic product (RGDP). Since Namibia's independence in 1990, public policy has been struggling with the development of major economic activities. However, economic growth remained stable at modest levels of around 3.3% a year (Wakeford, 2017).

For many years now, FDI has been treated as a main source of capital accumulation, which normally leads to economic growth of host countries. Therefore, many countries enacted policies to attract a huge amount of FDI by removing restriction on foreign investment, improving domestic economic policies and regulations, promoting the financial sector development as well as producing encouraging environments for foreign investors.

1.2 Statement of the problem

The causal relationship between foreign direct investment and economic growth in recipient economies remained one of the hottest debate (Sothan, 2017). In addition, large number of papers have examined the FDI-GDP growth nexus but their results are far from conclusive. Although some studies support the idea that foreign direct investment

have a positive impact on economic growth, this might not be the case for some countries (Bank of Namibia, 2006). Alkhasawneh (2013), Iqbal, Shaikh and Shar (2010) established a bidirectional causality between the variables while some researches emphasize a unidirectional causality with either FDI causing GDP or GDP causing FDI.

Even though, several studies on this subject exist in many developing economies, very few studies have been done in Namibia with the majority of these studies focused on the impact that FDI has on the country's economic growth (Ingo, 2015). Despite the strategies in place to attract FDI in the country, the transition of FDI to accelerate economic growth has been low (Bank of Namibia, 2006). However, with the question of which variable causes which between economic growth and foreign direct investment slightly unanswered, it is difficult for the country to identify the right economic strategies to achieve its key developmental objectives.

Therefore, there is a need for this study to be conducted. Ingo (2015) examined the causal relationship between economic growth, foreign direct investment and export in Namibia based on pairwise Granger causality test. This study however, add to Ingo's findings, in that, it employed a different econometric technique whereby Vector Error Correction Model based on Granger causality test was analysed. Besides, another variable used in other studies carried out in other countries on the same topic was employed. In addition, the study used growth rates in % as measurement for all the variables, while, Ingo (2015) measured variables in constant 2004 millions of Namibian dollars.

1.3 Objectives of the study

The main objective of this study was to investigate the causal relationship between foreign direct investment and economic growth in Namibia.

- The specific objective is to analyse the short-run and long-run causal relationship between economic growth and foreign direct investment in Namibia.

1.4 Hypotheses of the study

In light of the above objective, the following hypotheses were tested:

H_0: FDI does not Granger causes economic growth

H_1: FDI Granger causes economic growth

H_0: Economic growth does not Granger causes FDI

H_1: Economic growth Granger causes FDI

1.5 Significance of the study

There is insufficient or very few empirical literature on the causal relationship between economic growth and foreign direct investment in the context of Namibia. Therefore, the current study is significant in the sense that, its findings are very useful to the policy makers in Namibia for the identification of the strategies and policies as a means of either encourage or discourage foreign investors in the country. The study was necessitated by the fact that, foreign direct investment is considered as an engine of growth for many developing countries and as such FDI promotion policies are strongly encouraged especially for countries aiming to develop their economy. A country is able to develop and implement the right policies and strategies if its position in the matter is well established.

1.6 Limitations of the study

The study utilized secondary time series data for the variables considered. As a result, there was lack of control regarding the quality of data used for this study. In addition, the study was limited to the time period of 1980 - 2016 as this is the period where the time series data for all the variables under consideration were available for the country. Moreover, other variables that might influence economic growth and foreign direct investment in Namibia are not included in the study. Hence, they are beyond the scope of this study.

1.7 Delimitation of the study

This study confined itself to investigating the causality between foreign direct investment and economic growth in Namibia using the data for the period of 1980-2016. However, the findings of the study and the results were generalized to the entire Namibian economy.

1.8 Outline of the study

The remaining chapters are structured as follow: Chapter two presents the overview and some trends of economic growth and foreign direct investment in Namibia. Chapter three presents theoretical and empirical literature reviews related to the causal relationship between economic growth and foreign direct investment. Chapter four discusses in details the methodology used in the study. Chapter five contains the empirical results, analysis and interpretation of the results. Lastly, Chapter six gives the general conclusion of the study and policy recommendations.

CHAPTER TWO: AN OVERVIEW OF FOREIGN DIRECT INVESTMENT AND ECONOMIC GROWTH IN NAMIBIA

2.1 Introduction

This chapter presents a review of some developments in foreign direct investment and economic growth in Namibia. The chapter also presents trends in the variables for the period 1980 - 2016 and the standing point of the government of Namibia toward economic growth and foreign direct investment. The chapter is divided into five sections. Section 2.2 discusses the policies in place to attract FDI and to increase economic growth in the country; section 2.3 presents an overview of foreign direct investment while an overview of economic growth is discussed in section 2.4. Section 2.5 of the chapter presents correlation between variables and the last section 2.6 concludes the chapter.

2.2 Policies to attract foreign direct investment and boost economic growth in Namibia

The main strategic goal of the Namibian government is laid down prominently in its Vision 2030. The country envisages becoming an industrialized economy by then. In order for the country to achieve economic growth, the government aims to increase the share of manufacturing sector through diversification of the export base into exporting of processed raw materials and import substitution of manufactured goods (Rosendahl, 2010). The following section is a brief discussions of some of the policies and strategies that have been put in place in order to boost economic growth in Namibia.

In 1992, the government adopted the White Paper on industrial development. The paper specifically aimed to achieve an increased value addition in manufacturing. It advocate for increased productivity and export; import substitution; increased diversification through increased economic growth and inter-industrial linkages; employment generating schemes specifically for disadvantaged groups and improved geographical distributions of industries.

According to Sherbourne (2017) the manufacturing sector has been at the centre of the Namibian government ever since the country's independence in 1990. This is attributed to the fact that, even before the publication of Vision 2030, the government has declared manufacturing as a key sector toward the country's economic development. In addition, there have been policy pronouncements and initiatives from the government aimed to promote manufacturing, although the results have been very disappointing. However, the overall contribution of manufacturing sector to the country's economic growth has not changed much despite the initiatives put in place to promote it. It is reported that, food and mineral processing continue to dominate manufacturing sector's contribution toward the economic growth.

In addition to the white paper on industrial development, the government published policy and programme on small business development in 1997. The policy specifically aimed to address the social and more long-term economic concerns and identified manufacturing as the most promising sector for small business activity (Ministry of Trade and Industry, 1997 as cited by Rosendahl, 2010). Several small and medium enterprises (SMEs) support programmes were introduced by the policy in addition to a number of regulatory reforms aimed at regulating discriminatory apartheid practices

(Rosendahl, 2010). Although the policy was not well implemented, it remained one of the major framework for the government regarding the SMEs development to date.

In order to attain the main strategic goal of the Namibian government, the country came up with major macroeconomic policies based on the government's National Development Plans (NDPs). The first National Development Plan (NDP) was adopted in 1995 and focused on boosting and sustaining economic growth, reducing income inequality and creating employment opportunities. The plan encouraged the country to reduce its level of dependence on mineral resources, but to increase the output level in other sectors more specifically in the manufacturing sector. The plan further set targets for the manufacturing sector, such as, increasing the contribution of non- fish to economic growth and employment creation as well as an increase in non- fishing manufactured export to 4% by the end of the plan.

The second National Development Plan of the country (NDP 2) which was adopted in 2001 continued with the objectives of the first NDP, however, it focused more on increasing the share of manufacturing sector in the economy (Mahembe, 2014). This according to the Namibian government (2012), is believed to have contributed to an increase in the real gross domestic product of the country, thus the economic growth was realised.

The third National Development Plan (NDP 3) highlighted the significance of improving growth rates contrary to worsening unemployment and underemployment in the economy. This plan estimated a GDP growth rate of 5% per annum. However, the actual rate was only 3%. The government attributed the below performance of the economy to

global financial and economic crises experienced in 2009 (Government of Namibia, 2012).

In addition, the fourth National Development Plan (NDP 4) outlined three major goals. These were: faster and more sustainable economic growth; creation of employment opportunities as well as enhanced income equality (Government of Namibia, 2012). Finally, the fifth which is also the current National Development Plan (NDP 5) was launched in 2017. The plan aimed to achieve an inclusive, sustainable and equitable economic growth for the country through the economic progression pillar (Government of the Namibia, 2017). This goal involves growing the economy, creating employment as well as reducing poverty and inequality in the country.

The country's fifth National Development Plan's goals aim to change the Namibian economy into a knowledge based economy as opposed to the current input- dependent economy. This would be achieved by addressing or paying more attention to the following identified initiates: the structural transformation through value addition, expand and modernise the physical infrastructure of the country which would play a critical role in attracting foreign investors, strengthen export capacity and greater regional integration. Lastly, to support the financial infrastructure for greater inclusion for the majority of the citizens. The most important of all the mentioned initiatives is the expansion and modernisation of physical infrastructure. This would create an enabling environment for economic growth. In addition, it would play an important role in trade facilitation as well as paving ways for innovation. The country is confident that it is possible to achieve these initiatives provided that its macroeconomic stability is firstly ensured.

Additionally, as part of the government's initiative to realise high economic growth, the Namibian government has adopted the Targeted Intervention Program for Employment and Economic Growth (TIPEEG) in 2011. The TIPEEG programme was a three year special job creation program initiative aimed to address high unemployment rate and also to support strategic economic sectors at the same time with the hope of promoting economic growth in the process. The programme was not introduced to replace the already existing planning process based on the national development plans but to serve as an additional initiative to stimulate the much needed job creation as well as to accelerate economic growth. It was the belief of Namibian policy makers that, through this programme, the economy would operate closer to its full potential while the successful implementation of the programme was expected to result in additional output in the economy and GDP growth. However, the outcomes of the programme were not evaluated to assess its achievements.

