

DURBAN UNIVERSITY OF TECHNOLOGY

**FOREIGN DIRECT INVESTMENTS AS A SOLUTION TO
SOUTH AFRICA'S ECONOMIC GROWTH**

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**FOREIGN DIRECT INVESTMENTS AS A SOLUTION TO
SOUTH AFRICA'S ECONOMIC GROWTH**

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ABSTRACT

Foreign Direct Investments (FDI) as a growth-enhancing component has received growing attention in the global economy and is considered a vital source of external financing for many developing economies. This study examines the impact of FDI on economic growth using a mixed research methodology. The study combines the Autoregressive Distributed Lag (ARDL) approach and interviews with experts in the field of international finance and macroeconomics. The ARDL approach was employed to estimate the long-run and short-run relationship between FDI and economic growth using annual time series data for the period 1980 to 2020. The results indicate that FDI has a positive and significant impact on economic growth in the long-run and short-run. Furthermore, the study found that South Africa has not been able to fully exploit the potential benefits of FDI due to structural constraints such as poor infrastructure, insufficient skills and limited access to finance. This study, therefore, support the hypothesis that FDI has a significant impact on South Africa's economic growth. Thus, policy makers can formulate policies that attracts more FDIs in the country to promote economic growth. The interviews with the experts in the field provide additional insights into the factors that influence FDI flows and their impact on economic growth. The experts highlighted that FDI has contributed significantly to the country's economic growth by creating job opportunities, promoting innovation and technological advancement, and enhancing competition in the domestic market. The findings suggest that to maximize the benefits of FDI, the government needs to create a favourable investment climate, reduce bureaucratic barriers, and address the skills gap in the workforce. Therefore, policymakers and stakeholders should take steps to promote a conducive environment for FDI to contribute positively to the country's economic growth. The study also sought to conduct an empirical investigation on the determinants of foreign direct investment in South Africa using ARDL. The results revealed the following variables that were significant determinants of FDI, government spending, market size and exchange rates. The findings from the interviews identified market size and growth, inflation, exchange rates, availability of natural resources, infrastructure, openness of the economy and availability of good infrastructure as specific determinants of FDI. This study concludes that increasing economic growth requires attention to be focused on to the fundamental determinants of foreign

investments decisions and the underlying relevant microeconomic and macroeconomic outlooks. Furthermore, though there is a prime need to attract more foreign investors in South Africa, it is important to concede that attracting FDIs alone is not enough for sustainable economic growth and development. The policy makers should have holistic policies in place and undertake reforms with clear objectives and commitments.

Keywords: economic growth, foreign direct investment; ARDL; interviews, South Africa

DECLARATION

I Meshel Muzuva declare that **Foreign Direct Investments as a Solution to South Africa's Economic Growth** is my own work with the exception of quotations and references of which the sources are acknowledged.

Signature

Date: 15 March 2023

DEDICATION

To my beloved mother Mrs Edwick Chibvongodze and to the loving memory of my father Mr Hosiah K. Chibvongodze

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LIST OF ABBREVIATIONS

ADF:	Augmented Dickey Fuller
AGOA:	African Growth and Opportunity Act
ARDL:	Autoregressive Distributed Lag
AsgiSA:	Accelerated Shared Growth Initiative South Africa),
AU:	African Union
BITS:	Bilateral Investment Treaties
COVID:	Coronavirus Disease
DOLS:	Dynamic Ordinary Least Square
DRC:	Democratic Republic of Congo
DTI:	Department of Trade and Investment
EBA:	Everything but Arms
ECM:	Error Correction Model
EU:	European Union
EXR:	Exchange Rate
FDI:	Foreign Direct Investment
FIG:	Foreign Investment Grant
FMOLS:	Full Modified Ordinary Least Square
FSA:	Firm Specific Advantages
GDP:	Gross Domestic Product
GEAR:	Growth Employment and Redistribution
GIRF:	Generalised Impulse Response Function
IMF:	International Monetary Fund
IPA:	Investment Promotion Agency
IRF:	Impulse response analysis
JB:	Jarque–Bera
KZN:	KwaZulu-Natal
LM:	Langrage Multiplier
M&A:	Merger and Acquisition
MS:	Market Size
MIP:	Manufacturing Investment Programme
MNE:	Multinational Enterprises

NGP:	New Growth Path
OECD:	Organisation for Economic Co-operation and Development
OLS:	Ordinary Least Square
OLI:	Ownership Location Internalisation
OSS:	One-Stop-Shop
PLC:	Product Life Cycle
PP:	Phillips-Peron
PWC:	PricewaterhouseCoopers
RDP:	Reconstruction and Development Programme
RGDP:	Real Gross Domestic Product
SARB:	South Africa Reserve Bank
S.D:	Standard Deviation
SEDA:	Small Enterprise Development Agency
121 TAI:	121 Tax Allowance Incentive
TISA:	Trade and Investment South Africa
TSAM:	Toyota South Africa Motors
USA:	United States of America
UNCTAD:	United Nations Conference on Trade and Development
VAR:	Vector Autoregressive
VECM:	Vector Error Correction Model

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Foreign Direct Investment (FDI) as a growth-enhancing component has received growing attention in developing and developed countries (Udi, Bekun and Adedoyin 2020). However, it has been of great concern to many economists on how FDIs affects the economic growth of the host country. In closed economies where there is no access to foreign savings, investments are solely financed from domestic savings (Sunde 2017; Nyiko, Tumelo and Olebogeng 2021). Conversely, in open economies domestic savings do not only finance investment, but foreign capital flows are also involved in the mix. Investments that are received in the form of FDIs enables host country to achieve investment levels that are beyond their capacity to save.

