

AN INVESTIGATION OF THE IMPACT OF FOREIGN PORTFOLIO INVESTMENT
ON ECONOMIC GROWTH IN NAMIBIA

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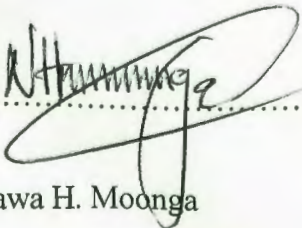
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DECLARATION

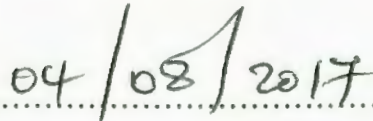
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Acknowledgement

This research paper contains evidence, facts, opinions and other related studies from different authors of journals, articles and books. It is therefore my appreciations to all such intellectual individuals and authors of such relevant information that helped me to compile this research. FPI in Namibia as the main topic, investigating either the negative impact or the positive impact on the economy in Namibia raises question that should impact policy makers. Mr. Nawa Moonga Hampande would further like to thank Mr. Charles Manongwa and Ms Mukwa Kawesha for helping in providing relevant information for this thesis. I would like as well to thank Dr. R. Kamati who has been the focal point in determining the relevance of the information contained in this research paper. I would also like to extend my thanks to my wife Portia Nyahni Nawa and my children David Nawa Moonga, Hilda Nawa Moonga and Getrude Nawa moonga for the time and patience they gave me to write this paper. Finally, more thanks given to my mother Getrude Tige Likunganelo for the words of encouragements and for good direction in education when she said education is the key to eradicate poverty. I would like to thank Dr. Green field Mwakipesile and Dr. James Camm at Namibia Business School for their effort they made in information dissemination in terms of research guidelines and words of encouragement. Finally, more thanks to the post graduate committee for having more patience in determining the good out come of students.

ABSTRACT

This study examines the impact of FPI on economic activity in Namibia for the period 1990 to 2015. A total of 26 observations were sourced from the World Bank data base on variables of interest to the study. In examining the impact of FPI, the study used the ordinary least squares (OLS) regression method to estimate the relationship. It established two statistically significant multiple regression models that were used to explain the impact of FPI on economic activity. The first regression model was to estimate the effect of FPI on the GDP of Namibia. The second model was to investigate the impact of FPI on the economic growth in Namibia. This thesis noted that, Namibia, like any other developing country needs accelerated economic growth, in order to achieve her economic prosperity. The results showed that, FDI and Gross Domestic Savings spurred economic growth whilst employment and FPI were insignificant. The study also recognised the fact that, bulk of domestic savings are channelled out of the country as FPI outflows, with South Africa as the major destination. The key finding for this study is that, FPIs have not impacted economic growth in Namibia in any way during the period under study. It is also noted that portfolio investments into Namibia are very low. This defies all efforts by Government to attract portfolio inflows into the country for improving economic growth and deepening financial markets.

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CHAPTER 1: INTRODUCTION

1.1. Background

Namibia, just like any other developing country is making efforts to achieve faster economic growth in order to alleviate the problems of inequalities in income distribution, poverty and unemployment. Economic growth has trended gradually upwards for close to two decades now, with per capita gross domestic product (GDP) rising steadily from below USD 4000 or N\$55,600 equivalency in the early 1990s to USD 6000 or N\$ 83,400, this was clearly outlined by Namibia Statistics Agency (2014) and National Income Accounts (2015). In fact, these growth rates have been higher than the annual average for Southern Africa. Unfortunately, the growth rates have not seen the desired transformation in terms of poverty alleviation and economic emancipation of the majority of Namibians, leading to emphasis on even higher economic growth rates.

In order to accelerate economic growth and transform the lives of the generality of Namibians, the Government of Namibia recognizes investment, both local and foreign as the key, National Planning Commission, (2015). Due to relatively low savings in Namibia, foreign capital is touted as an important source of growth in the Country. According to Picardo, (2014) Capital is a vital ingredient for economic growth, but since most nations cannot meet their total capital requirements from internal resources alone, they turn to foreign investors to supply capital. Namibia for one, has been over the years trying to attract foreign investment. According to the Online guide to Namibia Investment Climate (2013) shows that, the government of the Republic of Namibia, have taken steps to improve and increase foreign investments, in order to develop the economy, create employments and accelerate foreign exchange earnings. In this regard, the government has taken a number of positive steps to establish a system and environment conducive to foreign investment.

Namibia has received significant foreign capital flows in recent years, in form of both foreign direct and portfolio investment, World Bank Development Indicators, (2014). Therefore, given the significant inflow of FDI and FPI, the question to be posed is, what impacts, do these variables have on economic growth in Namibia.

Orientation of the Study

Foreign investment comprises of two types of investment; namely foreign direct investment (FDI) and foreign portfolio investment (FPI). Foreign direct investment (FDI) means investment directly in the productive resources of another nation by foreign investors, while FPI refers to investments, made by foreign investors in financial assets; such as money market instruments, stocks and bonds of firms of a country. One of the main distinctions between the forms of foreign capital inflows into Namibia is that, foreign direct investment is long term in nature and will naturally involve investors being actively and directly involve in the business, whilst foreign portfolio investment is short term with investors not active in the business.

Over the years, more focus has been put on foreign direct investment and there have been a considerable number of research studies on FDI than on FPI. According to Maverick (2015) stated that, FDI tends to involve establishing more of a substantial long term interest in the economy of a foreign country. Because of the significantly higher level of investment required, FDI is usually undertaken by multinational companies or venture capital firms. The nature of FDI such as creating or acquiring a manufacturing facility makes it much more difficult to liquidate or pull out of the investment. Therefore, FDI is undertaken with essentially, the same attitude as establishing a business in one's own country, with the intention to make the business profitable and to continue operating it indefinitely, while FPI typically, has a shorter time frame for investment return than FDI. As with any equity

investment, FPI investors usually expect to quickly realise a profit on their investments. Unlike FDI, FPI does not offer control over the business entity in which the investment is made. This is so, because securities are easily traded. Therefore, lack of adequate studies on the importance of foreign portfolio investments on the nation's economic growth, brings about the need for such a research study with a view of coming up with recommendations, which could be used in policy formulating regarding foreign investments.

FPIs, typically involve short-term transactions in financial securities that are relatively liquid. Foreign portfolio investment includes, in addition to equity securities and debt securities in the form of bonds and notes, money market instruments and financial derivatives such as options that can be purchased and sold very easily and quickly. In portfolio investments an investor is not involved in the management of a company. They do not exercise any direct control in running these companies but just get returns in the form of capital gains and dividends payable annually. FPI inflow is whereby foreign institutions such as pension funds, banks, insurance companies, companies managing mutual funds and others purchase stocks and bonds of companies of other countries. Foreign investors take part in private FPI in equities in order to get higher returns in the form of higher interest on their investment and also to geographically diversify their portfolio in order to reduce risk.

According to Ilene (1998) views, noted that, the series of crises that hit the stock, currency and banking markets in emerging economies were critically realized as a result of uncertainties among the countries that, were most affected. The countries that felt a heavy storm of crises were Thailand, Asia, Indonesia, Philippine, Singapore and generally some parts in Africa. An interesting feature of the general crises the ubiquitous claim of exceptionalism that was again invoked to explain these events. It was discovered that, there

were patterns of corruptions, unstable real estate, speculations, wasteful Government spending, tax evasion and misguided Government policies according to IMF Survey (1998).

Mpofu, M. (2014) noted that, in a long run, foreign portfolio investment has a negative impact on GDP. However, in the short run, it has a positive relationship on GDP. This study was supported by the Granger Causality Test, which stated that, FPI causes gross domestic product. While it is accepted that foreign portfolio investment has its own merits, lessons learnt from the financial crises in recent years revealed that FPI could have negative effects on the economy recipient nation. Therefore, firm regulations have to be in place regarding foreign portfolio investment. For instance, the minimum period of investment and limits for investment by foreign portfolio investors in Government securities and other financial assets also play a crucial role in FPI and should be clearly outlined.

Evans (2002) claims that, for portfolio investment, strong and well regulated, financial markets are necessary to deal with the inherent volatility. The financial system must have the capacity to manage risks if it is prudently and productively investing capital flows, foreign or domestic. According to World Bank Development Indicators (2014) states that, Namibia has received significant foreign capital flows in recent years, in form of both foreign direct and portfolio investment. It is therefore the purpose of this study to examine the impact of foreign portfolio investment on the economic growth in Namibia.

Agrawal, et al. (2011, p.71-79), provide an interesting insight in their case study by saying that, over the years, more focus has been put on foreign direct investment and there have been a considerable number of research studies on FDI than on FPI, because empirical evidence from other literatures shows that, there is a strong relationship between FDI and economic growth of a host country. Therefore, lack of adequate studies on the importance of foreign portfolio investments on the nation's economic growth, particularly Namibia, brings about

the need for such a research study with a view of coming up with recommendations which could be used in policy formulating regarding foreign investments.

FPI typically, involve short-term transactions in financial securities that are relatively liquid. Foreign portfolio investment includes, in addition to equity securities and debt securities in the form of bonds and notes, money market instruments and financial derivatives such as options that can be purchased and sold very easily and quickly. In portfolio investments an investor is not involved in the management of a company. They do not exercise any direct control in running these companies but just get returns in the form of capital gains and dividends payable annually.

Beck, T. (2002), advocates that, FPI typically, involves short-term positions in financial assets of international markets, and is similar to investing in domestic securities. Foreign portfolio investment allows investors to take part in the profitability of firms operating abroad without having to directly manage their operations. This type of capital inflow is whereby foreign institutions such as pension funds, banks, insurance companies, companies managing mutual funds and others, purchase stocks and bonds of companies of other countries. Foreign investors take part in private FPIs in equities, to get higher returns in the form of higher interest on their investment and also to geographically diversify their portfolio in order to reduce risk.

1.2. Problem Statement

Long term sustainable economic growth can only be achieved with the presence of an open environment for investment, and Namibia is devoted to maintaining such an environment. Namibia Investment Climate (2013, p. 1) justifies that, the government of the republic of Namibia is committed to stimulating economic growth and employment through attracting

foreign investment. One of the objectives of foreign portfolio investment is to stimulate economic growth and development in many host countries, but this has not yet been achieved fully in Namibia. Elsevier, B. (2003) noted that, long term sustainable economic growth refers to the elimination of economic stagnant, poverty alleviation and an extinguish of hunger and illness, as well as combating newer challenges like environmental degradation and globalization. Presently Namibia still experiences high levels of unemployment and poverty. Achieving faster economic growth requires significantly higher investment rates, both in form of FPI and FDI, and in order for Namibia to support her economic growth; capital in form of foreign investment is required.

Uncertainties in the flow of foreign portfolio investments result in unpredictable performance of money supply, exchange rate level and stock market volatility. Patro & Wald (2005) indicated that, the relationship between GDP and FPI has been illustrated here below; using the data from 1990 to 2015, and 26 observations were taken into account, because data on FPI and GDP was readily available during the period of study.

Despite Namibia 's growing economy, the economic growth realised since independence has been below the level needed to realise the development targets set in Vision 2030, chief among them, poverty reduction, employment creation and equality National Development Plan 4 (2013) disposes that, economic growth averaged 3.6% between 2009 and 2012, against a set target of 5%. This economic growth did not translate into significant employment creation, thus the need to aim for even higher growth rates. According to NDP 4 (2012), the economy should grow at minimum rate of 6% if the Vision 2030 economic goals are to be achieved.