In 2013, the Namibian government announced another significant initiative called Growth at Home with the aim of promoting local value addition. It is made clear in the strategy that, value addition should be added to all the country's raw materials before they are exported. This would increase the real gross domestic product of the country in comparison to exportation of the materials in their raw states. The Namibian policy makers always argued that, sustained manufacturing growth is a precondition for any country to get richer as well as to develop. Hence, the efforts for the Namibian government to come up with all the said initiatives as an attempt for the country to attain the desired level of economic growth and development (Sherbourne, 2017).

The following are some specific initiatives aimed to attract FDI in the country. Firstly, the government of the Republic of Namibia enacted Foreign Investment Act in 1990 (Act No.27 of 1990) in which Namibia's policy on foreign investment is vested in (PwC Namibia, 2016). Additionally, the Act is regarded as the foundation of Namibia's policy on foreign investment. The main aim of the Act was to address as well as to encourage foreign investment in Namibia. It allowed any foreign national to invest and engage in any business activities in the country which might be undertaken by any Namibian, of course with some business exemptions provided for as long as it would contribute to the Namibian economy through employment creation, provision of trainings to Namibian as well as the usage of raw materials and goods produced locally.

It is through the foreign investment Act where Namibia Investment Centre (NIC) within the Ministry of Industrialization, Trade and SME Development (MITSME) was established. The aim of the centre is to promote and facilitate foreign and domestic investment in the country. Most prominently, the centre is responsible for the assessment of the economic sectors, investment proposals and projects for investment as well as undertaking periodic reviews on investment policies and trends in Namibia and globally (PwC Namibia, 2016).

Secondly, the Export Processing Zone Act of 1995 (Act No.9 of 1995) enabled the government to establish Export Processing Zone (EPZ) as the country's legal framework for promoting export led industrialization of the primarily sector-driven national economy. The EPZ regime anticipate to facilitate imports of foreign capital and technology which are productive as well as the transfer of skills to the citizens of the country. It further aim to increase the share of the manufacturing sector toward the

creation of jobs, the country's gross domestic product, export of manufacturing goods and also to enhance local economy diversification (PwC Namibia, 2016).

Another initiative which the Namibian government came up with is Namibia Investment Promotion Act No.9 of 2016 which became effective on 31 August 2016. This Act replaced foreign investment Act of 1990 and its major objective it to provide a clear and transparent framework for investment in Namibia (Sherbourne, 2017). The Act further aim to provide the promotion of sustainable economic development and growth by mobilizing and putting in place initiatives which will attract foreign direct and domestic investments. In addition, the act would improve economic development which would eventually result in reduced unemployment for the country and accelerate growth in order to diversify the economy. It is projected to bring above some important changes to the country's trade and investment environment. Among the changes that the act is expected to bring include the introduction of the performance agreements on investment covering issues pertaining to the contribution the investment will make to the development objectives of the country, the efficient dispute resolution mechanism regarding investments as well as the reservation of certain business and economic sectors for the state, Namibian entity and joint venture partnerships with Namibian investors including foreign investors that meet all the necessary requirements for instance investment for the benefit of Namibia.

However, it is too early to give an analysis of the Act's impact on foreign investment although the new Act represent an important departure from Namibia's open investment environment which has been in place ever since independence and call for a significant level of FDI that enhance development.

In addition to these Acts, the government have an open attitude toward foreign direct investment which is characterized by a non-discriminating treatment of foreign investors and the promotion of manufacturing sector (Rosendahl, 2010). Moreover, the government offers a wide range of incentive regimes more specifically to firms in the manufacturing sector including substantial tax, and non-tax incentives for registered manufacturers, EPZ enterprises and for exporters of manufactured goods.

2.3 An overview of foreign direct investment in Namibia

According to Namibia Foreign Investment Act 1990, FDI in Namibia is defined as an investment by a foreign national of an asset with not less than 10% of the total share capital of a venture or that the foreign national holds a management interest in the running of the business concerned. The promotion of investment both foreign and domestic remained a high priority for the government of the republic of Namibia. To support this, Namibia has put in place the necessary institutions, policy and legal framework conducive for FDI as well as to encourage domestic investors and to promote private sector development.

It is well stated in the country's second national development plans (NDP 2) that, domestic and foreign investment are required in order to increase the level of gross fixed investment as well as the capital formation. Gross fixed investment and capital formation are necessary toward the realization of growth in the country's production and export sectors. It is through these investments that economic growth, diversification, employment creation and increased income might be achieved.

Upon gaining its independence in 1990, Namibia opened its border to FDI (Bank of Namibia, 2006). The level of FDI inflows in the country fell sharply in the 1980s and started picking up again in 1990. Regrettably, the country did not receive large FDI inflows until in the late 1990s. To be more precise, the country did not receive any substantial inflows of FDI until around 1992-1996. Table 2.1 reflect annual FDI growth rate data for Namibia for the period 1980 to 2016.

Table 2.1: Annual FDI growth rate data

YEAR	FDI GROWTH RATE	YEAR	FDI GROWTH RATE
1980	-0.01	1999	0.04
1981	0.07	2000	5.02
1982	0.4	2001	10.7
1983	0.08	2002	4.4
1984	0.48	2003	1.32
1985	-0.65	2004	3.38
1986	0.5	2005	5.41
1987	-0.01	2006	7.64
1988	-0.06	2007	7.66
1989	-0.02	2008	8.83
1990	1.05	2009	9.42
1991	4	2010	2.55
1992	3.43	2011	6.54
1993	1.72	2012	8.41
1994	2.7	2013	6.2
1995	3.88	2014	3.49
1996	3.26	2015	10.22
1997	2.22	2016	2.75
1998	2.51		

Sources: *World Bank*

Based on table 2.1, a graph showing Namibia's FDI growth rate trend for the period under consideration was drawn. This is displayed in graph 2.1.

Figure 2.1: FDI net inflows as percentage of GDP for Namibia, 1980 - 2016
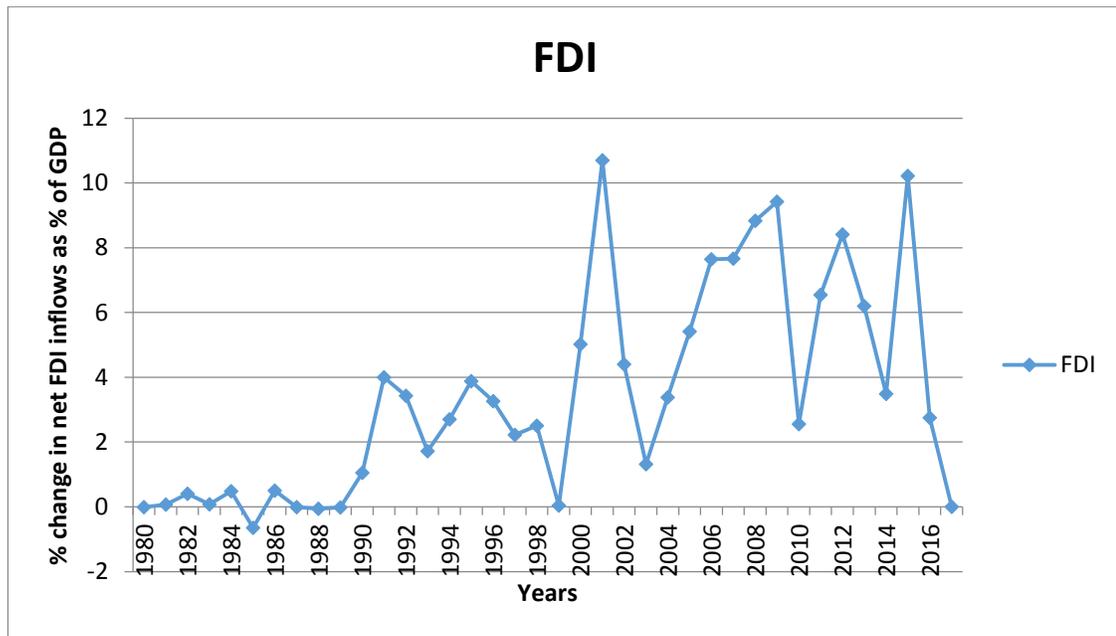
Sources: World Bank

As viewed by the performance of many African countries, Namibia's determination in attracting FDI has been quite significant which resulted in FDI inflows rising from an average of 2.8% between 1995 – 2000 before hitting a peak of 10.8% in 2001, as indicated in Figure 2.1.

Investment flows into Namibia, totaled a historical record of N$485 billion resulting in about 10 900 new jobs created between the year 2001 and 2005. These foreign investments include the establishment of Ramatex textile plant in Windhoek, implementation of the investment by Anglo base scorpion zinc mining as well as refinery at Rosh Pinah (Bank of Namibia, 2006). Namibia's net foreign direct investment has been fairly strong over the past decade i.e. 2005-2015, reaching a peak of 10.2% of GDP in 2015. Despite the fact that Namibia's net FDI inflows as percentage of

GDP varied substantially in 1990s, it increased through 1997 - 2016 period ending at 2.8% in 2016.

The country's FDI as a ratio of Gross Fixed Capital Formation was higher than the average for Southern African countries and some other developing economies. This increase is attributed to the increase in equity capital and reinvested earnings (Bank of Namibia, 2004). It further resulted from the sustained efforts of government at creating a friendly business environment for foreign and domestic investors after the lost decades of apartheid till the 1980s. Additionally, the creation of the Namibia investment center has paid off substantially in the promotion of the country as a profitable investment destination ever since the inception of the center in 1990.

The investment promotion programme which being spearheaded by the Ministry of Industrialization, Trade and SME Development aims to increase the number, the value and the nature of domestic and foreign direct investment in Namibia. This specific objective is to be achieved by creating an enabling environment for investment in the country which includes having in place an appropriate legal and regulatory framework, a proper investment plan and strategy for marketing Namibia as a preferred destination for investment in Africa. According to the Ministry of Industrialisation, Trade and SME Development (2016), a combination of domestic savings and foreign capital received in the form of foreign direct investment has boosted the country's level of investment as well as the industrial activities.