In developing countries, FDIs have remained the largest form of capital flow and strategic plans have been set out to reach a targeted economic growth and aim to become industrialised (Baiashvili and Gattini 2020). Thus, FDI is crucial to the provision of external financing for developing nations, that is, resources are required for the achievement of targeted growth rate in the economy (Makhoba and Kaseeram 2019; Makhoba and Zungu 2021). Most academics and policy makers argue that FDIs contribute to the development of the host country's economy (Baiashvili and Gattini 2020; Makhoba and Zungu 2021; Güngör and Bekun 2022). Furthermore, FDI is considered as a valuable source of technology, and it improves relations with local companies that can assist in enhancing the growth of the economy.

Based on the above arguments, many developing countries have encouraged FDIs in their economies by offering incentives (Hyungsun and Miguel 2017; Ridzuan, Ismail and Hamat 2017; Asiamah, Ofori and Afful 2019). According to Akpan and Eweke (2017), foreign investors are invited by developing and transition countries in a hope that the positive experience from the developed economies will spill over to their own economies. Baiashvili and Gattini (2020) alluded that as FDI flows

increases in the economy, this will ultimately increase the volume exports. Thus, developing countries are considering foreign investments a key source for growth, although it is difficult to measure the economic effects with precision. According to Osei and Kim (2020), most empirical studies have shown the important role of FDI in promoting the host country's economic growth through technology, human resources development and capital formation.

For developing countries like South Africa, foreign investments are regarded as an important channel for transferring capital and technology from developed economies to domestic economies (Asamoah, Mensah and Bondzie 2019; Joshua, Güngör and Bekun 2022). Hyungsun and Miguel (2017) postulated that FDI is regarded as one of the main channels of transferring technology. Furthermore, Sethi *et al.* (2019) believed that when FDIs enter a domestic country, that country is bound to receive new knowledge, management, experience and improved ways of production that will result in them having a competitive advantage. Developing countries with efficacious economic growth are described as a “*catch-up effect in technological development*” from developed nations (Emmanuel 2016: 44). Thus, in developing economies FDI inflows are a key driver for economic growth.

However, theories have provided conflicting arguments on the impact of FDI on economic growth. Theories such as Dunning Eclectic theory and Product Life Cycle (PLC) argued that when a host country is already involved in trade, the involvement of FDIs would affect the allocation of resources negatively and ultimately slow the growth of the economy. According to Borensztein, De Gregorio and Lee (1998) countries are able to exploit FDI benefits or inflows only if the workforce is educated or highly literate. However, Miningou and Sampawende (2017) found no evidence of education playing an important role, as they are of the opinion that the positive relationship between FDIs and growth of the economy is influenced by the wealth of a country.

The exponents of FDIs have highlighted the significance of inviting foreign investors to boost the growth of developing economies through domestic infrastructure improvements, job creation, training, skills, and technological transfers that comes with investors (Haider *et al.* 2021). On the other hand, evidence in the literature is

conflicting regarding how and to what extent FDIs influences growth of the economy. For example, Ahmad *et al.* (2021) asserts that foreign investments promotes the growth of the economy and Rehman *et al.* (2021) states that foreign direct investments affects the growth of the economy. The differences in the results implies that the benefits of FDIs does not occur automatically, rather they depend on the absorptive capacity of the host country such as human capital development, export oriented FDI policy and free trade policy (Sunde 2017).

Even though there are a significant number of studies that have examined the impact of FDIs on economic growth, (Akpan and Eweke 2017; Sunde 2017; Haider *et al.* 2021) in South Africa it remains an unresolved issue. There is no agreement on the linkage between FDI and growth of the economy. The differences in the research findings might be ascribed to variable measurement techniques, time frames, estimation techniques and the variant in the variables (Uwubanmwun and Ogiemudia 2016).

The discrepancies in studies by (Akpan and Eweke 2017; Dahir 2017; Sunde 2017; Haris and Danila 2018; Haider *et al.* 2021) motivated this study to investigate the impact of foreign direct investments on South Africa's economic growth using time series data. In doing this, the research contributes to filling the gap in knowledge on the effect of FDIs towards South Africa's economic growth. Furthermore, the study provides insight on how FDI could be a valuable tool in accelerating economic growth. Therefore, it is of vital importance to explore the main factors which promote economic growth, so that significant measures can be taken to stir up the positive influencing factors.

1.2 Problem statement

In the African continent, South Africa is considered to have the highest level of development in terms of human capital accumulation and financial structure. However, it seems that FDI has no long-term effect on the growth of the economy contrary to economic theory. This raises questions of whether the existing theory is incorrect with the implication that it does not explain fully the dynamics of economic

growth and foreign direct investments. Although theoretical approach is uncomplicated as it focuses on local development levels and absorptive capacities, the empirical evidence appears to be ambiguous.