In order to achieve the economic growth rates that are in tandem, with the ambitions set forth in Vision 2030, international capital, in particular foreign direct and portfolio investment will

play a significant role. Indeed, the economic growth earlier alluded to, was driven by investments in the primary sector of the economy, the bulk of the investment coming from foreign investors. The Government of the Republic of Namibia is committed, to stimulating economic growth and employment through attracting foreign investment among other strategies, according to Namibia Investment Climate, (2013).

Whilst FDI has been forthcoming, averaging just over USD 400 million in the period under study, foreign portfolio investment inflows have been relatively modest averaging just over USD 12 million during the same period. According to the Namibia Financial Sector Strategy (2011) noted that, the country seeks to develop the financial sector and create an environment that attracts portfolio investment inflows.

The pursuit of all forms of international capital in an attempt to raise economic growth rates puts into perspective the impact of such inflow on economic growth particularly at a juncture where various studies around the world have been inconclusive. This paper therefore, focuses on FPI inflows and how they have influenced economic growth in Namibia during the period under study.

1.3. Research Objectives

The main objectives of this research are to examine the impacts of foreign portfolio investments on the economic growth of Namibia. The research will also have the core research -objectives are to:

- examine the short run and long run effects of FPI on economic in Namibia.
- examine the trend of foreign capital inflows, into Namibia and capital outflows outside Namibia, in relation to economic growth in Namibia.

- analyse theoretical and empirical evidence concerning foreign portfolio investment and economic growth both inside and outside Namibia.
- advice policy makers on how to accelerate economic growth on FPI, in the country.
- examine whether foreign portfolio investment is as important to the economic growth of Namibia as is foreign direct investment.
- assess ways in which to harness better, the benefits of foreign portfolio investment.

1.4. Significance of the Study

This study provides new evidence, on the effects of FPI on economic growth in the country, by availing a basis for new evidence based policy planning for Government. The study should also stimulate debate in the country, which has already been raging in emerging and developing economies, on financing economic growth given that such debate is yet to take off in the country. This study provides information in the illustration of the impacts of foreign portfolio investment, on economic growth in Namibia. The researcher hopes that, the findings of the research and recommendations will be relevant in determining the policy measures specific to FPI's trend, of flow in Namibia, and its impacts on the economic growth.

This study provides clear understanding on whether it is necessary to attract more foreign portfolio investment in the Namibian economy. The research provides new contributions to the existing literature on the impact of FPIs on the economic growth of Namibia.

1.5. Limitations of the Study

Unavailability of data on foreign portfolio investment inflows in Namibia imply that external data sources were used in this study. As a result, the World Bank Development indicators

database was used. The main draw backs of using such data are that, the information may not accurately describe the condition of the Namibian economy.

The other weakness is that, the Namibian Government may dispute the external data because it does not portray the true picture of the country. In addition to that, the World Bank indicators (1995) showed that, data did not have observations prior to 1990, hence 26 observations were used.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

This chapter gives an overview of theoretical and empirical literature on the possible effects of FPI on economic growth. There is quite a wide range of literature on foreign investment. Most of this literature is not necessarily tailored to foreign portfolio investment, but largely focuses on FDI. The existing theories, that have been put forward to explain the impact of FPI, on the economic growth of host countries, give contradicting views and are largely inconclusive. The study on FPI and its impact on economic growth are gaining ground, due to recent economic uncertainties. Rogoff, et al (2009) states that, an increase in foreign capital flows, accompanied by a series of global economic crisis in the past 30 years, have given rise to concerns about the impact of the flows on host economies.

However, even though they are growing concerns about FPI, foreign investment has grown over the past years. According to the African Economic outlook (2014, p.48), describes the External Financial flows and Tax Revenues, playing an increasingly, important role in Africa's development and economic growth prospects. External financial flows have quadrupled since 2000 and are projected to reach over USD 200 billion in 2014.

Foreign capital inflow is said to be important to recipient nations as it is believed to have an impact on gross domestic product (GDP). Insaadoo and Biekpe (2011, p. 225), acknowledges that, foreign capital flows is made up of FDI, foreign debt flows and portfolio equity flows. These are expressed as shares of total GDP and reflect a quantity-based measure of international financial integration. It is obvious that, a vibrant socio-economic and stable political environment is vital in attracting foreign investment and making it beneficial in the host economy. The study by Bagfiebo and Edoumiekumo (2012, p 213) notices that, a high degree of macroeconomics stability and low and predictable inflation rates, have paramount

importance to ensure a strong response of foreign private investment to economic incentives. The overall harmony of macroeconomic policies and stability in the country is essential for the promotion of foreign private investment.

Theoretical framework and empirical evidence, therefore, form the two main sections of this chapter, discussing economic growth theories and empirical evidence on the topic respectively.

2.2. Theoretical framework

2.2.1. Economic growth theories

Romer and Lucas (1980) assert that, different researchers have developed and introduced different theories or models of Economic growth. All theory depends on assumptions which are not quite true. That is what makes it theory. The art of successful theorizing is to make the inevitable simplifying assumptions, in such a way that, the final results are not very sensitive. A crucial assumption is one on which the conclusions do depend sensitively, and it is important that crucial assumptions be reasonably realistic. Therefore, some of the theories developed by other researchers have been outlined below.

2.2.1.1. Exogenous growth model

Solow, R.M. (1956), contributes to the theory of economic growth by saying, Exogenous growth is the belief that, economic growth arises due to influences outside the economy or company of interest. Exogenous growth assumes that, economic prosperity is primarily determined by external rather than internal factors. According to this belief, given a fixed amount of labor and static technology, economic growth will cease at some point, as ongoing production reaches a state of equilibrium based on internal demand factors.

The Solow-Swan growth model holds that economic growth is a function of capital accumulation, in the form of machinery, buildings, equipment and physical infrastructure and labor which was regarded as identical. The theory assumes decreasing returns to scale, implying that an increase in the stock of capital holding labor constant yields a less than proportionate increase in output. Likewise, an increase in labor, holding capital stock, constant, yields a less than proportionate increase in output, De Jager, (2004). The implication of this model is that continuously adding capital while labor is fixed will eventually lead to no increase in output.

Technology on the other hand, affects output produced via its effects on productivity of labor and capital, thus opposing the law of diminishing returns. Economic growth therefore is dependent upon the quantity and quality of the two factors of production. The quantity of labor increases as population increases, whilst quality of labor improves due to technical progress. Both population growth and technical progress were assumed to be exogenously determined. The knowledge or technical progress factor was also assumed to be a public good and thus available to all producers. In the model technical progress augments labor and has no effect on capital productivity. The model believes that the continued accumulation of capital is driver of technical development according to De Jager, (2004). Any part of economic growth unexplained by changes in labor and capital is referred to as the Solow Residual. The model is built on the following production function:

$$Y(t) = f[K(t), L(t), A(t)] \dots \dots \dots (1)$$

Where: Y (t) represents total output at time t

K (t) represents capital stock at time t

L (t) represents total employment at time t

And $A(t)$ represents technology at time

In narrative, output or real GDP in a particular period (year or quarter), depends on the capital stock, labor and technology employed during that particular period.

Economic growth, which is defined as the increase in real output over time, is therefore explained by capital accumulation, and improvements in labor productivity and technology as earlier asserted.

Capital accumulation is affected by two main factors, namely, investment and depreciation in the stock of capital which add to the stock of capital, raising economic growth and reduces the stock of capital and slows down economic growth, respectively (Solow, 1962). Thus a positive net investment (gross investment less capital stock depreciation) is required to realize growth whilst increased labor productivity and technological progression have the same effect. The model neither explains the source of investment nor the source of technological progression, thus the two factors are exogenous in the economic growth function.

Given the above arguments, it should therefore, follow that foreign portfolio investment inflows positively influence economic growth through the increase in the stock of capital in a short run.

2.2.1.2. Growth accounting

This school of thought was pioneered by Denison (1987) and proposed the allocation of economic growth to the determinants of output in order to isolate the causes of growth De Jager, (2004). According to this school of thought economic growth is driven by increased employment, increases in the stock capital, improved education of the employed, growth in the size of the markets, improved resource allocation and advances in knowledge relevant to production. Growth accounting techniques have been used extensively in the analyses of

economic growth both in developing and developed countries. Just as in the case of the classical growth model, FPI adds to the stock of capital and should lead to economic growth.

The growth accounting model, is normally expressed in the form of the exponential growth function. As an abstract example, consider an economy whose total output (GDP) grows at 3% per year. Over the same period, its capital stock grows at 6% per year, and its labor force by 1%. The contribution of the growth rate of capital to output, is equal to that growth rate weighted by the share of capital, in total output and the contribution of labor, is given by the growth rate of labor weighted by labor's share in income.

According to Zelenyu (2014,p.115-126), while testing significance of contribution in growth accounting with application to testing ICT, impact on labor productivity of developed countries in international journal of Business Economics, it was advocated that, if capital's share in output is 0.33, then labor's is 0.66 assuming these are the only two factors of production. This means that the portion of growth in output which is due to changes in factors is $0.06 \times 0.33 + 0.01 \times 0.66 = 2.7\%$. This means that, there is still 0.3% of the growth in output that cannot be accounted for. This remainder is the increase in productivity of factors that happened over the period.

2.2.1.3. Endogenous growth model

Endogenous growth theory is an economic theory which argues that, economic growth is generated from within a system as a direct result of internal processes. More specifically, the theory notes that, the enhancement of a nation's human capital will lead to economic growth by means of the development of new forms of technology and efficient and effective means of production.

The endogenous growth model was criticized on the basis of its assumption that economic growth is determined by exogenous investment and technology factors. Proponents of the

endogenous growth model assert that, economic growth is an endogenous outcome of an economic system Mpofu, (2014) is explaining economic growth as a function of technology, foreign capital flows and financial development. Romer, (1994) strengthens that, endogenous growth embraces a diverse body of theoretical and empirical work. The empirical work does not settle for measuring a growth accounting residual that grows at different rates in different countries. It tries instead to uncover the private and public sector choices that cause the rate of growth of the residual to vary across countries. Two sub theories exist under the endogenous growth model, one focusing on technological change as a source of economic growth while the other emphasizes human capital.

According to the main proponents of the endogenous growth model, Romer and Lucas, ((1980; 1990) noted that, technological change refers to improvements in how factors of production are combined to produce a good or service, and thus is critical for economic growth. Technological progression occurs because of deliberate actions of people responding to market incentive, not exogenously. In stating this, Romer and Lucas denied the exogenous growth model proposition that technological progression is exogenous and determined by the passage of time. This model explains the economic growth process stemming from technological progression.

Technological progression is not exogenously determined but is driven by the following factors, arising from deliberate actions of economic agents within an economic system:

- i. Investment in human capital

Refers to the education and training of workers, enhancing their productive capacity, Such that, investment should result in economic growth even if other factors of production remain constant.

ii. Innovation and knowledge

The endogenous growth model also reckons that investment in research and development is key developing even more efficient production processes and the development of new goods and services. New, improved production processes enhance total factor productivity and thus spurs economic growth.

iii. Technology

It is also the proposition of the model that advancements in technology used in production (equipment, machinery etc) is an equally important determinant of total factor productivity and growth.