In addition, the Ministry through its investment promotion agencies, implemented measures aimed at attracting foreign direct investment. During the reporting period of 2015/2016 Financial Year, the MITSMED facilitated 13 new investments worth N$2.8 billion and created about 836 permanent jobs. These investments were mainly from South Africa, Germany, Zimbabwe, Portugal, Belgium, Italy and Dubai. In the same vein, the Namibia Investment Centre has facilitated new foreign investments to the value of N$409 million, which resulted in the creation of about 260 jobs in different economic sectors of the country. These include sectors such as tourism, hospitality, agriculture, manufacturing, construction as well as in the services sector. Table 2.1 gives a brief summary of the foreign direct investors that were facilitated by Namibia Investment Centre for the year 2015.

Table: 2.2 Foreign Direct Investment in Namibia by Countries and Sectors -2015.

Investment Amount	No of jobs	Sector	Country of Origin
15 000 000	2	Agriculture	China
1 000 000	3	Tourism/Hospitality	DRC Congo
2 900 000	8	Manufacturing	South Africa
5 000 000	40	Trading, Services	India
1 200 000	14	Manufacturing	United Kingdom
500 000	8	Construction	South Africa
4 000 000	7	Manufacturing	Germany
700 000	2	Services	Germany
2 000 000	5	Manufacturing/Export	Angola
130 000 000	81	Services	Angola
15 000 000	17	Wholesale/Trading	Pakistan
2 750 000	4	Construction	Netherlands
25 000 000	35	Hospitality	Germany
500 000	10	Manufacturing	South Africa
3 600 000	4	Tourism/Hospitality	Germany
200 000 000	20	Hospitality/Tourism	South Africa
409 150 000	**260**		

Source: Ministry of Industrialisation, Trade and SME Development (2016)

From the analysis of the foreign investments as facilitated by Namibia Investment Centre in 2015, it is evident that, the majority of foreign investors in the country for the year 2015 were from South Africa and Germany. The investors dominated or concentrated in the sectors of manufacturing, hospitality and tourism as compared to investors from other countries. However, it is worth noting that, China, is the only recorded country that invested in the agricultural sector of the country, a sector which is considered to be the backbone of many developed and developing economies. For proper comparisons of foreign direct investment inflows into the country, the study looked at the FDI by countries for the year 2016 in order to make proper analysis and to be able to make factual conclusion based on these analyses.

Table 2.2 presents the inflows of investment in Namibia from different foreign countries. It is clear from the table that, South Africa still remains the biggest foreign investor in the country representing about 47% of the foreign direct investment received by the country in 2016. Furthermore, Mauritius and China also invested a huge amount into various sectors of the economy in 2016; resulting in these two countries contributing 15% and 12.6% toward the overall net foreign direct investment in the country. The total value of the foreign investment in Namibia for the year 2016 amounts to N$140 billion.

Table: 2.3 Foreign Direct Investment in Namibia by Countries -2016

Country	Investment in billion N$	Percentage %
South Africa	65	46.4
Mauritius	20.9	15
China	17.6	12.6
United Kingdom	8.4	6.0
Spain	7.0	5.0
Luxembourg	5.7	4.0
Germany	5.2	3.7
Canada	2.9	2.2
Netherlands	3.1	2.0
British Virgin Islands	1.4	1.0
Other Countries	2.9	2.1
Total	**140.1**	**100**

Source: Bank of Namibia, 2017

Having discussed in brief the countries that mostly invested in Namibia, it is therefore important to analyse different recipient economic sectors of these foreign direct investment. Figure 2.2 is therefore a representation of foreign investment into different sectors of Namibia in 2016 as obtained from Bank of Namibia.

Figure 2.2: Foreign direct investment in Namibia by sectors - 2016
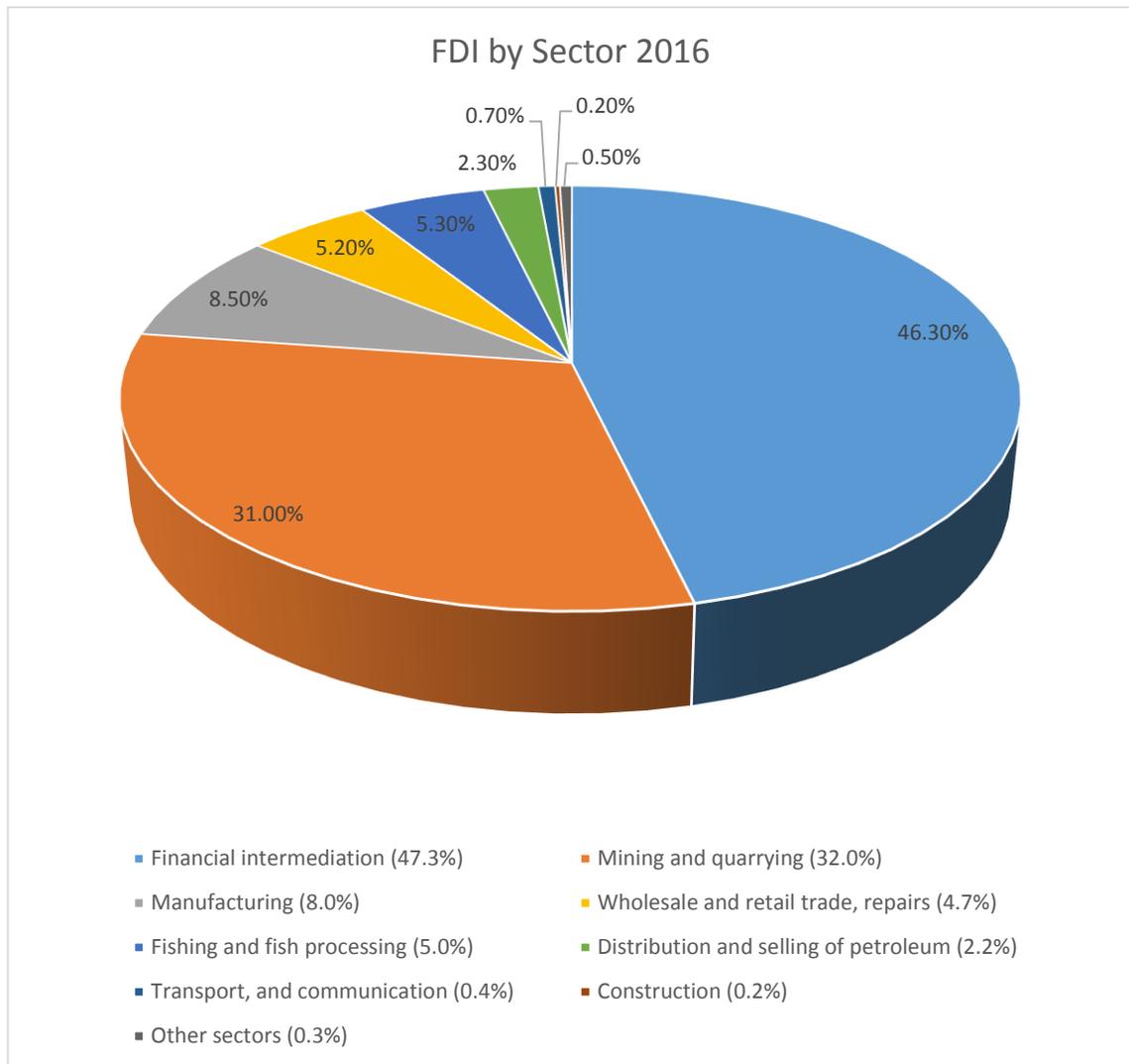
Sources: Bank of Namibia, 2017

Figure 2.2 shows foreign direct investments in percentages received by economic sectors for the year 2016. According to Bank of Namibia (2017) an analysis of the sectoral distribution of inward FDI in 2016 shows that financial intermediation is the major beneficiary of FDI followed by mining and quarrying, and then manufacturing sectors. Financial intermediation received 43.7% of the total FDI inflows into Namibia whilst mining and quarrying as well as manufacturing received 32% and 8%, respectively. The

mining sector which has been a major source of FDI continued to attract investments to the country's gold, diamond, uranium and copper deposits. This is ascribed to the fact that, Namibia has developed its diamond industry way beyond extraction services. Hence, it managed to attract investors from different countries interested in the diamond cutting as well as the polishing of the products. The remainder of the country's sectors including transport and communication as well as the construction sectors all received less than 5% of the foreign direct investment received in the country during the reporting period.

According to Mahembe (2014) approximately 75% of FDI inflows in Namibia came from South Africa; with the majority of investors from countries such as Germany, Spain, Australia, China and Scandinavian. In addition, Namibia's mining sector contributed over 50% of export earnings and it is accounting for over 70% of FDI stocks. FDI inflows accounted for about 24% of the total investment in the country by 2006 (Mahembe, 2014).

Foreign direct investment is projected to grow as a result of some strategic initiatives proposed by the policy document, the effect of recommendations of the investment conference which the country hosted in 2016 as well as the adoption of the economic diplomacy policy. In addition, economic growth is expected to increase if a large number of investments would be directed to infrastructures such as water, energy and transport, more especially, railway infrastructures (Government of Namibia, 2017).

2.4 An overview of Namibia's economic growth

Namibia is an upper middle country that has experienced significant successes after it gained its independence from neighboring South Africa in 1990. This is mainly attributed to the sound economic management and good governance. In addition, the country is blessed with splendid natural resources. Overall, the economy grew by an average of 2.5% in the 1980s, 3.6% in the 1990s and 4.5% in the 2000s (Mahembe, 2014).