The inflow of FDIs in South Africa has been rising steadily and the Department of Trade and Investment (DTI) anticipate the trend to carry on into the near future (UNCTAD 2018). Furthermore, the country has received a substantial inflow of foreign direct investments in recent years (Joshua, Güngör and Bekun 2022) and statistics have showed that South Africa has overtaken Nigeria as the largest recipient of FDI inflow to the continent (UNCTAD 2020). Despite increased FDI inflows, South Africa's GDP has remained unchanged and various empirical studies have failed to establish an agreement with regard to evidence of the FDI-induced expansion nexus (Sunde 2017; Khobai *et al.* 2018; Joshua, Güngör and Bekun 2022). This observation is perturbing because the government's motivation in attracting foreign investors is based on the neo-liberal school of thought that affirms an automatic link between FDI inflows and economic growth due to the capital accumulation (Carlos 2009). The theory highlighted that FDIs enables technological transfers. The technological transfers would then contribute significantly to the increasing production levels through spillovers to local companies in the host countries resulting in economic growth.

Despite the extensively publicised theory linking FDI to economic growth, it is on record that South Africa faces a challenge of ensuring that FDIs results in higher economic growth which in turn leads to human development and poverty alleviation. There has been increases in FDI inflows in South Africa over the past years; however, little or no impact has been noticed on job creation, technological transfers, and economic growth. Economic growth seems to be an essential means for improving and maintaining the citizen's standard of living. Therefore, it is significant to explore the main factors believed to promote economic growth, so that significant measures will be taken to stir up the positive influencing factors.

This study, therefore, seeks to examine the effects of FDIs on South Africa's economy in terms of trends, challenges, governance and responsibilities. The findings of the study will provide an understanding of the ways to utilise FDI

spillovers to generate South Africa's economic growth. If the GDP rate increases, South Africa's inflation rate and interest rate will decrease, thereby alleviating poverty and unemployment in the long run. Furthermore, it is expected that the findings from the study will assist policy makers in framing investment policies, economic development agendas for the economy and positioning strategic economic plans with potential foreign investors so as to achieve higher domestic production and GDP growth.

1.3 Aim of the study

The aim of the study is to examine the effect of foreign direct investments on South Africa's economic growth and to establish how foreign direct investment can be made a valuable tool in enhancing economic growth.

1.3.1 Supporting objectives

In order to achieve the aim, the specific objectives are to:

- i. Empirically investigate the impact of foreign direct investments on economic growth using time series data for the period 1980 to 2020.
- ii. Quantify the determinants of foreign direct investments inflows into South Africa using time series data for the period 1980 to 2020.
- iii. Determine how foreign direct investments can be made a valuable tool in enhancing economic growth of South Africa.
- iv. Suggest policy options that may be considered to increase both foreign direct investments inflows into South Africa and economic growth based on the results of the study.

1.4 Significance of the study

Foreign investments are increasingly being recognised by researchers as a tool for increasing GDP in developing countries (Melnyk, Kubatko and Pysarenko 2014; Masipa 2018; Meyer and Habanabakize 2018). However, current studies have

found controversial results (Ahmad *et al.* 2021; Rehman *et al.* 2021; Joshua, Güngör and Bekun 2022). The differences are attributed to variations in estimation and measurement techniques, times frames and variables used in these studies (Uwubanmwun and Ogiemudia 2016; Ciobanu 2020; Osei and Kim 2020). The discrepancies in reported results motivated this study to fill the gap in knowledge on the impact of FDIs to the economy of South Africa.

Furthermore, the study findings may provide specific reasons why South Africa's economic growth is low despite the high inflow of FDI. The significance of researching why there has been low economic growth with increased foreign investments in South Africa would have policy implications. It will assist in providing economic policy strategies and better ideas that will spur economic growth within the country. Furthermore, the research findings may assist in providing a good understanding of the current existing policies, laws, and decrees as to whether they are viable in attracting more foreign investors in South Africa. The study major contribution to international business and globalisation is towards understanding the importance of foreign investments to economic growth for developing countries such as South Africa.

This study also seeks to contribute to the literature on economic growth by exploring how FDIs can be the solution to the missing link of GDP growth rate. In addition, the findings of the study will provide a base for further examination of FDI activities on a global base thereby contributing to the knowledge base of FDIs. The research will enable policy makers to strategically align economic policies that promote GDP growth rate. Once GDP growth rate is achieved this will result in inflation and interest rates to either go down or remain constant. This in turn will alleviate poverty and unemployment.

It is envisaged that the results of the thesis can be used to socially motivate investors and social entrepreneurs who are driven by both social good and economic profit. Both socially motivated investors and social entrepreneurs will be able to determine businesses or sectors to invest in thereby, contributing to the national welfare and alleviate poverty.