The endogenous growth model therefore proposed an extension to the Cobb-Douglas production function, and the production function was given as:

AK Model of Economic Growth

According to Robert et al (2004, p. 205-237) asserts that, the AK Model of economic growth is an endogenous growth model used in the theories of economic growth, a subfield of modern macroeconomics. It became clearer that, the standard neoclassical exogenous growth models were theoretically unsatisfactory as tools to explore long run growth, as these models predicted economies without technological change and thus, they would eventually converge to a steady state, with zero per capita growth. A fundamental reason is the diminishing return of capital; the key property of AK endogenous growth model is the absence of diminishing returns to capital. In lieu of the diminishing returns of capital implied by the usual parameterization of a Cobb Douglas production function. The AK model uses a linear model where output is linear function of capital.

Where as $Y = AK$. Or output/income per worker

A, is a positive constant that reflects the level of the technology.

K is capital; this includes human capital.

If $f(k)/K = A$, is substituted in the equation of transitional dynamics of solow-swan model.

The transitional dynamics equation in which the growth rate on K is given by;

$$\dot{K} = K[s f(k)/k - (n + \delta)] \dots \dots \dots (2)$$

Such technological improvements provide an incentive for capital accumulation, further increasing individual worker productivity.

The chief growth models discussed above differ on whether economic growth is endogenous or exogenous, the discussion of which is not the subject matter of this paper. To an extent, consensus between them exists on the positive effect of investment (including portfolio investments) on economic growth.

2.2.2. International capital flows and economic growth

Whilst a wide range of literature on foreign investment exists, the bulk of the literature focuses on the broader capital inflows on FDI and there is little information on portfolio investment. The existing theories that have been put forward to explain the impact of foreign portfolio investment on the economic growth of host countries give contradicting views and are largely inconclusive. This raises questions on whether developing countries are right in pursuing FDI, FPI and other international capital paths to improve economic growth. There are scholars that argue that international capital flows lead to growth. Aizenman, Joshua (2004) on financial opening and policy options, argue that, economic growth can only be realised if the recipient country has the capability to absorb the flows, whilst some propose that capital

flows may have a neutral effect on economic growth. As will be highlighted on empirical literature, various studies conducted lend support to these schools of thought. These perspectives are briefly discussed below.

i. The positive effect perspective

The biggest impediment to economic growth and development in developing economies is the availability of investment capital. Economic theory posits that domestic savings finance domestic investment, and thus, lack of investment financing in developing economies stems from poor savings relative to investment demand. It is against this background that many scholars concur that international capital in the form of FDI, FPI, foreign debt and other international flows make up for the huge investment savings gap in developing economies Patterson (2008). This widely accepted view is the reason why many developing economies pursue international capital as a way of accelerating economic growth and development.

According to Evans (2002) FPI increases the liquidity of domestic capital markets, and can help develop market efficiency as well. As markets become more liquid, as they become deeper and broader, a wider range of investments can be financed. Some authors believe foreign portfolio investment can reduce investment volatility. Results from Insaideo and Biekpe study (2011), indicated that FDI inflow and foreign debt inflow, as well as the aggregated value of foreign capital inflow, lead to reduced investment volatility.

The other argument is that, FPI inflows increase liquidity in capital markets, allowing domestic business easy access to capital, thus supporting economic activity in the country.

In this regard, the inflow of foreign portfolio investment into the stock market helps to alleviate financial constraints of firms Laeven (2003); Knill (2004); Beck, Demirguc-Kunt and Maksimovic (2005). The FPI inflow, working through the multiplier effect to create wealth in the domestic economy, can drive economic growth Duasa and Kassim (2009). Free flowing foreign portfolio investment inflows also contribute to efficient capital allocation, a pre-requisite of economic growth.

The study by Baghebo and Edoumiekumo (2012, p. 213) concluded that a high degree of macroeconomic stability and low and predictable inflation rates, have paramount importance to ensure a strong response of foreign private investment to economic incentives. The overall harmony of macroeconomic policies and stability in the country is essential for the promotion of foreign private investment.

Despite the above mentioned benefits of FPI to the host country, some academics have argued against it. For instance, Prato and Wald (2005, p.1674) state that the main issues that have been of concern to investors and policy makers alike are the impact of financial market liberalization and foreign equity participation on the mean returns and volatility of the firms in these emerging countries, as well as the change in the cost of capital. A study done by the African Economic Outlook (2014, p. 57) also questioned the benefits of FPI. For African countries that are gaining increasing exposure to portfolio flows, the volatility can create an unstable investment environment detrimental to the growth and development through its negative impact on consumption and availability of finance.

Foreign portfolio investment has been found to play varying functions in different economies. According to a study that was done by Dausa and kassim (2009, p.120) it was discovered that FPI does not have any effect on economic growth but it is the

economic growth that has an effect on FPI. The study finds that economic growth causes the FPI inflow but not its volatility, and suggests that FPI or its volatility is not a crucial factor in determining the economic performance of Malaysia. While a study done by Raza, Mehboob and Sabir (2011, p.16) in Pakistan suggests that, FDI, FPI and remittances show a positive and significant relationship with the economic growth of Pakistan. Their study was supported by findings of studies done by other researchers which indicated that, Pakistan was extremely reliant on foreign capitals and these foreign capitals play a crucial role in the growth of Pakistan economy.

Darby, Hallett, Ireland and Picitelli (1999) noted that, some literatures have advocated that FPI has its own merits. However, other scholars indicated that, to some extent there is evidence that even though that might be the case, certain empirical study shows that, financial crisis that led to market collapse in previous years, provided evidence that FPI could have aggressive effects on the economy recipient nation. Therefore, firm regulations have to be in place regarding FPI before inviting foreign portfolio investors. For instance, the minimum period of investment and limits for investment by FPI in Government securities and other financial assets, also play a crucial role in FPI and should be clearly outlined.

Evans (2002, p. 4), states that, for portfolio investments, strong and well-regulated financial markets, are necessary to deal with the inherent volatility. The financial system must have the capacity to manage risks if it is prudently and productively investing in capital flows, foreign or domestic. Harry and Markowitz (1952) also supported the notion that risk adverse investors can construct portfolios to optimize expected returns, based on a given level of market risk. Emphasizing risk is an inherent part of higher reward.

ii. The conditional positive effect perspective

This group of researchers recognise the fact that different countries have different capacities when it comes to absorbing international capital as defined by individual country's macroeconomic and political stability, quality of financial system, quality of workforce, quality of physical infrastructure and quality of institutions. Countries better placed to absorb international capital inflows will realise foreign capital spurred economic growth, as they will be able to channel the additional resources to productive investments, Mucuk, et al (2014). According to Bloomstrom (1996), capital accumulation will only influence economic growth only if it can positively influence total factor productivity and thus improve productive efficiency. For countries without the requisite capacity, the international capital inflows will have an economic disruptive effect.

A branch of this perspective emphasises the extent of volatility of the international receipts and proposes that the effect of capital flows depends on how volatile the flows are. Short term capital flows that tend to be highly volatile are detrimental to the economy whilst less volatile flows may spur economic growth. In the case of volatile capital flows, significant capital inflows received are swiftly reversed when macroeconomic fundamentals change, creating financial crises and disrupting economic activity. Frankel (2010), under International Monetary Fund however, argues that, the disruptive nature of volatile international capital can be countered through greater exchange rate flexibility, production diversification and better risk management techniques.

iii. The neutral or negative effect perspective

Other theorists contend that, foreign capital has a neutral effect on economic growth at best, and is more likely to be disruptive. Increased inflows have the effect of local currency appreciation, leading to increased imports and thus stifling economic growth Mporu (2014). Mporu also argues that international capital inflows may crowd out domestic investment. Foreign capital also tends to be volatile, rapidly accumulating when economic prospects are bright. These costs of foreign capital tend to offset the benefits of foreign investment.

For foreign portfolio investment in particular, this school of thought argues that, this type of capital flow does not lead to economic growth but rather, economic growth raises the prospect of higher returns hence it is economic growth that causes FPI inflows not the other way round. In addition to that, this theory emphasises that, FPI can not cause economic growth instead; it is the economic growth that causes foreign portfolio investment.

The other thinking is that FPI volatility complicates the conduct of monetary policy as it leads to abrupt changes in money supply and exchange rates, Patro and Wald (2005). During persistent high levels of foreign portfolio investment, asset bubbles may be created, creating inflationary pressure, with the sudden reversals of such flows leading to the asset bubble bursting threatening economic activities.

2.2.3. Foreign direct investment and foreign portfolio investment

Foreign direct investment is investment in real capital assets, and has sunken costs that call for further inflow of funds to complete the investment. From a psychological point of view, human beings are known to suffer from what Margeisson (2015) terms sunk costs effect, that is, the tendency to continue with an investment in which

financial, material and human resources have been put although new information may be available showing that the investment may not be as profitable as earlier predicted. A foreign portfolio investor is not bound by such a spell as foreign portfolio investment instruments are hardly influenced by sunk costs.

Some researchers and theorists' contend that, FDI is connected to FPI. In fact theorists are divided on the relationship between FDI and FPI, some are arguing that the two are substitutes, others believe that they are complementary whilst another group reckons that no relationship whatsoever exist between the two, Frankel and Rose (1996) also argue that, if FDI stimulates FPI, then the same FDI is a source of future financial instability. To an extent, all these schools have been verified through empirical findings.

On the other hand, FPI represents passive holdings of securities such as foreign stocks, bonds or other financial assets, none of which entails active management control, of the securities issuer by the investor. Unlike FDI, it is very easy to sell off securities and pull out the foreign portfolio investment. Hence FPI can bring about rapid development, helping an emerging economy more quickly to take advantage of economic opportunity, creating many new jobs and significant wealth. However, when a country's economic situation takes a down turn, sometimes just by failing to meet the expectations of international investors, the large flow of money into a country can turn into a stampede away from it or worsen the economy.

The relationship between the two capital flows may also be shaped from an institutional point of view. For recipient countries characterised by high levels of corruption, Papaioannou (2009) argues that, attracting long term international capital,

is difficult and as such countries may have to rely on FPI. Corruption in a capital importing country tends to tilt the composition of its capital away from FDIs and towards foreign banks loans, Wei and Wu, (2001). The basic idea here is that short term capital inflows pursue high returns, and as such, investors can take the high risk. In the event that the risk increases short term investments can be relatively easily reversed. FDI, long term in nature, does not enjoy such privileges. This argument cements the idea that, FDI and FPI are substitutes. Against this background, it should therefore follow that countries with strong institutions and thus less corruption attract high ratios of FDI compared to FPI.

Golstein and Razin (2006) analyses that, an acquisition of a more than 10% stake in a foreign business venture, will require the investor to have superior information; otherwise a bad investment decision might be made. The information comes at a cost to the investor, and a bad long term or significant investment cannot be easily reversed without significant loss. In the absence of such superior information an investor might as well acquire a smaller stake initially, upping the investment as more information becomes available.

In support of FDI and FPI as complements, Dasgupta and Ratha (2004) argued that, FDI increases financial sector liquidity in the short run whilst improving the medium term outlook of the economy. It is this improvement in the outlook of the economy that attracts FPI. This is in sync with a Keynesian stance that declares that international capital flows follow each other, constantly seeking higher returns.

The last perspective is the one that argues that the different capital flows are driven by different factors and there is no co-variance, with any relationship observed spurious,

Reinhart, (1999) foreign portfolio investment responds to such factors as interest rates, whilst FDI will be influenced by macroeconomic fundamentals. The two capital flows, therefore, may bring good returns all together. The other way to look at the relationship between the two is the recognition that FPI is driven by short term prospects whilst foreign FDI is driven by the long term prospects of an economy, according to Margeisson (2015). The short term and long term prospects do not always move together, but in cases where they do, a high correlation exists between FDI and foreign portfolio investment inflows, giving an impression of the two being complements, that they co-exist.