Namibia has managed to record a positive growth almost every year ever since independence; apart from 1993 where the country recorded a negative growth of 1.58%. This resulted in a steady rise in average incomes as the growth in GDP has generally been higher than the growth in the population. However, the growth that Namibia has experienced has relied heavenly on the limited range of export as well as on the minerals sector. Thus, the country has benefited a lot from the global boom in resources, although, this growth is far from reducing the level of poverty and unemployment that the country is currently facing.

For an economy that depend mostly on international commodity markets, Namibia has experienced a negative growth only in 1993 ever since its independence as a result of a cut in diamond production in response to De Beers stockpiling (Sherbourne, 2017). Although Namibia has been classified as an upper middle-income country by World Bank in 2009, it is still faced with challenges of how to produce and export new products to new markets in order to generate growth and jobs for its citizens.

In 1990, more than half of the country's GDP has been generated mainly by agriculture, mining and government sectors. However, this contribution status changed by the year 2014 whereby these sectors accounted for less than 40% toward the gross domestic product of the country. Table 2.4 depicts Namibia's annual economic growth data for the period 1980-2016.

Table 2.4: Annual economic growth rate data

YEAR	GDP	YEAR	GDP
1980	13.4	1999	3.37
1981	0.97	2000	3.49
1982	-0.4	2001	1.18
1983	-1.82	2002	4.79
1984	-0.24	2003	4.24
1985	0.46	2004	12.27
1986	4.77	2005	2.53
1987	3.55	2006	7.07
1988	0.81	2007	6.62
1989	1.86	2008	2.65
1990	2.05	2009	0.3
1991	8.17	2010	6.04
1992	7.19	2011	5.09
1993	-1.58	2012	5.06
1994	1.73	2013	5.61
1995	3.90	2014	6.35
1996	3.19	2015	6.00
1997	4.22	2016	1.08
1998	3.29		

Sources: World Bank

Using the information in table 2.4, a graph showing Namibia's GDP trend for the period 1980 to 2016 was produced. This is shown in graph 2.3. As illustrated by the graph, the country has experienced recessions during the period 1982-1984. The 1980s were characterized by a decrease in investment more specifically in the mining sectors, which was then the dominant sector in the economy. Namibia has also experienced a decade of moderate growth, averaging at 4.2% per year. This resulted from a strong performance

in diamond production as well as the sound macroeconomic policies (Wakeford, 2017). The highest growth rate recorded for the period 1990 - 1999 was 8.2% in 1991. Since 1992, economic growth rates has slowed down from 7.2% in 1992 to 3.4% in 1999.

Figure 2.3: Economic growth for Namibia, 1980-2016
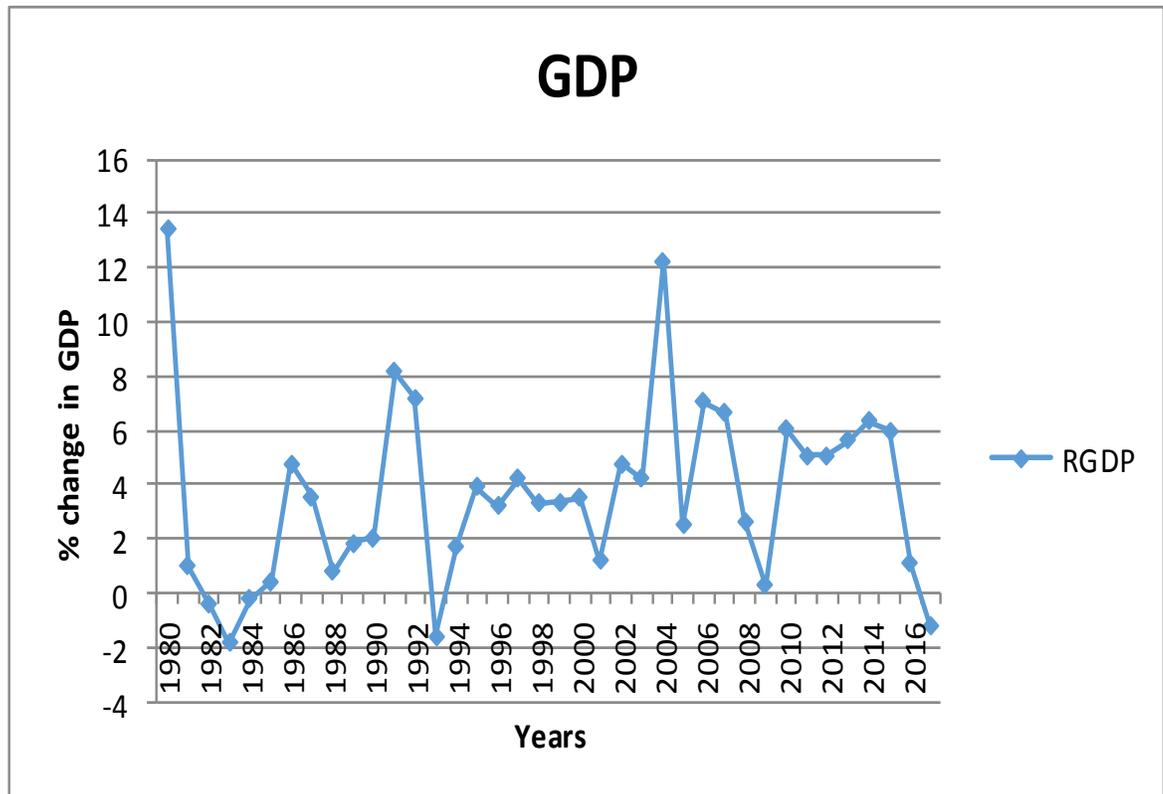
Sources: World Bank

According to Bank of Namibia (1990), the country was coupled with some negative domestic factors, more specifically, in the mining sectors in addition to the hesitance of the investment behavior, thus, the economy did not perform satisfactorily until 1990. This is further attributed to the fact that, until 1990, Namibia did not have legal framework to attract and protect foreign investors who were keen to invest in the country.

After the enactment of Foreign Investment Act of 1990, the output growth level in Namibia improved significantly after independence, surpassing the 2.5% average which the country achieved before independence as the average for the post-independence period i.e. 1990-2001, was recorded at 3.8%, (Bank of Namibia, 2002). The good economic performance during the post-independence period was attributed to the significant recovery of investment activities that raised the investment-economic growth ratio to more than 20% as compared to 14.9% recorded during 1985-89 period, (Bank of Namibia, 2006). In fact, the economic growth was more outstanding in the first half of the post-independence decade than it was in the last half of the decade as evident by Figure 2.3.

During the period 1990 - 1995, the economy grew at an annual average rate of 4.5%. This improved growth rate was attributed to the good performance of the mining and agriculture sectors. However, the growth rate declined to an average of 3.1% during the second half of the post-independence period. This was a result of a contraction in mining and agricultural output. The reduction in agricultural output came as a result of the drought that the country witnessed during the same period, while the decline in the mining output was a result of the fall in commodity prices as well as the closure of some mines at the time.

Furthermore, economic growth slowed down from 7.1% in 2006 to 2.7% in 2008 and to a further 0.3% in 2009. This was due to global financial and economic crisis that the world experienced in 2009. Additionally, African Development Bank (2014) attributed the slowdown in the economic growth of the country to the uncertain performance in mining and agricultural activities due to severe flooding experienced in the northern part

of the country, industrial action, as well as weak demand for mineral products arising from weaker global economy.

A report by Wakeford (2017) indicated that, GDP grew by an average rate of 4.4% between the period 2007 and 2016. After contracting by 0.4% in 2009 as a result of the impact of the global economic crisis, Namibia's economic growth recovered strongly reaching 6.0% in 2010. This is due to the positive measures which were implemented by the Namibian government since 2009 and the high commodity prices raised from improved global demand for mineral products (African Economic Outlook, 2012).

Following the global economic crises in 2009 which exposed Namibia's economic and fiscal vulnerabilities from its heavy reliance on Mining, the country's economic growth remained above 5.0% between the years 2010 and 2015, although it fell sharply in 2016 to a value of 1.2% (International Monetary Fund, 2018). This happened as a result of the collapsed in the global commodity prices. However, Namibia has enjoyed a strong and sustained averaged economic growth of 4.6% per year between the years 2012 and 2017. This growth has been primarily driven by large investments in the extractive sectors (Mining), favorable export prices and high government spending (Government of Namibia, 2017).

The country has experienced a slow economic growth between 2015 and 2016 as a result of price decline in commodities. In addition, this mostly resulted from the contraction of the activities in the mining sector due to low production of diamond and zinc. The production level for diamond and zinc decreased because of low - quality carats and ore mined as well as from the time intensive maintenance of vessels. However, Namibia had

the opportunities to invest in infrastructure in order to boost the economic growth and its competitiveness. Having posted an estimate average economic growth of 4.2% for the period of 2007 to 2016, Namibia's economy is set to expand at moderate rates over the next few years.

Figures 2.4 and 2.5 give a brief comparisons of the sectoral contribution by percentages toward Namibia's gross domestic product for the year 2006 and 2016.