1.5 Overview of research methodology of the study

The study adopted a mixed research approach whereby both quantitative and qualitative data were collected and analysed within the same study. Mixed methods research draws on potential strengths of both qualitative and quantitative methods (Greene, Caracelli and Graham 1989) allowing the researcher to explore diverse perspectives and uncover relationships that exist between the intricate layers of the research objectives. Quantitative research was used to examine the impact of FDI on economic growth and the study applied the Auto Regressive Distributed Lag (ARDL) developed by Pesaran, Shin and Smith (2001). The ARDL co-integration was employed in this study because it does not need all the variables under study to be integrated of the same order and can be applied when the underlying variables are integrated of order 1(1) or order 1(0) (Pesaran, Shin and Smith 2001). The macroeconomic variables used in the estimation process include foreign direct investment (FDI), exchange rate and economic growth (GDP).

Unit root test were performed first before running the ARDL cointegration and causality analyses. For having strong robust and cross check, the study employed the Augmented Dickey–Fuller (ADF) test which checks whether the series data is nonstationary or not. Having established cointegration, ARDL can be estimated. To differentiate the short and long run effects of the variable and establish the effects of FDIs on South Africa economic growth, Vector Error Correction Model (VECM) was performed. The VECM model was performed to show the speed of adjustment from the short run equilibrium to the long run equilibrium and establish the effects of FDIs on South Africa's economic growth.

The variables that were used in the study are Real Gross Domestic Product (RGDP), Foreign Direct Investments (FDI) and the following macroeconomic variables were incorporated in the model: exchange rate (EXR), market size (MS), government size (GOVSIZE), trade openness (OPEN) and inflation (INF). The choice of variables was guided by previous studies that have analysed the impact of FDIs on economic growth and FDI determinants (Ridzuan, Ismail and Hamat 2017; Sehwat and Giri 2017; Rani and Kumar 2019; Tang, Tregenna and Dikgang

2019; Ciobanu 2020; Duodu, Baidoo and Lau 2020; Nwadike, Johnmary and Alamba 2020).

After the completion of analyses and observations of trends, interviews were scheduled with some of the experts in the field of macroeconomics. To enable a greater understanding of the expert's views on FDIs and economic growth, qualitative research was adopted in this study. The paradigm was chosen because it is more inductive, and it does provide an in-depth analysis. To obtain accurate information, interview questions were developed based on the literature review. Interviews were conducted in two parts, an informal discussion, and semi-structured questions. The interviews answered research objective three and the interview questions are included in Appendix E.

1.6 Outline of the study

The thesis is structured as follows:

Chapter One: this chapter provides an overview of the study, that is, the background, problem statement, aim and objectives, justification, research methodology and research design and the study structure.

Chapter Two: this chapter reviews empirical and theoretical literature on FDIs and economic growth and it is divided into two main sections. Theories of FDIs and economic growth are discussed in the first section. Second section provides literature on the impact of FDIs on economic growth.

Chapter Three: this chapter presents a summary of South Africa's economic growth and foreign direct investments. The chapter discusses trends in the country's economic growth and gives a comparative analysis of South Africa's growth relative to other emerging economies.

Chapter Four: this chapter outlines the research methodology and it is divided into two main sections. The first section discusses the rationale for the method used to

analyse secondary data. The section involves the collection and analysis of data variables obtained from various databases and testing the relationships of the variables using regression analysis. The second section presents the qualitative approach used to collect and analyse information on foreign direct investments and growth from key personnel and macroeconomic experts. The key experts are interviewed to validate the results and discuss the current South African economic environment regarding FDIs and economic growth.

Chapter Five: this chapter presents the empirical results that were obtained from the analysis. In addition, analysis of the interviews that were conducted are presented in this chapter.

Chapter Six: concludes the study and suggests policy recommendations that could be useful for future research. The next chapter provides theoretical literature review on economic growth and FDI.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The relationship between Foreign Direct Investments (FDI) and economic growth has remained a critical issue in the economic literature. Several studies have examined this relationship and most of them were conducted in developed nations (Pegkas and Tsamadias 2016; Hyungsun and Miguel 2017; Ridzuan, Ismail and Hamat 2017; Haider *et al.* 2021; Rehman *et al.* 2021). There is a growing interest in studies that examine the relationship between these two variables in developing countries. Despite some notable increases in literature from developing countries, little empirical research has been done in South Africa on the subject and the available academic literature is scanty.

Studies by (Okafor, Ugochukwu and Chijindu 2016; Sunde 2017; Sokang 2018; Joshua and Alola 2020; Ahmad *et al.* 2021; Rehman *et al.* 2021) show that the relationship between FDI and economic growth found controversial results. These differences were attributed to variable measurements technique employed in the studies, the study variables, estimation techniques and time frames (Uwubanmwun and Ogiemudia 2016; Ciobanu 2020; Osei and Kim 2020). The revealed discrepancies in reported results calls for an investigation relating to the relationship between FDI and South Africa's economic growth. In doing so, this study attempts to fill the gap on the impact of FDIs to South Africa's economic growth.

The chapter presents theoretical and empirical literature on economic growth and FDI addressing research objective two. The chapter is structured as follows: first section discusses theoretical literature on economic growth followed by FDI theories. Second section discusses the empirical literature on the impact of FDIs on economic growth followed by an analysis of FDI determinants. The last section groups the empirical literature into three parts, that is, developed countries, developing countries, and South Africa.