However, short term prospects fluctuate and in many instances, the long term prospects remaining the same. When that happens, FPI slows whilst FDI continues, showing the disconnection between the two.

Foreign portfolio investment is hot, that is, the capital may leave the country at the first sign macroeconomic economic problems, exasperating the situation. FPI is procyclical, rather countercyclical.

The above argument tries to establish if the two types of international investment inflows can have an identical effect on the economy or otherwise. If the two complement each other, then their effect on economic growth is identical. Given that the bulk of literature on the effects of FDI on economic growth concur that FDI drives economic growth, it would therefore follow that foreign portfolio investment has the same effect.

2.3. Empirical evidence

The study on FPI and its impact on economic growth is gaining ground, due to recent economic uncertainties. According to Reinhart & Rogoff (2009), observe that, the

increase in foreign capital flows, accompanied by a series of global economic crisis in the past 30 years, have given rise to concerns about the impact of the flows on host economies.

However even though they are growing concerns about foreign portfolio investment, foreign investment has grown over the past years. According to the African Economic outlook (2014, p.48), external financial flows and tax revenues play an increasingly important role in Africa's development and economic growth prospects. External financial flows have quadrupled since 2000 and are projected to reach over USD 200 billion in 2014.

2.3.1. Evidence of Foreign portfolio investment causing economic growth

According to Insaadoo and Biekpe (2011) foreign capital inflow is said to be important to recipient nations as it is believed to have an impact on gross domestic product (GDP).

Nigeria, in the aftermath of its rebasing in 2010, attracted significant FPI. Baghebo (2014) studied the long run effects of such short term capital inflows, into the country on the country's economic growth, using linear regression methodology and the results were affirmative, indeed foreign portfolio investment had long term positive effects on economic growth. An earlier research by Osinubi and Maghionyeodiwe (2010) indicated that, Nigeria had the same findings.

Raza, Mehboob & Sabir (2011) suggest that, FDI, FPI and remittances show a positive and significant relationship with the economic growth of Pakistan. Their study was supported by findings of studies done by other researchers, which indicated that Pakistan was extremely reliant on foreign capitals, and these foreign capitals play a crucial role in the growth of Pakistan economy.

Bailu (2000) undertook a study on Private Capital flows, financial development and economic growth on 40 developing countries between 1975 and 1995 that sought to establish, the relationship capital flows on economic growth. Employing dynamic panel data methodology, the study concluded that, capital inflows fosters high economic growth in economies that have a banking sector that has reached a certain level of development. Kose, Prasad and Terrones (2009) also argued that foreign portfolio investments and FDIs enhance total factors of productivity and thus enhances growth.

2.3.2. Evidence of foreign portfolio investment negatively affecting economic growth

Mpofu (2014) analysed the long and short run effects of FPI on economic growth in South Africa using the linear regression methodology, and the long run effects of foreign portfolio investment on the South African economic growth were found that, FPI had a negative impact on economic growth in South Africa. While the same study, showed to have positive impact on the economic growth in South Africa in the short run. Bruce-Brand (2002) had done the same research in South Africa earlier and had concluded that foreign portfolio investment had negative impact on economic growth but instead lead to higher share prices, private consumption growth and the financing of capital flight. Mohamed (2010) concurred with Bruce Brand findings.

The SARB (2011) observed that, the volatile nature of FPI was responsible for macroeconomic and financial instability experienced in South Africa during the global financial crisis experienced between 2008 and 2010.

Mohamed (2010) studied the impact of capital flows on the South African economy, and emphases that, Capital flows observed, were short term in nature, and were

absorbed by the private sector in the form of increased access to credit. The credit, was, however, not used productively. The capital inflows were also absorbed through increased share prices, capital flight, imports and private consumption.

The reversal of capital flows led to a sharp depreciation of the rand, leading to rising inflation in 2000. Given the earlier inflows and how they were absorbed and the subsequent reversal in the inflows, it is noteworthy that, international capital had a destabilizing effect to the South African economy. The way international capital is absorbed, is therefore, critical in the final effect of such flows on the economy, if used non-productively, capital inflows weaken the economy as the stock of debt increases, but the stock of capital remains unchanged. Portfolio inflows, increase household consumption through increased access to credit by private sector and the reduction in real interest rates.

According to a study that was done by Dausa & Kassim (2009, p.120) it was discovered that, FPI does not have any effect on economic growth, but it is the economic growth that has an effect on FPI. The study finds that economic growth causes the foreign portfolio investment inflow but not its volatility. The findings of the study suggest that foreign portfolio investment or its volatility is not a crucial factor in determining the economic performance of Malaysia.

This study examines the relationship between FPI and Malaysia's economic performance. In particular, the study analyses the relationship between FPI and real GDP using the widely adopted Granger causality test and the recent Toda and Yamamoto (1995), none causality test to establish the direction of causation between the two variables. Similar method is also applied on the relationship between volatility of FPI and real GDP. Additionally, the study uses an innovation accounting

by stimulating variance decomposition and impulse response functions for further inferences, using quarterly data covering the period from 1991 to 2006.

The study finds evidence that, economic growth causes changes in the FPI and its volatility and not vice versa. The findings suggest that, economic performance is the major pull factor in attracting FPI into the country.

In a different study Mordi and Murshid (2011) distinguished economies, not only by country like other studies, but by the level of volatility of capital flows faced by each economy. On this basis, countries used in the study were grouped into two, high and low volatile regimes. Findings show that for countries in the low volatility regime, international capital flows promote economic growth, and countries in a high volatility regime, international capital flow impacts negatively on economic growth.

Kose, et al (2006) found no evidence, to suggest that international capital flows cause growth. Prasad et al (2006) found negative correlation between economic growth and capital flows in developing countries, concluding that international capital may hurt developing countries. Rajan and Subramanian (2006) noted that, contrary to the assumption that, capital flows from capital rich countries to capital poor countries, the reverse was occurring and studied the effects of such capital flows. Their findings showed that, economic growth in non-industrial country is not influenced by capital flows whilst growth in industrial countries was positively correlated with foreign financing. Their explanation for these findings was that non industrial countries lacked the capacity to absorb foreign capital.

Choon et al (2004) studying the effects of capital inflows in 51 recipient countries found that foreign debt and portfolio investment have negative effects on growth.

Durham (2004) found no positive effect of either FDI or FPI on growth per se, but effects depended on financial and institutional development.

2.3.3. International capital flows in Namibia

Capital flows within the Common Monetary Area (CMA) and the rest of the world are hugely unrestricted. The Namibian government has instituted measures of attracting the same mutual funds and foreign portfolio investors that have energized emerging stock markets elsewhere in the world. Namibia benefits from substantial resources such as Uranium, diamond and Copper which attract the majority of FDI. The main countries investing in the mining sector in 2015 are South Africa, the United Kingdom, the United States and Germany. The country should remain politically stable due to the hegemony South West Africa People's Organization (SWAPO), the only political party that has been in power since its independence. Monetary stability is also ensured by the steady flow of FDI and a properly Banking Sector.

The Government, which encourages a liberal economy, has had a tendency for several years to favour partnerships between local and foreign companies, such as the state owned companies, for instance Epangelo Mining, which holds exclusive rights in the future contracts of mining explorations. However, new measures aimed at strengthening, the national economies were set up. Some measures restrict investment opportunities for foreign groups and strengthen state control in certain areas, especially in the exploration of natural resources. This could discourage FDI in the coming years. Additionally, a lack of a skilled workforce and the low level of the educational system are noticeable. Namibia has launched very large infra-structure projects in the country, all of which are expected to bring in significant FDI inflows. After being ranked 88th at a level of doing Business, World Bank (2015) ranked it 101st in the rankings in the year 2016, with significant setbacks in business creation and

licensing. FDI increased in 2015, reaching USD 13.8 billion after a significant decline in 2014 to USD 4.7 billion.

2.4. Conclusion

From the perspective of economic growth theories discussed in the theoretical literature section of this chapter, it is clear that foreign investment inflows, including FPIs increase the stock of capital in a country and thus lead to economic growth. This view is supported by researchers whose results show that foreign portfolio investment leads to capital accumulation and economic growth.

Researchers have, however, come up with non-affirmative findings. They have argued that the effect of FPI is conditional upon the absorptive capacity of the recipient countries. This basically refers to the ability of a country to channel the short term capital inflows towards productive uses. Another group of scholars argue that the volatile nature of foreign portfolio investment make them less attractive and disruptive to economic activity in the future.

Researchers have also tried to investigate the relationship between FDI and FPI as an indirect route to analysing the effects of foreign portfolio investment on economic growth.

CHAPTER 3:

METHODOLOGY

3.1. Introduction

This chapter describes the methodology used to investigate the effects of FPI in Namibia, commencing with statement and justification of the model adopted, explanation of the variables used in the model, data sources and the estimation technique adopted. The method of analysis in this study is the simple regression analysis. This is motivated by the fact that, it is most appropriate to analyse the impact of one variable overtime. The dependent variable is economic growth regressed against the following independent variables; FPI, interest rate and other variables deemed relevant to the study.

3.2. Model Specification

The model used has been drawn from the traditional economic thinking that economic activity depends on two factors of production namely capital and labour. The justification for building the model from this foundation is the desire to build a credible model, whilst at the same keeping the analysis very simple. According to classical economic growth theory, the production function of an economy is a Cobb Douglas function, stated as outlined below:

$$Q = AK^{\alpha}L^{1-\alpha} \dots \dots \dots (3)$$

Where

K represents capital,

L represents labour

Q represents quantity of output

A is a constant variable representing a coefficient in the equation

α is a constant between 0 and 1 representing alpha, a level of significant.

The equation below takes you through the basic model of growth in the context of economic history. Other models are geared towards issues of modern economies. For example endogenous growth models incorporate explicit feed back effects, such as from the level of education to the rate of technical change, using differential equations.

Our starting point is a basic production function; $Y = f(K, L)$ (4). In this case the Cobb- Douglas function is used. It is important to say that, in a closed economy, output Y is equivalent to income Y .

Specifically, this study will loosely adopt the model developed by Osinubi and Maghionyeodiwe (2010), and later adopted and adapted by Mpofu (2014) who applied it in a similar study in South Africa. Given the resemblance in economic conditions and developments, such as the tied currencies and trade relations, it makes sense to adopt a similar approach in the same analysis in Namibia. The model is specified as:

$$RGDP_t = f(FDI_t, FPI_t, DINV_t, EMP_t, U_t) \dots \dots \dots (5)$$

Where;

$RGDP_t$ = is a macroeconomic measure of the value of economic output adjusted for price changes. i.e. inflation or deflation.

Product per Capita in year t ;

FDI_t = FDI as a percentage of GDP in year t ;

FPI_t = FPI as a percentage of GDP in year t ;

$DINV_t$ = Domestic Investment in year t ;

Real economic growth rate measures economic, in relation to GDP, from one period to another, adjusted for inflation, in other words, expressed in real as opposed to nominal terms. The real economic growth rate is expressed as a percentage that shows the rate of change for a country's GDP from one period to another, typically from one year to the next. Another alternate, economic growth measure is gross national product (GNP) which is sometimes referred to a nation's economy that is substantially dependent on foreign earnings. The real economic growth rate also referred to as the growth rate of real GDP, is a useful measure than the nominal GDP growth rate due to the fact that it takes into account the effect that inflation has on economic data. The real economic growth rate is a 'constant dollar' figure and therefore, provides a consistent measure, one that is not subject to being distorted by periods of extreme inflation or deflation.