Figure 2.4: Gross Domestic Product by sectors-Percentage contributions - 2006
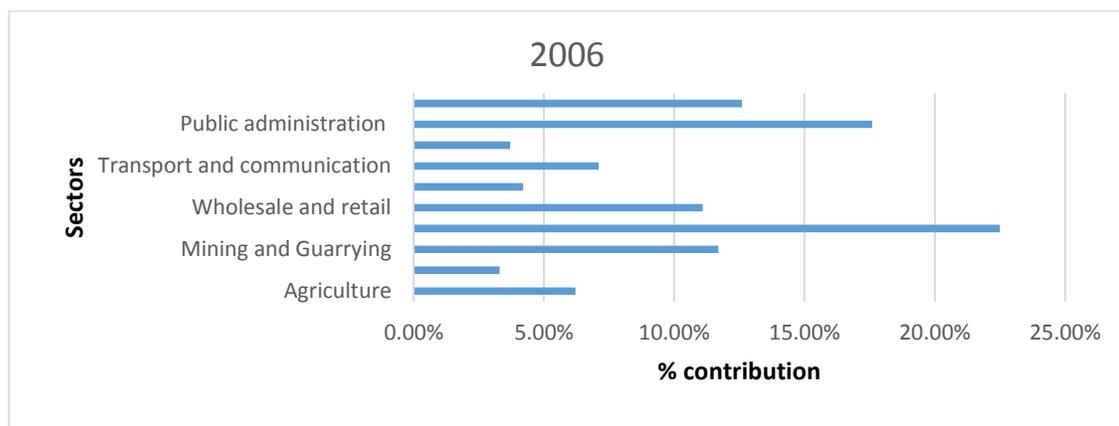
Source: Bank of Namibia, 2007

Figure 2.4 presents the percentage contribution of sectors to the national gross domestic product for the year 2006. The manufacturing sector was the major contributor to the country's GDP in 2006 as it contribute more than 20%. The sector is comprised of meat and fish processing; manufacturer of other food products and beverages as well as the component of other manufacturing. Other sectors including public administration; mining and quarrying; education; wholesale and retail all contributed more than 15% toward the country's gross domestic product for the reporting period. The government of

the Republic of Namibia seems to be on the right track by promoting the manufacturing sector as one of its initiatives toward achieving economic growth for the country. This was attributed to the fact that, the sector is the highest contributor to the country's GDP and the more productive the sector is, the higher the economic growth. In addition, agricultural sector, which is considered to be the backbone of many economies has recorded the contribution of more than 5% toward the country's gross domestic product for the reporting period, hence, much needs to be done to uplift the activities of agricultural sector.

Figure 2.5: Gross Domestic Product by sectors - Percentage contributions - 2016
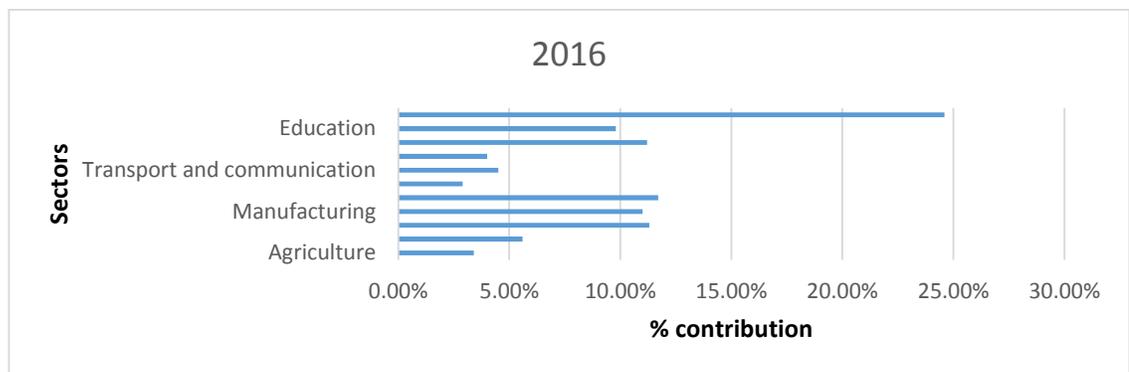
Source: Bank of Namibia, 2017

It is evident from Figure 2.5 that, exactly after ten years; the manufacturing sector was still part of the sectors that contribute the highest percentage to the country's gross domestic product. Although the sector's contribution is not as high as it was in 2006, this was due to the facts outlined earlier on in this section. Additionally, the overall growth of the country was high in 2006 compared to the growth experienced in 2016. Thus, the majority of the economic sectors did not perform well in 2016 as compared to 2006.

It is evident from the analysis of the sectoral beneficiary of the FDI and the sectoral contribution toward gross domestic product of 2016 that, manufacturing and mining and quarrying sectors were among the top recipient sectors of FDI inflows in Namibia and are the majors contributors to the country's GDP. Regrettably, financial intermediation sectors which is the major beneficiary of FDI is only responsible for about 5.6% of the country's economic growth of the same period.

Despites all that the country has been through, the outlook remained positive with growth projected to resume in 2018 as mining production is expected to ramp up, the stabilization of construction activities and manufacturing is also expected to recover before converging to a long term rate of about 3.5% below the average of recent years (Mahembe, 2014).

From the analyses of the overview of foreign direct investment and economic growth in Namibia, it is obvious that the sectors which received the biggest portion of the foreign direct investment excluding financial intermediation were the greatest contributors to the country's economic growth. This is attributed to the fact that, when these sectors did not do well due to some reasons as outlined in the overview sections, the growth rate of the country for the same period is likely to be affected negatively.

2.5 Correlation between the variables

Correlation is a statistical method that determine the degree of linear relationship between two different variables. The relationship between any two variables can vary from strong to weak or none and it is indicated by the correlation coefficient. When the

correlation coefficient approaches 1.00 or greater than 0.50 it means there is a strong positive relationship or high degree of relationship between the two variables. In addition, the coefficient of -1.00 or less than -0.50 indicate the presence of strong negative relationship between the variables while the correlation coefficient that is closer to 0.00 indicate weak or no relationship between the variables (Brooks, 2008). However, there is major caution that correlation does not imply causation since a strong positive or strong negative correlation between two variables does not mean that one variable is caused by the other variable.

Fig 2.6: Correlation matrix of GDP, FDI and MAN

	GDP	*FDI*	*MAN*
GDP	1		
FDI	0.18669	1	
MAN	0.130712	0.307025	1

Source: Author's compilation using excel

The above figure represent the correlation matrix for the three variables considered in the study as computed from excel. It is clear that there is a positive relationship between all the variables as evident from the correlation coefficient. However, all the correlation coefficient indicated a weak positive relationship as the values are closer to 0.00.

2.6 Summary

In summary, the chapter looked at the overview of economic growth and foreign direct investment in Namibia. Government policies and some of the interventions that the Namibia government came up with in an attempt to boost economic growth and to attract foreign direct investment were also discussed in details in the chapter. Some contributing factors to the country's economic slowdown as well as drivers of the

growth in the country were explored. The chapter also presented the main foreign investors as well as the economic sectors that benefited mainly from this kind of investments. Lastly, the percentages contribution by industry to the country's gross domestic product as well as the correlation between the variables under consideration were discussed.

CHAPTER THREE: LITERATURE REVIEW

3.1 Introduction

Foreign direct investment-economic growth is the most debated issue in many developing countries in recent years. While there is consensus regarding the theoretical outcomes of FDI on economic growth, the empirical results on the subject matter seems to be inconsistent or rather mixed. Therefore, this chapter aims to critically review the causal relationship between NFDI and economic growth both theoretically and in empirical terms. Section 3.2 of the chapter gives a brief discussion of the theoretical literature, whereas, a brief discussions on different studies that looked at the FDI-economic growth nexus relationships are presented in section 3.3.

3.2 Theoretical literature

There are various models and theories that have been used to explain the relationship between foreign direct investment and economic growth of the host country. The study discussed the four main theoretical theories namely exogenous growth model, Endogenous growth model, Modernisation theory and Dependency theory. These theories are briefly discussed in the next section.

3.2.1 Exogenous growth theory

The exogenous growth theory is also referred to as Neo-classical growth model or Solow-Swan growth model. The theory was initiated by Solow in 1956 and 1957. This theory assumes that economic growth is generated through the accumulation of exogenous factors of production such as the stock of capital, technological progress as well as the level of labour in the country.

It has been shown that, through this framework capital accumulation contributes directly to economic growth relative to the share of capital to the national output. In addition, the growth of the economy depends on the expansion of the labour force and technological progress. According to this theory, FDI increases the capital stock in the host country and this would positively affect the country's economic growth. De Jager (2004) as cited by Mahembe and Odhiamo (2014) explained that, if FDI introduces new technology, it would eventually lead to increased productivity in both capital and labour (labour productivity and capital productivity). This might result in more consistent returns on investment, therefore, labor would grow exogenously.

Through the exogenous growth theory, it has been shown that FDI can impact economic growth directly through capital accumulation and the inclusion of new inputs as well as foreign technologies into the production functions of the host countries. Thus, the neoclassical growth model shows that FDI promote economic growth by increasing volume and or efficiency of investment in the host country.

3.2.2 Endogenous growth theory

Unlike neoclassical growth models which assumes technological progress to be exogenous, the new endogenous growth models postulates that economic growth is driven by two main factors. These are the stock of human capital as well as technological change (Nair-Reichert & Weinhold, 2001). The theory takes into account long-run growth as a function of technological progress thus, offer a framework in which FDI could continuously increase the rate of economic growth in a host country

through technology transfer, diffusion spillover effect and research and development (R&D).

The endogenous growth theory argued that technological progress is improved endogenously through the increase in knowledge and innovation. To this, FDI through multinational corporations (MNCs) is believed to bring research and development in addition to human capital accumulation.

These two growth theories and the FDI-economic growth's illustration reveal that FDI could contribute to economic growth through both direct and indirect impact. In theory, FDI could boost the host country's economic growth via capital accumulation, the introduction of new goods, introduction of foreign technology and also by enhancing the stock of knowledge in the host country via the transfer of skills (Elboiashi, 2011 as cited by Mahembe & Odhiamo, 2014).

3.2.3 Modernization theory

The theory of modernization is build on fundamental principle of economics. This implies that economic growth requires or need capital investment. The theory indicates that the transfer of technology through foreign direct investment is very important as many developing countries do not have the necessary infrastructure as in an educated population, liberalized markets as well as social stability required for innovation to promote economic growth (Calvo & Sanchez-Robes, 2002 as cited by Tsaurai & Odhiamo, 2012). Other supporters to the theory are Kumar and Pradham (2002) as cited by Tsaurai and Odhiamo (2012) indicated that, in addition to technology transfers and capital accumulation, FDI brings about new bundle of resources to the host countries.