2.2 Theoretical literature

A plethora of theories on economic and foreign direct investments exist (neoclassical growth theory; product life cycle theory; endogenous growth theory; Dunning eclectic theory and the industrial organisation theory) on economic growth and FDI exist. These theories are long-standing and they present the impact of FDI to the host country. They also articulate the reasons why foreign investors would invest in foreign countries. The next section presents and discusses some of these theories.

2.2.1 Economic growth theories

In assessing the influence of FDIs on economic growth and channels of the influence, economist came up with several estimating techniques. These techniques comprises the inclusion of FDIs in estimating the host country's economic growth usually referred to as "growth empirics" (Blomstrom, Lipsey and Zegan 1996). The effect of FDIs on the growth of the economy can either be direct (increased employment, improved productivity, technology and knowledge transfer) or indirect (transition of technology, knowledge and know-how through license, imitation and job training). Furthermore, Carp (2012) highlighted the possibility of economic growth influencing foreign investments, in literature this is referred to as inverse impact, that means the economic growth influences foreign investments.

The neoclassical growth model provides the outline for analysing the theoretical and empirical FDI growth relationships (Ozturk 2007; Kida 2014). According to Elboiashi (2011), growth theories help to unpack factors that affect economic growth by providing a predictive framework, mechanism, models, and explanations. This section discusses the two basic theories "neo-classical growth theory" and the "new endogenous growth theory" summarised in figure 2.1.

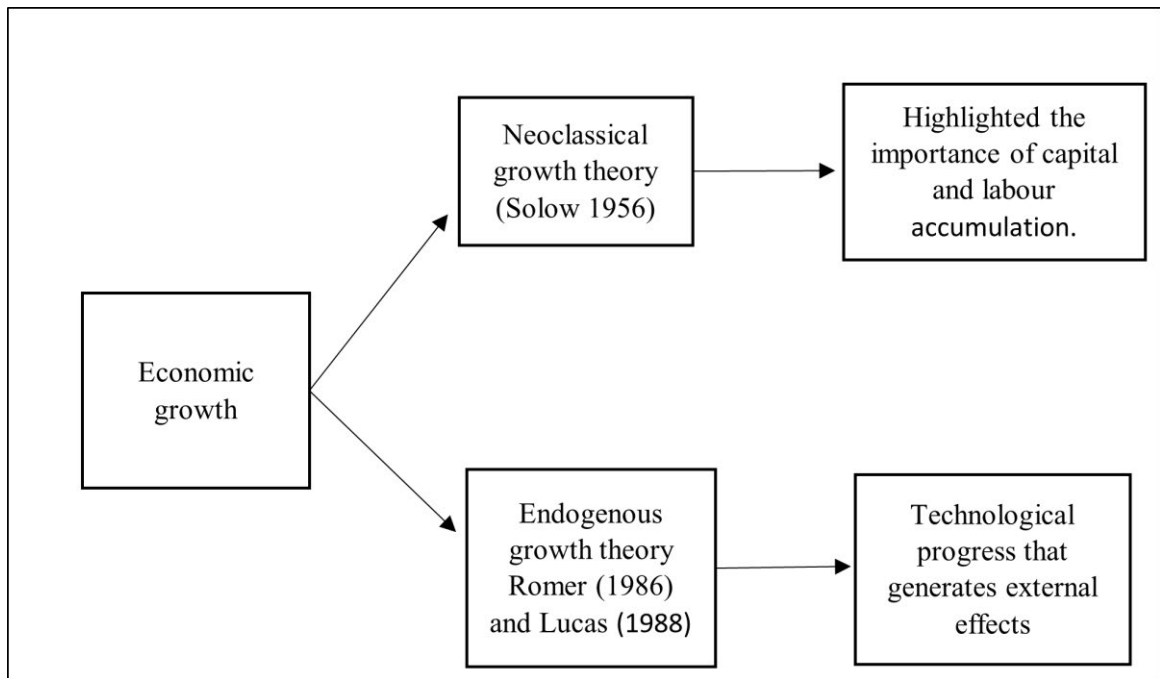


Figure 2.1: Economic growth theories and their theoretical emphasis

Source: Author's compilation

2.2.1.1 The neoclassical growth theory

The theory was developed by Robert Solow and Trevor Swan in the year 1950. According to the neoclassical theory, the effect of FDIs on growth is identical to domestic investments and in the short term, FDI influences the growth of the economy. The model suggests that the economic growth rate improves due to greater share of gross domestic product allocated to investments. The more the physical capital stock depreciates at a higher rate, the growth rate decreases (Solow 1957), whereas, growth in technological developments and total factor productivity increase the growth rate. The theory is based on the assumptions that technological developments are exogenously determined and there is similarity across nations. Also, the theory is well-known for employing the Cobb-Douglas production function, which is based on three assumptions, (i) constant labour forces; (ii) Savings (S), Investment (I), are equivalent: and (iii) output (Y), is determined by the interaction of capital and labour

$$Y = F(K, L)$$

2.1

If other factors are held constant, the production function in equation 2.1 assumes diminishing returns to scale or constant returns to scale of the variable factor (Mankiw 1995). These assumptions are used to explain why the economy attains stable growth levels when investment requirement and capital per worker are in equilibrium. In the model, increases in labour supply and/or investment increases production. Furthermore, the model affirms that productivity increases because of investment in machinery and equipment and labour supply increases. According to Burda and Wyplosz (2001), technological developments are considered as the main contributor of productivity through innovation and inventions. Increase in capital stock, either human or physical capital are capable of increasing labour productivity. Investment in real capital results in physical capital and human capital emanates from investments in human through training and education.