For the sake of simplicity, a linear relationship between the dependent variable, economic growth (proxied by RGDP_t) and the explanatory variables given above is assumed in this study, and the empirical model stated as:

$$RGDP_t = \alpha + \beta_1 FDI_t + \beta_2 FPI_t + \beta_3 DINV_t + \beta_4 EMP_t + U_t \dots \dots \dots (6)$$

Where;

$\beta_1, \beta_2, \beta_3,$ and β_4 are the coefficients to be estimated.

Equation 3 above posits that economic growth that is, changes in real gross domestic product per capita, in Namibia is driven by FDI, FPI, domestic investment and employment. Other less influential factors influencing economic growth in the country are captured by the error term.

The field of economics is a heavily contested space with many models used to study one economic phenomenon. In the same vein, many models have been used to investigate the relationship between foreign portfolio investment and economic growth.

In order to have normal properties in the time series as well as capture the dynamic effects of the explanatory variables on economic growth the data are transformed into natural logarithms except for the proportion of the population that is employed (emp), such that the model estimated was restated as:

3.3. Justification of variables and a priori assumptions

Dependent variable (RGDP_t)

Economic growth, as proxied by the natural logarithm of real GDP per capita, is the dependent variable. Real gross domestic product refers to the total value of goods and services produced within an economy adjusted for any price changes or measured at constant prices (Mpofu 2014). When put in per capita terms, it becomes more or less the average income per each citizen in a given year. Economic growth, for purposes of this study, is defined as the increase in real GDP per capita over a given period of time. Because real gross domestic product per capita measure annual average incomes per individual, it is a better measurement of economic progression than just real GDP. It is for this reason that real gross domestic product per capita is chosen as a proxy for economic growth in this study.

Independent Variables

These are the identified factors that explain economic growth in an economy, picked on the basis of economic theory and empirical evidence. The independent variables are explained in detail below.

Foreign direct investment

FDI refers to a long term investment in a country, in which foreigners take control of the production or business they buy into and are effectively involved in the running of the business. It is the amount of foreign inflows of investment by non-citizens to acquire a lasting management interest, Law and Yousop, (2010). According to the World Bank, FDI is given as the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments.

Theoretical and empirical literature discussed in literature is inconclusive regarding the effect of FDI on economic growth giving two different possible scenarios, positive or negative effect. However, the simplistic view adopted from classical economic thinking is that the more capital is employed the higher the output produced. FDI adds to the stock of capital, and hence the coefficient, β_1 is expected to be positive.

Foreign portfolio investment

Foreign portfolio investment the main subject of this paper, refers to the purchase of stocks and debt instruments on the local stock and money markets by foreigners seeking higher returns, portfolio diversification or for speculative reasons. Theorists and researchers alike do not concur on the effects of FPI on economic growth. However, just as in the case of FDI, foreign portfolio investment adds to the stock of capital, and thus the null hypothesis is that FPI induces economic growth (β_2 is positive).

Employment

Employment speaks to amount of labour used in production during a particular year. As given in equation one, labour is one of the two factors of production, and thus an increase in

labour use should result in higher production. Because of this, the coefficient of employment is expected to be positive.

Statistics for annual employment levels in Namibia are not readily available, and therefore, the International Labour Organisation (ILO) will be used as a proxy for labour employment levels.

Domestic Investment

Domestic investments, together with FDI and FPI complete total investment in the country for a particular year. Just like the two international capital flows, domestic investment also adds to the stock of capital in the country, albeit from internal investors. For lack of exact statistics, gross domestic saving will be taken as a proxy for domestic investment. This is because economic theory postulates that savings provide resources for investment through financial intermediation. The study therefore assumes that all savings are used for investment purposes and thus a positive coefficient is expected.

3.4. Data Sources

Guided by the internet and direct contacts with the financial institutions, both primary and secondary methods of data collection will be adopted in this study. Secondary method will entail the researcher obtaining required data from already published documents from financial institutions. The data includes statistical records, annual financial reports and foreign investment reports. The primary method will entail collecting data that has not yet been published.

As earlier alluded to, this study will make use of secondary time series data from 1997 to 2015 provided by the Namibia Statistical Agency and supplemented by the World Bank Development Indicators database.

3.5. Estimation technique

3.5.1. Estimation tools

This study will depict trends of variables used since 1997 using Microsoft Excel generated graphs. The data will be analysed using simple linear regression model, which can be found within the computer package SPSS and excel spread sheet.

3.5.1.1. Linear Regression Method: Fully Modified Ordinary Least Squares (FMOLS) (Phillip and Hansen (1992))

Regressing the time series data, leads to spurious regression. The traditional remedial action is different from the time series before regression. The drawback for this action is that the long run deterministic relationship between the dependent variables and the regresses is lost. The linear technique argues that, even though the time series may not be stationary, a long run relationship between the regressant and the regresses can be established by estimating the linear equation.

The relationship denoted by equations above is thus estimated using the Fully Modified Ordinary Least Squares (FMOLS) found within Eviews to find the linear relationship. According to EVIEWS7, the Fully Modified Ordinary Least is one of the three fully efficient estimation methods for estimating and testing single equation linear equations.

3.5.1.2. Co-integration Tests

After estimating the co-integrating relationship using the Fully Modified Ordinary Least, the relationship is tested for co-integration by simply subjecting the residuals to unit root testing, using the Augmented Dickey Fuller (ADF) Test. The relationship estimated is only co-integrating if the residuals are stationary.

3.5.1.3. Unit root testing

Prior to the estimation, the series are subjected to unit root testing to the order of integration. This will be done by subjecting all the time series to the Augmented Dick Fuller (ADF) tests also provided for by EVIEWS7.

CHAPTER 4: ESTIMATION AND RESULTS

4.1. Introduction

This chapter presents the actual findings of this study, first analysing the trends in the variables used and then presenting the results of the unit root testing on the variables, the Fully Modified Ordinary Least Squares estimated relationship between the economic growth (dependent variable) and the regressors (FDI, FPI , domestic investment and employment) and finally the co-integration tests.

4.2. Descriptive Statistics

As earlier highlighted, the time series data were transformed into natural logarithms. The table below summarises the group descriptive statistics of the time series used in this study because different descriptive statistics will naturally fit different distributions of data and will have different interpretations. Descriptive statistics has been below used to describe the economic growth while taking into account that, GDP is one of the primary indicators used to gauge the health of a country's economy. It represents the total dollar value of all goods and services produced over a specific time period. One can think of it as the size of the economy.

Table 1: Descriptive Statistics

	LOGRGDP	LOGFDI	LOGFPI	LOGSVN	EMP
Mean	8.40	19.14	14.78	22.88	46.37
Median	8.38	19.16	15.40	22.93	45.70
Maximum	8.7	20.79	17.75	24.29	50.70
Minimum	8.21	14.28	0.00	21.46	39.70
Std. Dev.	0.156318	1.419530	4.474696	0.840970	2.277114
Observations	26	26	26	26	26

Descriptive Statistics generated using Eviews 7 (See appendix 3)

The natural log of real GDP per capita (RGDP) over the period under study shows a mean of 8.4, the arithmetic mean, lies at the centre of a set of numeric data values. It is found by adding up all the data values and then dividing the total by the sample size, with a standard deviation 0.16. The mean implies that, real gross domestic per capita grew by an annual average of 8.4 during the period under study with the growth peaking at 8.7 in whilst the lowest recorded was 8.21. In absolute terms, the annual average FDI inflow of USD 442.6 million was observed in the same period, which is relatively high in the Southern Africa.

No FPI was recorded during the years 1990 and 1991, and according to Table 1 above foreign portfolio investment grew by average of 14.8% from 1990 to 2015. Absolute figures (see Appendix), however, show that foreign portfolio inflows were very volatile during the period under study. This was expected as empirical evidence discussed in chapter two of this paper asserts that FPI is highly volatile. It is also noteworthy from absolute figures, that foreign

portfolio investment recorded over the period was very modest with an annual average of USD12.5 million compared an average FDI of over USD 400 million during the same period.

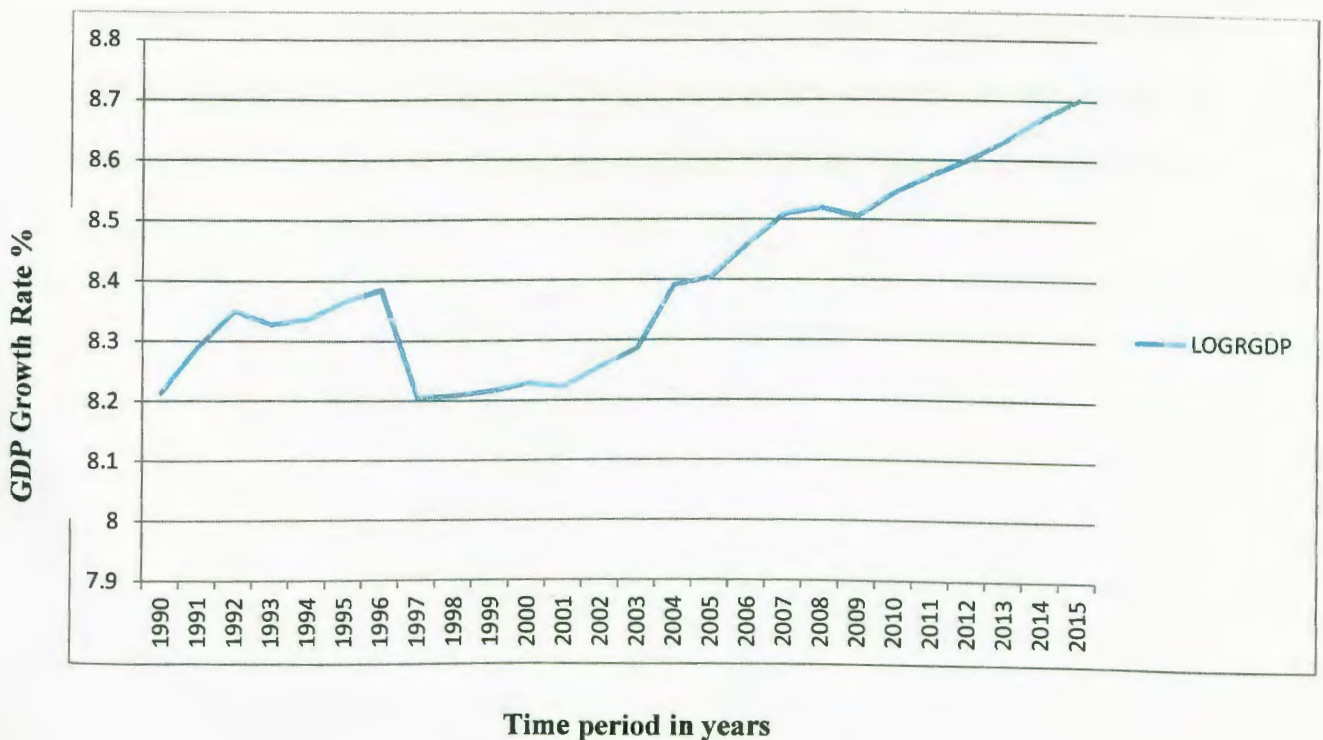
Table 2 also shows that the employment to population ratio averaged 47% and with very little variation from this mean over the period.

4.3. Data presentation

4.3.1. Economic Growth trend

Figure 1 below gives a pictorial trend of economic growth as given by the natural logarithm of real gross domestic product per capita for the period 1990 to 2015. There is a gradual increase in per capita income throughout the whole period, rising from just below US\$4000 in 1997 to over US\$6000 in 2014 in absolute terms. As earlier discussed, per capita real gross domestic product grew by 8.4% each annually.