This includes organizational and managerial skills, market knowledge as well as market access through multinational enterprises. To support this, Nath (2005) as cited by Tsaurai and Odhiamo (2012) argued that FDI plays major functions in promoting the economic growth of the recipient economy as it contributes to the accumulation of capital and it tends to increase the country's total factor productivity.

3.2.4 Dependency theory

The dependency theorist, Bornschier and Chase – Dum (1985) & Amin (1974) as cited by Tsaurai and Odhiamo (2012) argued that FDI is not entirely good for the host country as it has some negative effect on its economic growth and the distribution of the income level in the country. They believed that FDI creates a monopolistic industrial structure that would result in the underutilization of productive forces. The theorist further indicated that, the economy which is dominated or being controlled by foreigners would not develop but rather grow in a disarticulated manner (Tsaurai & Odhiamo, 2012).

3.3 Empirical literature

The causal relationship between foreign direct investment and economic growth has received great attention in both developed and developing economies. Among the few papers that investigated the causal relationship between economic growth and FDI, Sothan (2017) examined causality between FDI and economic growth for Cambodia. The study employed Granger causality test and Vector Error Correction Model (VECM) for the period 1980-2014. The results provide strong evidence on the causal impact of FDI on economic growth. However, the study does not confirm causality to run from

economic growth to FDI. Therefore, it concluded that the growth impact of FDI is sufficiently supported in Cambodia.

In addition, another study by Gupta and Singh (2016) examined the causal nexus and effects between FDI and economic growth for the BRICS (Brazil, Russia, India, China and South Africa) nations using the Johansen cointegration technique followed by Vector Error Correction Model (VECM) and Granger causality test for the period 1992-2013. The study further explored the reasons behind the linkage between FDI and GDP through the estimation of liner regression model. The findings of the study revealed that there exist a unidirectional causality running from GDP to FDI for some countries (Brazil, China and India) while the causality results for Russia and South Africa showed that GDP and FDI are independent of one another, that is, there is no causality between these two variables. The results of the ordinary least square technique revealed that there are different factors according to the countries which cause the linkage between FDI and economic growth.

Another study by Iamsiraroj (2016) investigated the association between foreign direct investment and economic growth for 124 countries by means of simultaneous system of equations using panel data approach. The study employed data for the period 1971-2010 and its findings revealed a bidirectional causality between economic growth and foreign direct investment. The results implies that, economic growth of the host country can determine and it can be determined by the inflows of FDI and vice versa. The study further showed that labour force, trade openness as well as friendly investment climate

are among the factors which influence the inflows of foreign direct investment into the country and thus stimulating its economic growth.

In the Namibian context, Ogbokor (2018) examined foreign direct investment and economic growth progress, using Namibia as a test center covering a quarterly time period of 1990-2014. The study employed the Vector Autoregressive method which incorporated unit root test, co-integration test, estimation of the long-run equation and diagnostic checks for autocorrelation, heteroscedasticity, normality, causality test as well as the forecast error variance decomposition analysis. The results revealed that there is cointegration among the variables considered for the study and some degree of positive association between foreign direct investment and economic growth. However, no causality was found between net foreign direct investment and economic growth. This indicates that other factors, apart from FDI, could be the key contributors or promoters toward Namibia's economic growth.

In another study, Ogbokor (2016) analyzed the impact of FDI on economic growth of Namibia using cointergration techniques. The study aimed to measure in quantitative terms, the influence that FDI has on the country's economic growth. It utilized annual data for the period 1990 to 2014. The study found a long-run relationship among the variables that were considered in the econometric model which indicated a positive association between the explanatory variables and economic growth. The study therefore concluded that FDI has a strong influence on Namibia's economic growth. In addition, Ingo (2015) investigated the causal relationship between economic growth, exports, and

FDI using quarterly data for the period 1980:Q1 to 2013:Q4. The Autoregressive Distributed Lag (ARDL) approach to cointegration was used. The results indicated a bidirectional causality between variables under consideration.

Similarly, Taino and Olayemi (2015) examined the causal relationship between foreign direct investment and economic growth in sub-Sahara Africa. The study used annual data for the period 1995-2011 for a panel of 30 sub-Sahara African countries. Both homogeneous non-causality and homogeneous causality were used to analyse the causality between these two variables. The findings of the study revealed a bidirectional causality between foreign direct investment and economic growth in sub-Saharan countries. The study also confirmed that causality is homogenous across all members of the panel.

Another study by Bakir and Eryilmaz (2015) investigated the causality relationship between the inflows of foreign direct investment and economic growth in Turkey for the period 1974 to 2012. It utilised Granger causality test whilst economic growth variable was measured by real gross domestic product per capita. The Granger causality test results indicated or showed that, economic growth is causing foreign direct investment in Turkey while foreign direct investment was found not to cause economic growth. Hence a unidirectional causality between these two variables. This is an indication that, more foreign direct investment entered the economy together with an increase in economic growth.

Kumar and Chauhan (2015) analysed the causality relationship between FDI and GDP in India for the period of 2000 to 2014. The study employed cointegration and Granger causality analysis. The cointegration test showed the existence of a long-run relationship among the variables in questions, whereas, Granger causality test results revealed causality relationship, which is unidirectional running from FDI to economic growth.

In another study by Ahmed (2015) the author investigated the causal relationship between FDI and economic growth in Bangladesh. The study used annual data stretching the period of 1972 to 2013. It employed Vector Autoregressive (VAR) model and the Granger causality test. The results showed a strong evidence of a unidirectional causality running from FDI to economic growth, which points out that, FDI lead or Ganger cause economic growth in Bangladesh.

In contrast, Mahembe (2014) examined the causal relationship between inward foreign direct investment and economic growth for Southern African Development Countries (SADC). The study through the use of panel data aimed to investigate whether the causation is short-term, long-term or both. In addition, it also explored whether the causal relationships between these variables differ according to the income level. The study covered a panel of 15 SADC countries for the period 1980-2012. The panel unit root test results revealed that, both variables in the 15 SADC countries were integrated of order one. The panel cointegration showed that the variables for some countries were not cointegrated while for some countries were cointergrated. Finally, based on the Granger causality test, the study concluded that, FDI-led growth hypothesis does not apply to SADC countries. Therefore, economic growth drives FDI inflows into the SADC region and not vice versa.

Using the Granger causality test on annual data for the period 1995-2013, Sundari (2014) investigated the causal nexus between FDI and economic growth in India. The study concluded that, economic growth led to more foreign direct investment in India. Mandishekwa (2014) examined the causality between economic growth and investment in Zimbabwe using annual data for the period 1980-2005. The study employed Granger causality techniques. The results of the study revealed that causality does not run in any direction. Thus, there is no causality between the variables which were considered for the study. The study concluded that the FDI and economic growth in Zimbabwe are independent of each other.

In addition, Alkhasawneh (2013) investigated causality relationship between foreign direct investment and economic growth in the state of Qatar for the period 1970-2010. The study employed various statistical tests including unit root test, Johansen cointegration tests as well as the Granger causality test. The results indicated that there is a bidirectional causality between the variables under consideration. Another study by Tsaurai and Odhiamo (2012) examined the dynamic causal relationship between foreign direct investment and economic growth for Zimbabwe. The study utilized annual time series data for the period 1980-2010. The FDI was computed as total FDI as a ratio of gross domestic product and economic growth was measured by real gross domestic product per capita. The Autoregressive Distributed Lag (ARDL) bounds testing approach was used to examine the FDI- economic growth linkage. In addition, the study employed the error-correction based causality test in order to capture the short-run and long-run dynamics. The results of the study confirmed a unidirectional causal flow from economic growth to foreign direct investment in Zimbabwe. The studyrecommended

that the Zimbabwean government should pursue pro-growth strategies as a mean of promoting foreign direct investment.

Another line of research carried out by Nwosa, Agbeluyi and Saibu (2011) examined causal relationship between financial development, FDI and economic growth in Nigeria for the period 1970 -2009. The study employed a tri-variate Vector Error Correction Model in testing the causal relationship between the variables. The results for the tests indicated the presence of causality between financial development, foreign direct investment and economic growth. Thus, the study concluded that, both financial development and foreign direct investment have statistically significant causal influence on Nigeria's economic growth.

Moudatsou and Kyrkili (2011) in their study analysed the causality between inward foreign direct investment and economic growth for two countries' group economic associations, that is, European Union (EU) and Association of South Eastern Asian Nations (ASEAN) over the period 1970-2003, using Vector Error Correction Model (VECM). In analyzing the causality between the said variable, the study investigated three possible cases namely, growth-driven: when growth of the host country attracts FDI, FDI-led growth; when FDI improves the growth of the host country and; the two way causal link between FDI and GDP. The empirical results of the study support the hypothesis of GDP-FDI causality in the panel for European Union countries whereas in the case of ASEAN countries, the results indicated a two- way (bidirectional) causality between FDI and GDP per capita for Indonesia and Thailand. The results further revealed that, FDI was found to be motivated by the host country's GDP growth.

Therefore, the study concluded that, causality between economic growth and FDI depend from country to country.

In addition, Attari, Kamalt and Attaria (2011), analyzed the causal link between foreign direct investment and economic growth in Pakistan' economy for the period of 1981 to 2009. The study employed different econometric tests including Augmented Dickey Fuller (ADF) unit root test, Johansen cointegration test, Vector Error Correction Model (VECM) and Granger causality test. The study further investigated the impact of foreign direct investment on some of the economic factors of the same country including gross domestic product, export and imports. The results of the study prove a long-run relationship between the variables considered, whereas, the Granger causality test results indicated that the economic growth does Granger cause foreign direct investment influx into the Pakistan economy. This implies a unidirectional causality between foreign direct investment and economic growth since foreign direct investment does not Granger cause economic growth. In addition, the results revealed a bidirectional causality between economic growth and export as well as between foreign direct investment and export.