Criticism of the neoclassical growth model (De Jager 2004; Herzer, Klasen and Nowak-Lehmann 2008) cite several shortfalls of the model. Firstly, the assumption of perfect competition assumes markets to self-correct and achieve equilibrium as well as the maximum allocation of resources through the 'invisible hand'. The failure of markets to clear, results in uncertainty and information becomes imperfect. This results in accruals in the market and unpredictability in expectations as investments plans are reduced (Jones 1998). The change in investments plans does affect economic growth negatively.

Secondly, the assumption that technological development is exogenously determined and across the world, the level of availability is the same is unrealistic. This assumption is unrealistic because technology is not evenly distributed across the world. Technological differences across the world explains why some countries have better resources than others do. In a perfectly competitive market, the model technology is tradable and available freely (Stonier and Hague 1975) and in the long run it is endogenously determined. According to the neoclassical views, greater emphasises has been attached to technological change and it is significant than the capital accumulation (Herzer, Klasen and Nowak-Lehmann 2008).

In closed economies, neoclassical growth models noted that output growth is entirely exogenous and is equal to the labour growth rate as well as technological

progress. Baldwin (1992) extended the Solow model and showed that allowing free trade to economies from autarky does have temporary effects on output growth rate. The neoclassical growth model weakness is that it does not explain the exogenous variable determinants, predict absolute convergence in cases whereby developing countries catch up to developed countries because of technology and diminishing marginal product of capital.

Regardless of these criticisms, the neo-classical growth model is an essential tool in explaining the effects of FDI on economic growth. De Jager (2004) explained that FDIs bring in new technology to the host country which results increases in labour and capital productivity, leading to more consistent returns of investment, and growth. In agreement was the study of Barro and Sala-I-Martin (1995) who proved the existence of a positive relationship between economic growth and capital accumulation and Herzer, Klasen and Nowak-Lehmann (2008) established that FDIs fuel economic growth through enhancing domestic investment.

Based on the discussion above, the neo-classical growth model has shown that FDIs result in growth of the host country through increases in the efficiency of investment and technological developments. The criticism of neoclassical growth model has led to the development of the endogenous growth theory.

2.2.2.2 Endogenous growth theory

Romer (1986) and Lucas (1988) developed the endogenous growth theory. To ensure consistency with the traditional neoclassical growth theory assumptions, diminishing marginal returns to factor inputs assumptions were adopted by the “new growth theory”. Furthermore, the first version of the endogenous growth theory was the AK theory. According to Romer (1986) and Lucas (1988), the equation below reflects the essence of the endogenous growth theory.

$$Y = AK$$

2.2

Where, Y is the aggregate output, A indicates technological factors and K includes human and physical capital. The AK theory noted that in the long run, economic growth is dependent on the savings rate. For example, if a fixed fraction of output (s) is saved and a fixed rate of depreciation δ , the aggregate net investment rate is:

$$\frac{dK}{dt} = sY - \delta K \quad 2.3$$

Combining with (2.2) the growth rate is as follows:

$$g \equiv \frac{1}{Y} \frac{dY}{dt} = \frac{1}{K} \frac{dK}{dt} - sA - \delta \quad 2.4$$

Thus, increases in saving rates results in higher growth rates that are permanent.

The model leaves an open possibility that increases in human capital and physical capital could result in sustained growth rates. However, the neoclassical view was criticised by the endogenous growth theory Romer (1986) and Lucas (1988) through the proposition of channels which technology progresses. The endogenous growth theory assumes technology to be endogenously determined. Technology is envisioned in the model through the introduction of research and development that generate new ideas. These new ideas are then used in the manufacturing of capital goods allowing researchers to generate profits from their efforts. According to Romer (1994), the final goods are also used as factor inputs in the sector that would have produced them.

Jones (1998), noted that new ideas changes technology in the production process resulting in production inputs being more productive. However, the theory has been criticised; firstly, changes in technology are created for long run growth generation; secondly, improvements in technology is determined by the response of agent to market incentives and, thirdly, they had the perception that production costs are incurred once and ideas can be used over time with any costs being incurred.

Furthermore, the theory postulate that positive externalities prevent marginal product of capital from decreasing (Romer 1986). Unlike the neoclassical,

technological development is viewed as a positive externality and human capital development through skills development and knowledge accumulation contributes positively to output growth. In addition, companies engaging in research and development cannot keep the benefits to themselves because of spillovers effects.

The impact of economic integration in endogenous growth model is considered significant. Countries that isolate themselves from free flows of knowledge, new ideas and new technology suffer from inaction (Romer 1994). Economies that are more successful are the ones with high rates of human and physical capital accumulation that is technological based (Aghion and Howitt 1987; Romer 1990, 1994). In addition, economic growth is complemented by instabilities of relative sizes in individual sectors (Romer 1986; Lucas 1988).