Figure 1. LOG Real GDP per Capita



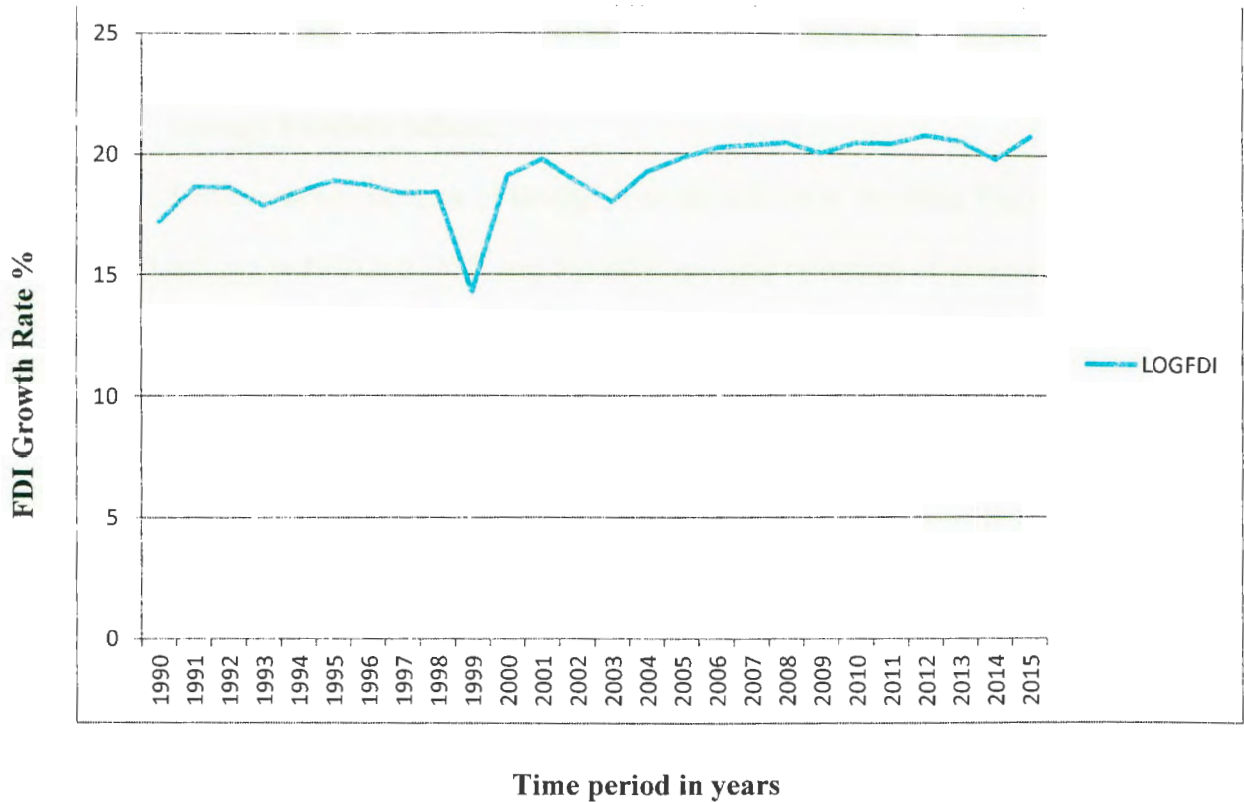
Source: World Bank Development Indicators, (1995).

Whilst the trend has been positive, the National Development Plan 4 (NDP 4) of Namibia (2012/13-2016/17) recognises that economic growth between 2006 and 2011 as measured by the Namibia Statistical Agency is significantly lower than the required growth rate of 6% required to Vision 2030 – a prosperous and industrialised Namibia. This relatively modest growth has largely been spurred in recent years by investments in the construction and mining sectors, strong export prices, private credit growth and a program of deficit financed fiscal stimulus (World Bank, 2016). The National Development Plan, however, envisages higher economic growth rates over the plan period, averaging 6% and expected to peak at 6.5% in 2016/17. These, however, are ambitious targets given the 3.6% average growth rate realised during the preceding National Development Plan 3 period. The World Bank (2016) reports a 5.6 % economic growth average in Namibia between 2010 and 2014 implying that the country might be on course to achieving the preferred 6% average growth.

4.3.2. Foreign direct investment inflows

The diagram below shows the growth trend of FDI inflows. Figure 2 shows an upward trend, with a marked dip in 1999. Absolute figures in the appendix however show that annual FDI inflows fluctuate severely around the trend, making FDI induced economic growth difficult to plan.

Figure 2: LOG Foreign Direct Investement



Source: World Bank Development Indicators (1995)

The FDI fluctuations shown above can be directly linked to macroeconomic developments in Namibia, raising questions on the traditional macroeconomic fundamentals believed to attract FDI such as low inflation and economic growth prospects.

The upward trend line can be explained by the aggressive efforts of the Government to attract foreign capital as a driver of the required economic growth.

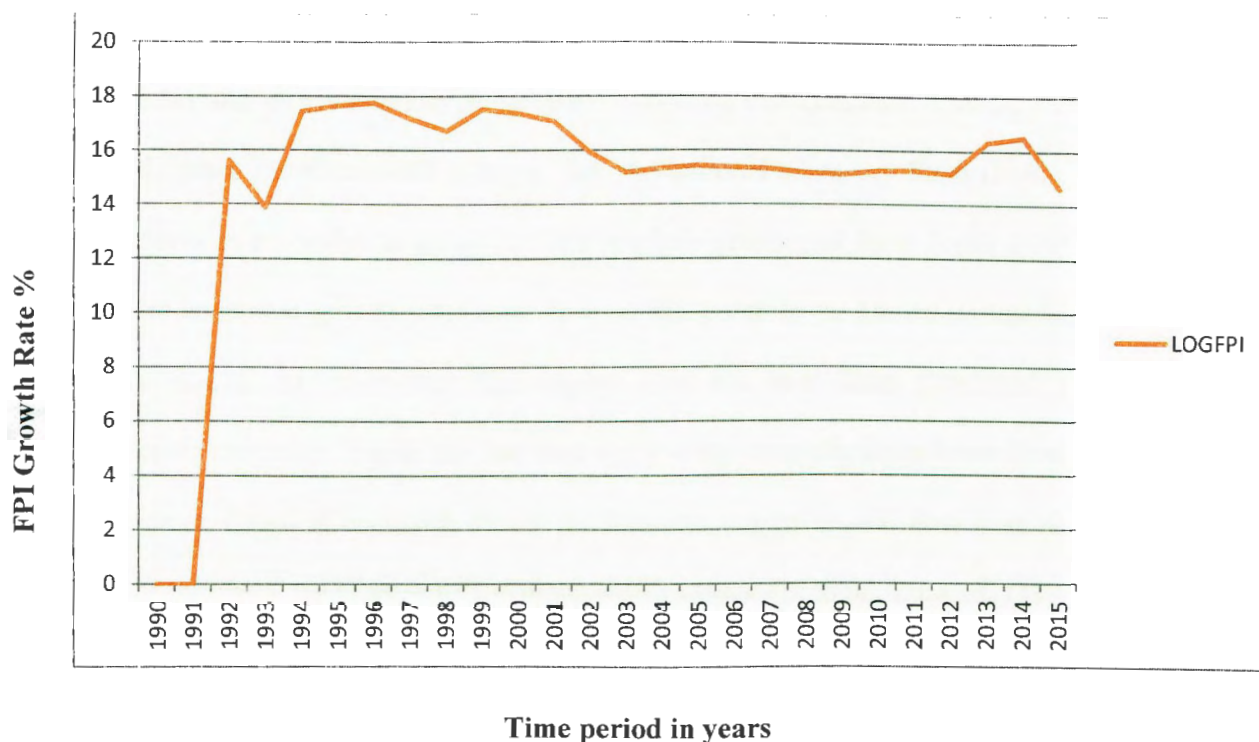
Figure 1 above shows economic growth gently trending upwards, and as such one would expect FDI as a driver of economic growth to exhibit a similar pattern. However, the upward trend line suggests the possibility of the expectation of a correlation between economic growth and foreign direct investment.

It is also noteworthy that the upward trending FDI can be taken as evidence of sound institutional structure that protects and attracts long term capital flows into the country.

4.3.3. Foreign Portfolio Inflows

Figure 3 below shows the story of foreign portfolio inflows to Namibia. The diagram shows no FPI inflows in 1990 and 1991, and thereafter growing by annual of over 14%. In absolute terms higher inflows were recorded in the late 1990s, with inflows dwindling gradually to around just 2 million USD in 2015. This trend does not bode well for a country that has sought foreign portfolio investment both for purposes of financial markets deepening and economic growth.

Figure 3: LOGFPI



Source: World Bank Development Indicators

The low foreign portfolio investment mirrors the current state of the financial markets in the country. Whilst the financial system is considered deep relative to other financial systems in Sub Saharan African economies, Namibia is considered to be relatively a small domestic market; high transport costs, high energy prices, and limited access to skilled labour. Investment Climate Statement (2016) organized by Bureau of Economic and Business Affairs. The shallowness of financial markets made reference to manifests in the form of: firstly a bond market that is government dominated and a few large institutional investors who hold securities until maturity. The second evidence of financial shallowness is the illiquid Namibia Stock Exchange with very limited trading, only a few listed local firms and largely dominated by dual listed companies. Thirdly, the Namibian capital markets, still lags in terms of investment instruments.

The Namibia Financial Sector Strategy 2011-2021 seeks to address this shallowness, and impliedly, improve foreign portfolio inflows.

The trend also defies mainstream economic thinking that countries with high growth rates should attract significant FPI inflows. The International Monetary Fund (2008) argues that Namibia is in a position to attract foreign portfolio investment from South Africa given her superior economic growth. However, in what has come to be known as the Lucas paradox entails that, is an observation that capital does not flow from developed countries to developing countries despite the fact that, developing countries have lower levels of capital per worker. Classical economic theory predicts that, capital should flow from rich countries to poor countries due to the effect of diminishing returns of capital, Lucas.R. (1990).

This trend also sheds light on the argument in literature review on the relationship between FDI and FPI. The fact that foreign direct investment has trended upwards whilst foreign portfolio investment has been very low proves a case of foreign direct investment being an alternative to foreign portfolio investment rather than being complementary.

Another logical explanation to the little foreign portfolio investment realised in Namibia is to do with how portfolio investors make allocation decisions, IMF (2008). According to the capital asset pricing method (CAPM), investors allocate investments according to market capitalisation, which implies that; international portfolio diversification is driven by the size of capital markets. Namibia, by virtue of having a small capital market would also receive little FPI inflows.

4.3.4. Gross Domestic Savings

Domestic savings for the period under study trended upwards. These savings rates are relatively high compared to rates realised by other Southern Africa Customs Union (SACU) and SADC members. The reasons for such high savings rates include a low inflation rate that

translate to positive real interest rate, well developed pension and life assurance schemes that effectively mobilise private savings and a competitive exchange rate that boosts incomes and savings through positive net exports.