Moreover, Esso (2010) analysed long-run relationship and causality between economic growth and foreign direct investment in ten African countries using Pesaran et.al's (2001) approach to cointegration and the procedure for non-causality of Toda and Yamamoto (1995). The study used data for the period 1970 - 2007. The findings of the study showed a positive long-run relationship between FDI and economic growth in Angola, Cote d'Ivoire and Kenya, whereas, economic growth causes foreign direct investment in Liberia and South Africa.

Similarly, Mah (2010), examined the causality link between economic growth and foreign direct investment in the Republic of China. The study employed cointegration test on a small sample. The empirical results of the study showed a unidirectional causality between these variables. This implied that foreign direct investment inflows have not caused economic growth in China but rather economic growth has led to more foreign direct investment.

In Pakistan, Iqbal, Shaikh and Shar (2010) investigated the causality between FDI, Trade and Economic growth using quarterly time series data for the period 1998 - 2009. The study employed VAR model. The results indicated a bidirectional causality between the variables considered for the study. Balamurali and Bogahawatte (2004) also examined the causal relationship between foreign direct investment and economic growth in Sri Lanka for the period 1977-2003 using Johansen's full information maximum likelihood method. The results indicate bidirectional causality between FDI and economic growth.

Mawugnon and Qiang (n.d) investigated the causal relationship between foreign direct investment and economic growth in Togo using Granger causality for the period 1991-2009. The results revealed a unidirectional relationship between FDI and GDP, which indicates that FDI cause GDP and not the other way around.

3.4 Summary

The chapter looked at the theoretical and the empirical causal relationship between economic growth and foreign direct investment in details. The empirical review clearly shows that, though there are many studies that looked at the FDI-economic growth nexus relationship, their results are far from conclusive or they are rather mixed up. In

the case of Namibia, two specifically reviewed studies investigated the relationship or causality between economic growth and foreign direct investment in Namibia. However, it is evident from the review that, the results of these two studies are contradicting one another. The study of Ingo (2015) concluded that, there is a bi-causality between economic growth and foreign direct investment. Ogbokor's (2018) study revealed a no causality between the said variables; leading to the conclusion that the two variables are independent of each other.

CHAPTER FOUR: RESEARCH METHODS AND DATA SOURCES

4.1 Introduction

In the previous chapter, literature review was surveyed to explore the causal relationship between economic growth and foreign direct investment. The empirical review indicated that the causal relationship of these variables can run in either direction. Therefore, this chapter outlines the methodology employed in this study as well as the techniques applied in order to investigate the causality between economic growth and FDI in Namibia. The chapter is divided into four sections. Section 4.2 discusses research design, section 4.3 outlines the research procedure and section 4.4 presents the econometric framework of the study.

4.2 Research Design

This study followed a quantitative research design. The study employed Granger causality test for the estimation of causality relation between FDI and GDP of Namibia. Economic growth is measured by the annual percentage change in gross domestic product, Foreign direct investment is measured by the annual percentage change in net foreign direct investment inflows as percentage of GDP. Manufacturing is included in the study because it is considered as an engine of growth and it is measured by annual percentage change in manufacturing value added. All results are performed by using E-Views technique.

4.3 Procedure

The study used secondary time series annual data covering the period 1980 - 2016. This period has been chosen because data for all the variables considered are available.

Secondary data on GDP which is a proxy for economic growth, foreign direct investment (FDI) and Manufacturing Value Added (MAN) were all sourced from World Bank's world development indicators.

4.4 Model Specification

In order to investigate the causal relationship between FDI and Economic growth, the study adapted the model used by Sothan (2017), thus Granger causality test based on Vector Error Correction Model (VECM) was employed. The framework takes its starting point in the vector autoregressive (VAR) model of order p given by:

$$Y_t = a + A_1 Y_{t-1} + A_2 Y_{t-2} \ldots \ldots + A_p Y_{t-p} + \varepsilon_t \qquad (1)$$

Where Y_t ($Y_{1t}, Y_{2t}, \ldots, Y_{nt}$) is a vector of endogenous variables (n×1); a: an (n×1) vector intercepts ; A_i (i =1,2,…,p) represent the matrices of coefficients of lagged endogenous variables (n×n); ε_t is the error term; t is the time while ρ is the lag length.

The model involves the following steps: Unit root test, cointegration test, determination of optimal lag length, as well as the Granger causality analysis.

4.4.1 Unit root test

The initial step is to test for stationarity of time series in order to establish the univariate characteristic of data and also to test for the order of integration. The unit root tests have become an increasingly popular path to ascertain the properties of macroeconomic time series variables. This test is necessitated by the fact that the majority of macroeconomic time series variables exhibit non-stationary behavior, which would invalidate the quality

of empirical inferences drawn from such estimates if appropriate measures are not taken. The test is conducted by employing one or a combination of the following tests: Augmented-Dickey Fuller (ADF) test developed by Dickey and Fuller (Dickey & Fuller, 1981), the Phillips − Perron (PP) test developed by Philip and Perron (Phillip & Perron, 1988) and the Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test. For confirmatory purposes, more than one test was used for this study, thus, the Augmented Dickey Fuller (ADF) and the Phillips-Perron (PP) tests were conducted in this study.

The ADF and PP's statistics test the null hypothesis of non-stationary against the alternative hypothesis of Stationarity. The test involves estimating the following regression:

$$X_t = \alpha + \rho t + \beta X_{t-1} + \sum_{i=1}^{k-1} \gamma_i X_{t-i} + \varepsilon_t \tag{2}$$

From the above equation, α is the constant while ρ is the coefficient of the time trend. X represent the variables under consideration. For this study, X include GDP, FDI and MAN, t is a time trend while ε_t is the error term, i represent the lag length and k is the maximum lag length used in each time series. The test for a unit root test is conducted on the coefficient X_{t-1} in the above regression equation. If the coefficient β is found to be significantly different from zero ($\beta \neq 0$), then the null hypothesis that the variable X contains a unit root problem is rejected indicating that the variable does not have a unit root.

4.4.2 Cointegration tests

The next step in this analysis is to test for co-integration among the variables, i.e. if two or more series have long-run equilibrium. Cointegration is defined as a concept, which mimics the existence of the long-run equilibrium relationship among variables. This test gives an indication as to whether the variables would converge in the long-run to some sort of equilibrium. In other words, the test is conducted in order to test the linear combination of the time series being analysed to determine long-run relationships among the variables being investigated. The cointegration could be applied in several ways according to the nature of the equation that is tested. The equation could be a single or a multivariate system. If cointegration is found among the variables, one could run a long-run analysis through the Vector Error Correction Model (VECM), whereas, the unrestricted Vector Autoregressive VAR could be used if there is no cointegration among the variables using short-run analysis.

This study employed the Johansen cointegration test in order to determine if there are any cointegrated equations. The Johansen cointegration test procedure uses two tests to determine the number of cointegrated equations: the Maximum Eigen test and Trace test. For cointegration to exist, the calculated values for Maximum Eigen and Trace Test values should be greater than the critical values. However, in cases where Maximum Eigen and Trace tests yield different results, the results for Trace test are preferred (Gujarati, 2009).

However, since the optimal lag length affects the VAR model, that is, the number of lags used, it is necessary to determine the number of lags before the Granger causality test. There are five criteria used to indicate the number of lags namely, a) Akaike Information

Criterion (AIC); b) Log likelihood Ration (LR); c) Final Prediction Error (FPE); d) Schwartz Information Criterion (SC) and; e) Hannan-Quinn Information Criterion (HQ). According to Liew (2004), Akaike Information Criterion (AIC) and Final Prediction Error (FPE) are superior to the other criterias for studies with 60 observations and those with less than 60 observation. This is because they minimise the possibility of under estimation in the model while at the same time maximizing the chance of recovering the true lag length.

4.4.3 Granger Causality tests

The Granger causality test is a statistical hypothesis test for determining whether one time series is useful in forecasting another (Gujarati, 2009). This test is necessary in order to determine the direction of the causality between FDI and Economic growth. Some of the economic theorists believe that economic growth causes FDI whereas others are of the opinion that, FDI causes economic growth. Granger causality suggests that the past values can cause or predict the future while on the other hand, the future values cannot cause or predict the past.

According to Granger, X causes Y if the past values of X can be used to predict Y more accurately than simply using the past values of Y. In other words, if past values of X statistically improve the prediction of Y, then we can conclude that X Granger-causes Y. Therefore, in a regression of Y on other variables (including its own past values), if we include past or lagged values of X and it significantly improves the prediction of Y, then we can say that X Granger causes Y. A similar definition applies if Y Granger causes X. The test involves estimating the following regressions:

$$GDP_t = \gamma + \sum_{i=1}^{k} \alpha_i \, GDP_{t-i} + \sum_{i=1}^{k} \beta_i \, FDI_{t-i} + \mu_t \tag{4}$$

$$FDI_t = \Phi + \sum_{i=1}^{k} \sigma_i \, GDP_{t-i} + \sum_{i=1}^{k} \lambda_i \, FDI_{t-i} + \eta_t \tag{5}$$

Where GDP_t and FDI_t are stationary time series sequences, μ_t and η_t are the respective intercepts, and are white noise error terms; t represent the time, i is the lag length and k is the maximum lag length used in each time series as decided by Akaike Information Criterion (AIC) or Bayesian Information Criterion (BIC)). Foreign direct investment is said to Granger cause GDP if the β_i coefficients are jointly significantly different from zero. Similarly, GDP is said to Granger cause FDI if the σ_i coefficients are jointly significantly different from zero.

The null hypothesis (H$_0$) when $\beta = 0$ and i = 1 means that FDI does not Granger cause GDP is being tested against the alternate hypothesis (H$_1$): $\beta \neq 0$ and i = 0 that state that FDI does Granger cause GDP. Similarly, testing H$_0$: when $\sigma = 0$ and i=1 then GDP does not Granger cause FDI against H$_1$ when $\sigma \neq 0$ and i=1 then GDP does Granger cause FDI.