The growth theories reviewed above are both relevant to this study. The traditional neoclassical and the new endogenous growth theory use a production function-based approach to identify factors that contributes to growth of the economy. According to neoclassical theory, the fundamental determinants of economic growth are labour and capital. The theory, however, has a weakness as it fails to explain the exogenous variable determinants and also to predict absolute convergence in cases whereby developing countries catch up top developed countries because of access to technology (Al-Ubaydli and Kealey 2000). Also, since it is based on assumptions that cannot be measured accurately, it is difficult to validate with empirical evidence (Al-Ubaydli and Kealey 2000).

The endogenous growth theory outlines that those positive externalities such as research and human capital development prevent decreases of marginal product. In South Africa spill overs effects have resulted in increases in technological transfers in the motor industry (Makwembere 2014). If companies are not enjoying the benefits of research development, then there is need for government incentives to come in play. The government introduced the Motor Industry Development Programme (Flatters 2010) to incentives the manufacturing of motor vehicles.

2.3 Foreign direct investments

Foreign direct investment is defined as the acquisition of at least 10% stake in a company outside the investor's country of residence with the intention of attaining a say in the operation and manufacturing of the company (SAIIA 2019). Literature identifies two types of FDIs, namely horizontal FDI and vertical FDI (Hill 2012). Figure 2.2 below illustrates the international capital flows with more emphasis on the two types of FDIs. Horizontal FDI occurs when a company invests in an international market that is in the same industry with it. Thus, horizontal FDI involves the manufacturing of foreign goods that are similar to those produced in the firm's home market. There is duplication of activities by the multinational in different countries and they arise because of costs that are involved in serving foreign countries through exports trade barriers and transportation costs. Hence, it is more profitable for the company to serve the international market by producing locally rather than exporting from their home countries (Hill 2012). As a result, multi-plant companies that are horizontally integrated produces similar goods in different countries for local sales. A number of Multinational Enterprises (MNEs) such as Coca Cola, Pepsi and Kodak have expanded internationally by a way of horizontal FDI.

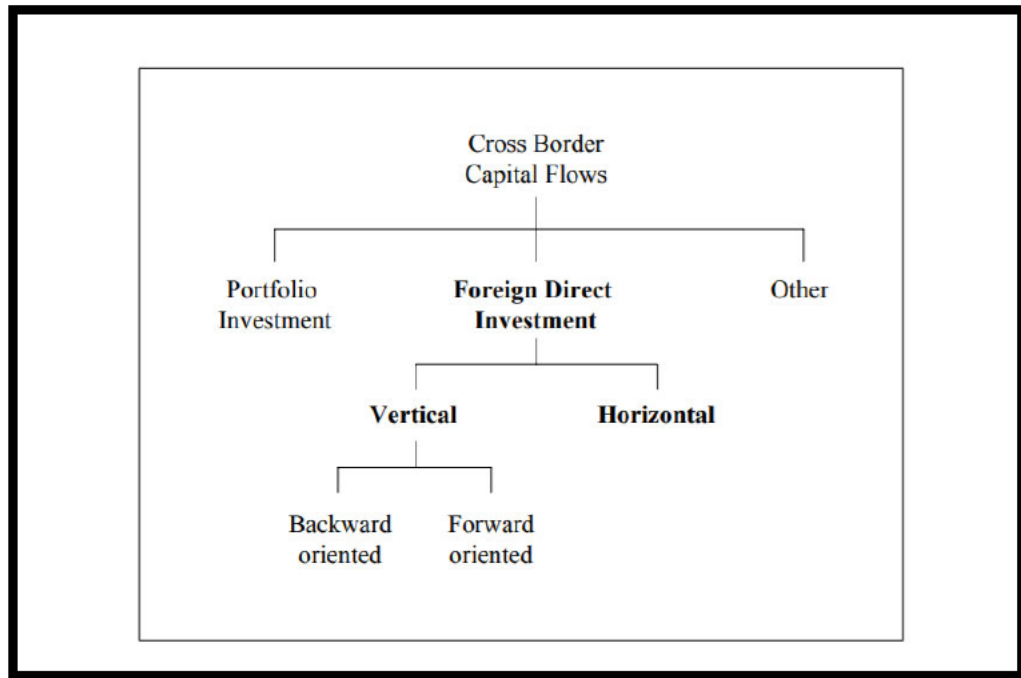


Figure 2.2: Structure of International Capital Flows

Source: Hill (2012)

In contrast, vertical FDI is whereby a business establishes internationally the production process and locating production stages in the country where it can be done relatively cheap (Hill 2012). Thus, vertical FDI involves multinational companies fragmenting their production process geographically. The production process is separated vertically by outsourcing abroad some of the production stages. The essence behind vertical FDI is that there are multiple stages that are involved in the production process and they have different input requirements in different countries. The variation of input prices across countries enables the firm to become more profitable by splitting the production chain. Thus, in vertical integration companies invest in foreign firm because they want to minimise the factor costs.