Figure 4: LOG Domestic Savings



Source: World Bank Development Indicators

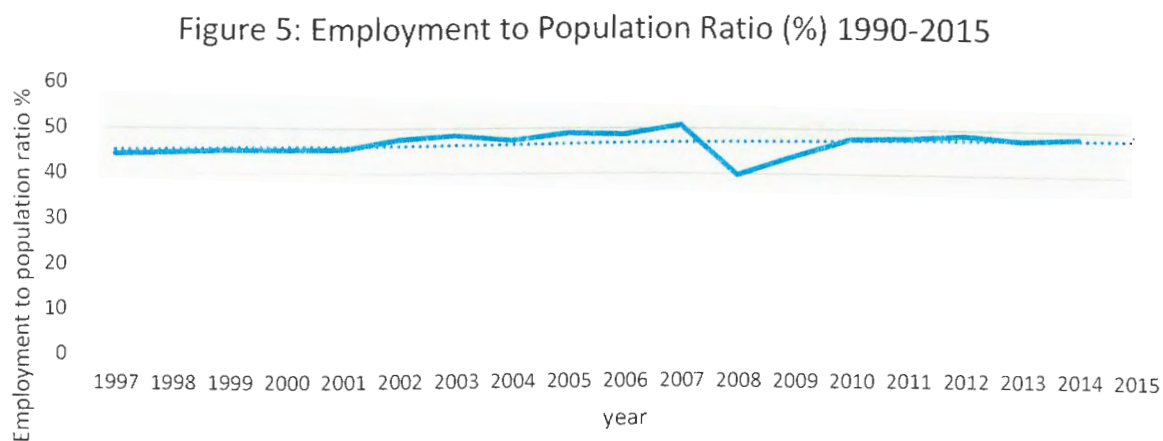
Savings are a major source of investment funds, which are channelled to productive and consumption purposes through financial intermediation. Thus, savings are a source of economic growth. One would expect the trend shown Figure 4 above to shape the economic growth trend depicted by Figure 1.

4.3.5. Employment

Employment to population ratio has remained constant at just over 45% over the period under study, implying that job creation in the country has been unable to beat population growth. It is however, implies that employment in absolute terms has been increasing. As the

employment figures in absolute terms increase, national output should also increase, as explained by the growth theories discussed in the literature review.

The trend depicted by Figure 5, therefore is consistent with the economic growth trend shown by Figure 1.



Source: World Bank Development Indicators

The country has been unable to increase employment levels significantly for three main reasons. Firstly, the country is characterised largely by unskilled labour having inherited an education system at independence that does not prepare students well for employment. Secondly, the Namibian economy is not well diversified, with the capital intensive mining and mineral processing not providing much employment opportunities. Finally, inflexibilities in the labour market mean that employment creation outside the traditional mining sector is difficult (IMF, 2008). These factors mean that a significant number of Namibians are outside formal employment and not contributing effectively to economic activity. A big potential, therefore, exist for the country to accelerate economic growth.

4.4. Unit root tests

The unit root tests were conducted on the time series using the Augmented Dickey Fuller (ADF) tests on EVIEWS7 and the detailed results are appended to this document. The table below summarizes the results of the Augmented Dickey Fuller tests conducted.

4.5. Results of relationship estimation

As highlighted in the research methodology, a simple linear regression methodology or co-integrating relationship is estimated using the Fully Modified Ordinary Least Squares (FMOLS) in EVIEWS7. The technique yielded the results presented in Table below.

Table 1: Results of FMOLS Estimation

Dependent Variable: LOGRGDP
 Method: Fully Modified Least Squares (FMOLS)
 Date: 01/31/17 Time: 18:59
 Sample (adjusted): 1991 2015
 Included observations: 25 after adjustments
 Cointegrating equation deterministics: C
 Long-run covariance estimate (Bartlett kernel, Newey-West fixed bandwidth = 3.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGFDI	0.056330	0.023880	2.358914	0.0286
LOGFPI	-0.004971	0.007645	-0.650151	0.5230
LOGSVN	0.113485	0.045006	2.521585	0.0203
EMP	0.002661	0.011605	0.229303	0.8210
C	4.673397	0.716359	6.523817	0.0000
R-squared	0.654449	Mean dependent var		8.408090
Adjusted R-squared	0.585339	S.D. dependent var		0.154762
S.E. of regression	0.099658	Sum squared resid		0.198634
Durbin-Watson stat	1.049207	Long-run variance		0.013477

Table above gives the co-integrating relationship between the regressant and the explanatory variables. The next step is to test the validity of this relationship by subjecting the generated residuals to test and the Augmented Dickey Fuller Test. A co-integrating relationship exists if the generated residuals are found stationary; other the regression is a spurious regression.

4.6. Testing for co-integration

Table 2: Below shows the two residual based tests for co-integration results.

Table 2: Test for co-integration

Null Hypothesis: RESIDUALS has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=5)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.779110	0.0762
Test critical values:		
1% level	-3.737853	
5% level	-2.991878	
10% level	-2.635542	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RESIDUALS)

Method: Least Squares

Date: 01/31/17 Time: 19:27

Sample (adjusted): 1992 2015

Included observations: 24 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESIDUALS(-1)	-0.525385	0.189048	-2.779110	0.0109
C	0.001695	0.017090	0.099191	0.9219
R-squared	0.259844	Mean dependent var		0.001562
Adjusted R-squared	0.226200	S.D. dependent var		0.095177
S.E. of regression	0.083723	Akaike info criterion		-2.042941
Sum squared resid	0.154211	Schwarz criterion		-1.944769
Log likelihood	26.51529	Hannan-Quinn criter.		-2.016896
F-statistic	7.723455	Durbin-Watson stat		1.930868
Prob(F-statistic)	0.010942			

The null hypothesis that the generated residuals (RESIDUALS) have a unit root is rejected at 10% level and the conclusion therefore reached that the residuals are stationary. A cointegrating relationship therefore exists between the regressant and the regressors.

4.7. Interpretation of Results

The relationship estimated above is as follows:

$$\text{LOGRGDP} = 4.67 + 0.056\text{LOGFDI} - 0.005\text{LOGFPI} + 0.11\text{LOGSVN} + 0.003\text{EMP} \dots (7)$$

Foreign Direct Investment

FDI is found to be statistically significant at 5% level of significance. The results show that, FDI and gross domestic savings spurred economic growth on Namibian economy. Therefore, null hypothesis that FDI drives economic growth is therefore not rejected. While, employment and foreign portfolio investments are insignificant in Namibia. The study also recognised the fact that, bulk of domestic savings, are channelled out of the country as FPI outflows, with South Africa as the major destination. The positive coefficients, proves the positive effect of FDI on economic growth suggested by Figure 1 and Figure 2. Loosely interpreting the coefficients, a 1% increase in FDI induces a 5.6% increase in real gross domestic product per capita. This is in line with economic theory which states an increase in expenditure influences output through the expenditure multiplier. This finding dispels empirical suggestions that FDI is negatively related to economic growth.

Some economic researchers argue that FDI capital receipts may not make as much impact on arrival but will definitely influence the GDP in the succeeding year. On arrival, the capital receipts finance sunk costs as well as set-up cost, particularly in the foreign investor favoured banking and mining sectors of the economy. The impact of full production and spill over effects are then realised to the full extent in the succeeding year. Given this argument FDI in Namibia should even have a bigger impact on economic activity than estimated by this model.

FDI in the country is mainly into banking and mineral sectors, which are highly profitable making investment reversal unlikely, according to the International Monetary Fund (2008).

This basically implies that the FDI is long term in nature, a pre-requisite of growth inspiring international capital inflows.

Foreign portfolio investment

FPI is found to be statistically of no effect on national output in the period of the inflow. The sign of the coefficient is however in line with the position of researchers that argues that foreign portfolio investment is detrimental to economic growth. The key finding for this study is that, FPIs have not impacted economic growth in Namibia, in any way during the period under study. It is also noted that, foreign portfolio investments in Namibia are very low. This defies all efforts by Government to attract portfolio inflows into the country for improving economic growth and deepening financial markets.

One of the key observations from Figure 3 earlier is that foreign portfolio inflows have been very low in the country. To an extent this explains the lack of effect on economic growth. From the perspective of economic growth the Namibian economy has performed relatively well, invalidating the importance of FPI as a key determinant of growth.

This puts into perspective the absorptive capacity of the country in terms of use of such short term receipts. These findings suggest that the receipts, rather than being directed to productive activities have been used for consumption and other non-productive uses. Financing consumption out of hot money creates a financial obligation to the international investors, whilst at the same time not creating the requisite capacity to service the created obligation, as witnessed in South Africa during the period after independence, Mpofu, (2004).

Employment

Employment to population ratio is statistically insignificant only at, showing a rather passive but positive link to economic growth. This is expected because the model used did not factor

in endogenously induced technology which increases factor productivity and thus drives economic growth even with the same level of employment.

An increase in labour employed implies an increase in one of the factors of production as discussed in literature review. This finding is thus as per the assumption and mainstream economic thinking that increasing employment leads to growth in national output.

The finding should be taken with a pinch of salt as other researchers insist causality run from economic growth to employment not the other way round.

Gross domestic Savings

Gross domestic savings are found to be statistically significant at 5% level of significance, which is consistent with the assumption that savings finance investment and thus lead to economic growth.

The relationship between economic growth and savings could have been stronger were it for the nature of the bulk of savings in the country. Most of the savings are contractual, and mobilised through pension schemes and insurance and life assurance funds. The tendency over the years has been for the funds to invest the mobilised savings in South Africa and other countries, denying the Namibian economy more domestic resources driven investment. According to GIPF (2006) for instance, 46.5% of assets were invested in South Africa, 19% in other foreign countries and only 34% in the country. The foreign investments accounted for 66% of GDP that year. Of domestic investment, almost half of the investment was on dual listed companies on the Namibia Stock Exchange, reducing the real domestic investment from domestic savings to less than 20%.

The pension and insurance funds flock to South African and other investment destinations where capital markets and instruments are well developed, and also in search of better

returns. The fact that listed local firms on the Namibia Stock Exchange are very few IMF (2008), also limits the investment opportunities for the funds.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

This chapter concludes the study by summing up the major findings and their implications on economic policy. In this study, Namibian Government and policy makers have been advised to set up strategies in order to create an enabling investment environment for FPI and FDI for economic prosperity and growth.

5.2. Recommendations

The key finding for this study is that for Namibia, foreign portfolio investment inflows have not impacted economic growth in Namibia in any way during the period under study. It is also noted that portfolio investment inflows into Namibia are very low. This defies all efforts by the Government to attract portfolio inflows into the country for improving economic growth and deepening financial markets.

This finding has two major implications. Firstly, it puts into perspective the ability of the Republic of Namibia to efficiently absorb the short term capital flows. If the absorption capacity is lacking then the capital flows in the form of FPIs are channelled to non-productive activities, including consumption and higher stock prices, as witnessed in South Africa, Mpofu (2002). Secondly, even if the absorption capacity is not lacking, the volatile nature of foreign portfolio investment imply that they cannot be used for long term investment uses.

In light of these findings, it is recommended that the Government need to build capacity in the financial sector to ensure efficiency in capital allocation. This would allow for the channelling of the short term capital flows towards productive activities. In the absence of this, Government need not to pursue FPI as an economic growth strategy but rather should device mechanisms that minimises the negative effects of such capital flows. Expansionary

fiscal and monetary policies could be used to counter foreign portfolio investment effects in cases where there are significant increases in inflows.

FDI does have a positive effect on economic growth and the Government of Namibia can do well by intensifying efforts to lure FDI into the country.