If none of the null hypothesis is rejected then it means the study will accept the claims that FDI does not Granger GDP and GDP does not Granger cause FDI. This means that the two variables are independent of each other. However, if the first hypothesis is rejected it shows that FDI Granger causes GDP while the rejection of the second hypothesis means that the causality is running from GDP to FDI. Finally, if all hypotheses are rejected, then there is a bidirectional causality between economic growth and foreign direct investment.

CHAPTER FIVE: EMPIRICAL ANALYSIS AND INTERPRETATION OF RESULTS

5.1 Introduction

In this chapter, the empirical findings for the unit root test, the Johansen cointegration test and the Granger causality test based on the vector error correction mechanism are presented. The results of the model used as discussed in the preceding chapter are presented in various sections of this chapter. Section 5.2 presents the results for the unit root tests; section 5.3 gives a brief discussion of Johansen cointegration test results whilst the results for Granger causality test are presented in section 5.4.

5.2 Unit Root Tests: ADF and PP

Many economic series are found to be non-stationary, however, very few are stationary. In order to avoid spurious results for policy analysis, it is very important to test the variables for stationarity. The Augmented - Dickey Fuller (ADF) and Phillips − Perron (PP) test were used in this study for the purpose of investigating the variable's univariate characteristics and also to test the order of integration of the variables. This is a critical step before any other estimation is undertaken as most of the macroeconomic variables are trended and mostly non-stationary. The present study used more than one test for confirmatory purposes and also to ensure the robustness of the results. Table 5.1 presents the results of the unit root tests obtained from both ADF and PP tests for the variables under consideration.

Table 5.1: Unit Root Tests Results

Variable	Model specification	ADF Levels	PP Levels	ADF 1st Difference	PP 1st Difference	Order of Integration
GDP	Intercept	-5.81**	-5.78**	-8.60**	-24.60**	I(0)
	Intercept and Trend	-6.92**	-7.68**	-8.36**	-24.75**	I(0)
FDI	Intercept	-3.14**	-3.09**	-7.30**	-14.23**	I(0)
	Intercept and Trend	-5.16**	-5.03**	-5.12**	-14.91**	I(0)
MAN	Intercept	-6.30**	-6.30**	-6.88**	-27.36**	I(0)
	Intercept and Trend	-6.79**	-8.29**	-6.80**	-26.81**	I(0)

Source: Author's compilation and values obtained from E-views

*Notes: ** denote rejection of null hypothesis at 5% significance level*

The results show that foreign direct investment, economic growth and manufacturing were stationary in level at 5% significance level. This indicates that the variables have zero mean, constant variance and the residuals are uncorrelated over time. This implies

that the variables used in the study are integrated of order zero, [I (0)], thus, the variables are safe for further estimations.

5.3 Co-integration Test Results

After establishing the order of integration of the variables from the unit root test results, co-integration among the variables was tested for. This was done in order to assess the presence of any long-run relationship among the variables. In this study, the Johansen cointegration test, based on Trace and Maximum Eigen test statistics, was conducted and their results are presented in Table 5.2.

Table 5.2: Johansen cointegration test results based on Maximum Eigen and Trace tests

Maximum Eigen Test				Trace Test			
H_0: rank=r	H_a: rank=r	Statistics	95% Critical value	H_0: rank=r	H_a: rank=r	Statistics	95% Critical value
r=0	r=1	17.783	21.132	r=0	r>0	29.968	29.797
r=1	r=2	9.047	14.265	r<=1	r>1	12.185	15.494
r=2	r=3	3.138	3.841	r<=2	r>2	3.138	3.841

Source: Author's compilation and value obtained from E-views

The null hypothesis of cointegration says that there is no cointegration that is r = 0 and the alternative hypothesis says that there is cointegration. From the results, the

calculated t-statistic value is compared to the critical value and if the calculated t-statistics value happens to be greater than the critical value, then the null hypothesis of no cointegration is rejected. However, should the calculated t-statistic value turns out to be less than the critical value, then one should fail to reject the null hypothesis and conclude that there is indeed cointegration among the variables.

Trace test results from Table 5.2 indicate that the null hypothesis of no cointegration is rejected since the t-statistic value of 29.968 is greater than the critical value of 29.797. Therefore, Trace test results indicate the presence of one cointegrated equation at 5% level of significance. However, the Maximum Eigen test indicates that, all calculated t-statistics values are less than the critical values at 5% level of significance and failed to reject the null hypothesis of no cointegration. Therefore, Maximum Eigen test results are indicating that there is no cointegration at 0.05 levels. Since the Trace and maximum Eigen tests are giving conflicting results, it is worth noting that, Trace test results are robust and preferred to the one of Maximum Eigen test. The study, therefore, conclude that there is cointegration among the variables considered for the study at 5% level of significance and the presence of co-integration among the variables suggests that a Vector Error Correctional Model (VECM) could be estimated in order to carry out the long-run analysis.

Before Granger causality test is carried out, it is important for the variables to be estimated for optimal lag length. This procedure is done in order to determine the level of lags and the point at which the model would converge. Based on the lag length

criteria results, both Akaike Information Criterion (AIC) and Final Prediction Error (FPE) indicated that the convergence lag length to be used is one.

5.4 Granger causality test results

Upon establishing the existence of cointegration among the variables under consideration, a Vector Error Correction Model was estimated in order to establish causality between the variables. The estimated results are presented in Table 5.3.

Table 5.3: Granger causality test results

	Dependent variable in Regression		
Regressor	GDP	FDI	MAN
GDP	0.000	0.035**	0.891
FDI	0.054*	0.000	0.531
MAN	0.081*	0.630	0.000

Source: Author's compilation and value obtained from E-views

*Notes: **and *denote rejection of null hypothesis at 5% and 10% significance level*

Based on the results as presented in Table 5.3, there is causality running from economic growth (GDP) to foreign direct investment (FDI) at 5% level of significance. This is revealed by its probability value of 0.035 which is less than 5%. In addition, there is also causality running from foreign direct investment (FDI) to economic growth (GDP) at 10% level of significance as shown by the probability value of 0.054. Another causality is evident from manufacturing (MAN) to economic growth at 10% level of significance;

a probability value of 0.081 which is less than 10% level of significance. However, there is no causality running from other foreign direct investment neither from economic growth to manufacturing. Thus, manufacturing output in Namibia cannot be predicted by economic growth and foreign direct investment but rather it could be explained by other variables not considered in this study. Therefore, there is a unidirectional causality between economic growth and manufacturing, whereas, a bidirectional causality exists between economic growth and foreign direct investment in Namibia. This means that, economic growth and foreign direct investment could help to predict one another while manufacturing output is good to predict economic growth and not the other way round.

CHAPTER SIX: CONCLUSION AND POLICY RECOMMENDATIONS

6.1 Conclusion

The study investigated the causality between economic growth and foreign direct investment in Namibia with the objective of analysing whether economic growth is causing foreign direct investment and vice versa. The study utilized secondary time series data covering the period 1980-2016. However, it is worth noting that in investigating causality between these variables, literature has revealed that manufacturing is a variable that drive economic growth of many developed and developing countries. The study used Granger causality based on Vector Error Correction Model (VECM).

The study noted that FDI has emerged as an important source of globalization which promotes economic growth in the world. A huge amount of FDI has been flowing to developing countries through multinational companies and half of these were received by business within developing countries. Namibia has also witnessed a rapid increase in the inflows of FDI over the years, although it did not easily translate into economic growth. To add to this, the expectation of FDI to complement the country's domestic investment has not been fully realised.

Most of the studies revealed that, a high rate of economic growth is normally associated with high foreign direct investment level. Although the results on the causality are mixed or inconclusive. The majority of the studies indicated evidence of unidirectional causality from foreign direct investment to economic growth. However, there are few studies that concluded that there is a bidirectional causality between these two variables.

6.2 Empirical findings and policy implications

Based on the empirical findings of the study, the unit root test results showed that, all the three variables are stationary in level form, an indication that they are all integrated of order zero. The results of the study further revealed the existence of a long-run equilibrium relationships between economic growth, foreign direct investment and manufacturing output for the period being investigated. This is attributed to the results of Johansen cointegration, which showed the presence of cointegration among the variables. Finally, Granger causality test results confirmed a bidirectional causality between economic growth and foreign direct investment in Namibia, implying that, these two variables could cause or help predict one another.

In addition, the findings of the study concluded that there is a unidirectional causality between economic growth and manufacturing in Namibia. The causality between these variables is running from manufacturing to economic growth and not vice versa. Indeed these findings are in agreement with the outcomes of the studies by Ingo (2015); Iqbal, Shaikh and Shar (2010); Balamurali and Bogahawatte (2004).

The findings of the study therefore have some policy implications for the country. Firstly, Namibian policy makers need to focus more on establishing policies and strategies that are friendly and could attract more inward foreign direct investment whilst special attention should be equally paid to policies and strategies aimed at promoting economic growth in the country. In addition, the government should also ensure that the policies and strategies for inward foreign direct investment are fully implemented. It is also worth noting that, a country with a sound macroeconomic

policies and good developed physical infrastructure could attract more inward FDI. Therefore, it is critical for the Namibian government to maintain its sound macroeconomic policies as a way to attract more foreign investors on the other hand, the country need to invest more in physical infrastructure as this would pay off through more foreign direct investment accumulations, which would lead to the realization of economic growth in the country.

Furthermore, policy makers have to take into consideration other determinants of foreign direct investment and economic growth as confirmed by various studies carried out in the country when developing new strategies. Finally, the government should strengthen its measures to increase the share of manufacturing sector and emphasize the role of value additions in manufacturing in the country. This is because this sector has a significant role to play in the achievement of economic growth.

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