Gross domestic savings were found to have strong influence on economic growth in line with mainstream economic theory. This is despite the fact that the bulk of the savings are held by pension and insurance funds, which prefer to hold investment portfolios in countries other than Namibia. The Government should in this case; put in a place policies that further enhance financial intermediation towards productive activities within the country. The Government can also put in place domestic investment requirements, which make it mandatory for the pension and insurance funds to invest a minimum threshold locally. However, this will require the domestic market to have the capacity to absorb such savings. The Namibia Financial Sector Strategy will be a good place to start from in term of deepening the financial sector and building domestic capital market capacity.

In view of the fact that Namibia is actual a net exporter of capital, the priority of the Government should be to halt the capital outflows, and use these internally generated resources to achieve set growth and financial sector development targets, the achievement of which should take the country close to Vision 2030.

5.3. Conclusion

This thesis noted that Namibia, like any other developing country, needs accelerated economic growth to achieve her aspirations. One of the biggest hurdles experienced in the quest for high economic growth is the investment-savings gap, that is, internally generated resources are inadequate to meet the investment demand, and thus developing countries turn to international capital in the form of FDI and FPI. .

The challenge, and thus the rationale of this paper, is that whilst for the former the effects on growth to an extent are straight forward, the same cannot be said on the later. This study therefore sought to answer the question on the impact of foreign portfolio investment in Namibia's economic growth.

To answer this question, time series data on economic growth, FDI, FPI, employment and gross domestic savings was gathered from the World Bank development indicators. Economic growth in the country was modelled as a function of FDI, FPI, employment and gross domestic savings. The Co-integrating equation technique was employed to determine the long run relationship between the dependant variables and the explanatory variables.

The results showed that FDI and gross domestic savings spurred economic growth whilst employment and FPIs were insignificant.

Given these findings, the study recommended a scrutiny of the absorptive capacity of the Namibian economy in order to ensure the short term capital is channelled to productive sector of the economy. The study also recognised the fact that the bulk of domestic savings are channelled out of the country as foreign portfolio investment outflows, with South Africa as the major destination. The Government was advised to put domestic investment requirements that, ensures a minimum domestic investment from the funds.

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APPENDICES

APPENDIX 1: KEY ECONOMIC INDICATORS FOR NAMIBIA EXTRACTED FROM WORLD BANK DEVELOPMENT INDICATORS

Year	RGDP	FDI	FPI	Emp	svn
1990	3694	29567264.7		45	2487664019
1991	3986.485	120449858		45.5	2093666371
1992	4233.24	118232232	6030825.583	45.6	2559836600
1993	4140.256	55267528.2	1071076.127	45.7	2648210894
1994	4177.36	97977966.5	37540853.49	45.7	3656647944
1995	4301.158	153015438	45739209.31	45.1	4219032845
1996	4383.932	128693897	51193795.03	44.6	4627989332
1997	3662.919	90972979	28819684	44.3	4300066927
1998	3675.156	96232390.4	18088795	44.6	5489363389
1999	3702.03	1592530.1	40670032	45	5233977088
2000	3749.287	196350763	34744313	45	6899101013
2001	3728.521	379336366	25914773	45.3	7856192123
2002	3853.695	147535759	8158647	47.5	9081087935
2003	3970.875	65110887.1	3882129	48.4	9050083718
2004	4408.636	223561311	4533312	47.3	12030806573
2005	4465.996	392758629	5055379	48.9	12720663495
2006	4719.282	609774001	4728615	48.6	20194941624
2007	4960.891	669795195	4521527	50.7	17622396196
2008	5014.05	749771644	3901631	39.7	18942220330
2009	4943.25	496968181	3726374	43.9	12984371985
2010	5143.131	766951872	4260984	47.7	14985850969
2011	5292.748	744490547	4309900	48	15320819354
2012	5435.714	1077257911	3801323	48.8	19285050355
2013	5608.602	853433033	12435370	47.8	25777769709
2014	5823.993	405455253	15011348	48.4	35423317963
2015	6013.767	1060290755	2284472	48.6	33801076500

APPENDIX 2; UNIT ROOT TEST

Null Hypothesis: D(LOGRGDP) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=5)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.374836	0.0023
Test critical values: 1% level	-3.737853	
5% level	-2.991878	
10% level	-2.635542	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(LOGRGDP,2)

Method: Least Squares

Date: 01/31/17 Time: 15:31

Sample (adjusted): 1992 2015

Included observations: 24 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGRGDP(-1))	-0.902904	0.206386	-4.374836	0.0002
C	0.015289	0.011001	1.389744	0.1785
R-squared	0.465230	Mean dependent var	-0.001839	
Adjusted R-squared	0.440922	S.D. dependent var	0.067361	
S.E. of regression	0.050367	Akaike info criterion	-3.059316	
Sum squared resid	0.055810	Schwarz criterion	-2.961145	
Log likelihood	38.71179	Hannan-Quinn criter.	-3.033271	
F-statistic	19.13919	Durbin-Watson stat	2.048770	
Prob(F-statistic)	0.000241			

Null Hypothesis: D(LOGFDI) has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=5)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.035101	0.0000
Test critical values: 1% level	-3.737853	
5% level	-2.991878	
10% level	-2.635542	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(LOGFDI,2)
 Method: Least Squares
 Date: 01/31/17 Time: 15:35
 Sample (adjusted): 1992 2015
 Included observations: 24 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGFDI(-1))	-1.374498	0.195377	-7.035101	0.0000
C	0.131485	0.277412	0.473969	0.6402
R-squared	0.692276	Mean dependent var	-0.018470	
Adjusted R-squared	0.678289	S.D. dependent var	2.388974	
S.E. of regression	1.355017	Akaike info criterion	3.525160	
Sum squared resid	40.39354	Schwarz criterion	3.623331	
Log likelihood	-40.30192	Hannan-Quinn criter.	3.551205	
F-statistic	49.49264	Durbin-Watson stat	2.307416	
Prob(F-statistic)	0.000000			

Null Hypothesis: LOGFPI has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=5)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.387804	0.0021
Test critical values: 1% level	-3.724070	
5% level	-2.986225	
10% level	-2.632604	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(LOGFPI)

Method: Least Squares

Date: 01/31/17 Time: 15:37

Sample (adjusted): 1991 2015

Included observations: 25 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGFPI(-1)	-0.485699	0.110693	-4.387804	0.0002
C	7.765711	1.709684	4.542192	0.0001
R-squared	0.455658	Mean dependent var		0.585666
Adjusted R-squared	0.431991	S.D. dependent var		3.286000
S.E. of regression	2.476540	Akaike info criterion		4.728220
Sum squared resid	141.0647	Schwarz criterion		4.825730
Log likelihood	-57.10275	Hannan-Quinn criter.		4.755265
F-statistic	19.25282	Durbin-Watson stat		2.625369
Prob(F-statistic)	0.000214			

Null Hypothesis: D(LOGSVN) has a unit root

Exogenous: Constant

Lag Length: 2 (Automatic - based on SIC, maxlag=5)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.070518	0.0051
Test critical values: 1% level	-3.769597	
5% level	-3.004861	
10% level	-2.642242	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(LOGSVN,2)
 Method: Least Squares
 Date: 01/31/17 Time: 15:39
 Sample (adjusted): 1994 2015
 Included observations: 22 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGSVN(-1))	-1.342632	0.329843	-4.070518	0.0007
D(LOGSVN(-1),2)	0.412825	0.307681	1.341729	0.1964
D(LOGSVN(-2),2)	0.625263	0.200713	3.115204	0.0060
C	0.141335	0.048131	2.936459	0.0088
R-squared	0.785050	Mean dependent var	-0.003673	
Adjusted R-squared	0.749225	S.D. dependent var	0.296929	
S.E. of regression	0.148694	Akaike info criterion	-0.810881	
Sum squared resid	0.397980	Schwarz criterion	-0.612510	
Log likelihood	12.91970	Hannan-Quinn criter.	-0.764151	
F-statistic	21.91349	Durbin-Watson stat	2.260843	
Prob(F-statistic)	0.000003			

Null Hypothesis: EMP has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=5)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.354807	0.0229
Test critical values: 1% level	-3.724070	
5% level	-2.986225	
10% level	-2.632604	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EMP)

Method: Least Squares

Date: 01/31/17 Time: 15:49

Sample (adjusted): 1991 2015

Included observations: 25 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EMP(-1)	-0.669720	0.199630	-3.354807	0.0027
C	31.14130	9.250397	3.366482	0.0027
R-squared	0.328560	Mean dependent var	0.144000	
Adjusted R-squared	0.299367	S.D. dependent var	2.660839	
S.E. of regression	2.227225	Akaike info criterion	4.516008	
Sum squared resid	114.0922	Schwarz criterion	4.613518	
Log likelihood	-54.45010	Hannan-Quinn criter.	4.543053	
F-statistic	11.25473	Durbin-Watson stat	1.966792	
Prob(F-statistic)	0.002743			

Dependent Variable: LOGRGDP
 Method: Fully Modified Least Squares (FMOLS)
 Date: 01/31/17 Time: 18:59
 Sample (adjusted): 1991 2015
 Included observations: 25 after adjustments
 Cointegrating equation deterministics: C
 Long-run covariance estimate (Bartlett kernel, Newey-West fixed
 bandwidth
 = 3.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGFDI	0.056330	0.023880	2.358914	0.0286
LOGFPI	-0.004971	0.007645	-0.650151	0.5230
LOGSVN	0.113485	0.045006	2.521585	0.0203
EMP	0.002661	0.011605	0.229303	0.8210
C	4.673397	0.716359	6.523817	0.0000
R-squared	0.654449	Mean dependent var	8.408090	
Adjusted R-squared	0.585339	S.D. dependent var	0.154762	
S.E. of regression	0.099658	Sum squared resid	0.198634	
Durbin-Watson stat	1.049207	Long-run variance	0.013477	

Appendix 3: Test for Co-integrating Relationship

Null Hypothesis: RESIDUALS has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=5)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.779110	0.0762
Test critical values: 1% level	-3.737853	
5% level	-2.991878	
10% level	-2.635542	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RESIDUALS)

Method: Least Squares

Date: 01/31/17 Time: 19:27

Sample (adjusted): 1992 2015

Included observations: 24 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESIDUALS(-1)	-0.525385	0.189048	-2.779110	0.0109
C	0.001695	0.017090	0.099191	0.9219
R-squared	0.259844	Mean dependent var		0.001562
Adjusted R-squared	0.226200	S.D. dependent var		0.095177
S.E. of regression	0.083723	Akaike info criterion		-2.042941
Sum squared resid	0.154211	Schwarz criterion		-1.944769
Log likelihood	26.51529	Hannan-Quinn criter.		-2.016896
F-statistic	7.723455	Durbin-Watson stat		1.930868
Prob(F-statistic)	0.010942			

Appendix 4 Descriptive Statistics

	RGDP	FDI	FPI	EMP	SVN
Mean	4564.376444	44263051	12586896.44	46.66111111	
Median	444444	4.0772223	444444	111111	13.761406
Maximum	4592.639	1.25	4891997	47.6	12.77371
Minimum	3662.919	1592530.1	3726374	39.7	5.668694
Std. Dev.	490517	3.5310456	219351	380718	843435
Skewness	0.119436860	31866376	1.174401320	0.977557245	0.843839256
Kurtosis	1.601380521	1.9500161	2.992144073	3.895169359	3.744482736
Jarque-Bera	1.509897824	1.0805298	4.137701674	3.467850639	2.551884982
Probability	116636	87	0356653	9688018	0396521
Sum	82158.77600	79673492			
Sum Sq. Dev.	000001	53.39	226564136	839.9	247.705308
Observations	26	26	26	26	26