In addition, Figure 2.2 shows that there are two groups of vertical FDI: backward oriented and forward oriented. Backward FDI involves the establishment of a supplier by the multinational company who supplies input goods to its home country's company. Forward FDI involves building a foreign affiliate that draws inputs from the parent company for own production, thus the company acts as a distributor (Hill 2012).

2.4 Theories on foreign direct investments

The FDI phenomenon has been explained by various theories. These theories are classified into microeconomic and macroeconomic FDI theories. Microeconomic theories focus on the variables that influence the company's decision-making process. Such characteristics include market imperfections, investment location and market power. Macroeconomic theory explains a country's characteristics that determines FDI inflows. This section discusses the following microeconomic theories; Dunning Eclectic theory and Product Life Cycle theory. The macroeconomic theory discussed is the Industrial Organisation Theory. Figure 2.3 summarises the selection of FDI theories discussed in this study and their theoretical emphasis.

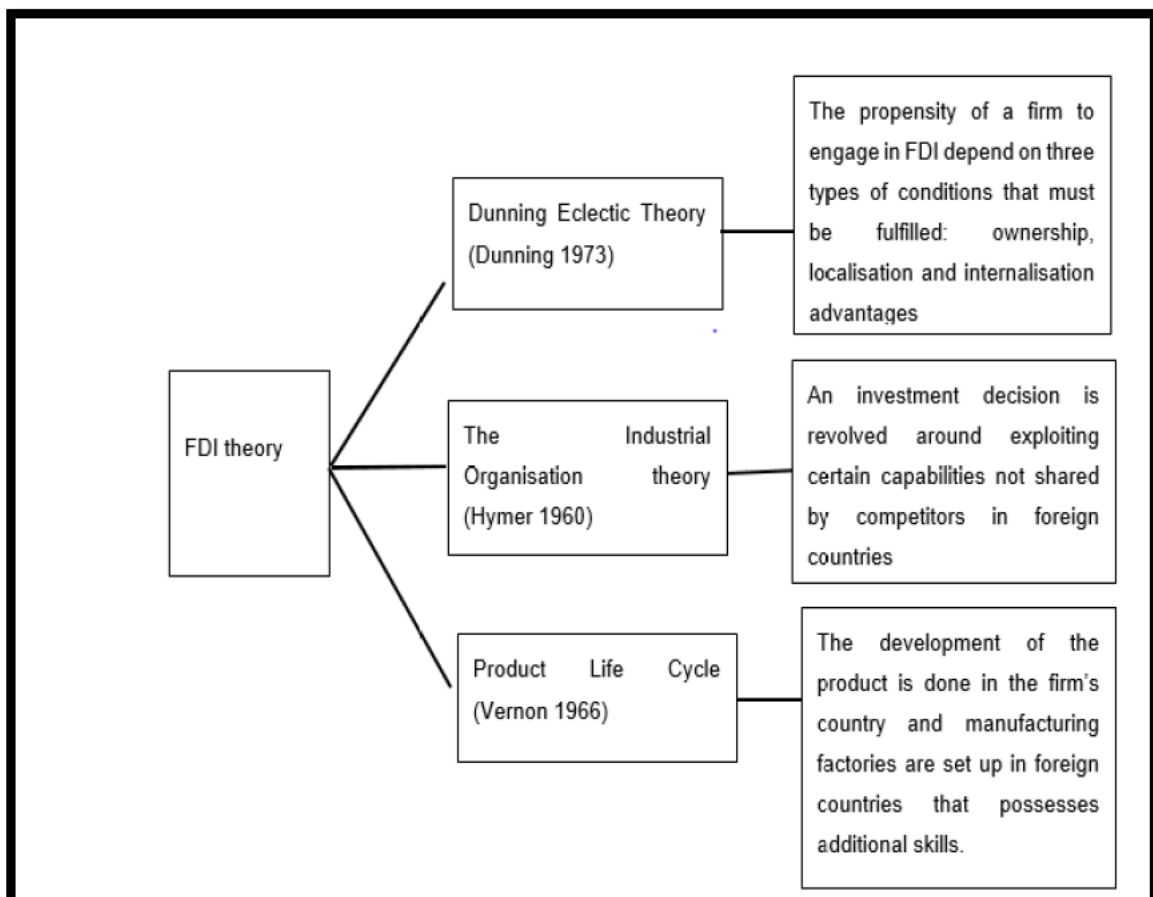


Figure 2.3: FDI theories and their theoretical emphasis

Source: Author's compilation

2.4.1 Dunning eclectic theory

Dunning (1973) developed the Dunning Eclectic theory, and it is regarded as a major contribution to economic literature since it integrates previous traditional trade and internalisation theories of FDI as well as complement these theories with a new dimension – location (Qui 2019). It offers a framework that determines the patterns of production owned by foreign investors and foreign owned production undertaken by local companies in the host country. The eclectic theory explains the why (reasons), the where (location) and the how (the way) international operations are carried out by multinational enterprises. According to Hymer (1960), the theory's theoretical goal is to explain why MNEs exist and why they are more profitable compared to domestic countries. The theory identifies three pillars, Ownership, Location, and Internalisation (O+L+I) which make up the different questions that foreign investors seek to answer. These identified pillars are shown in figure 2.4 below.

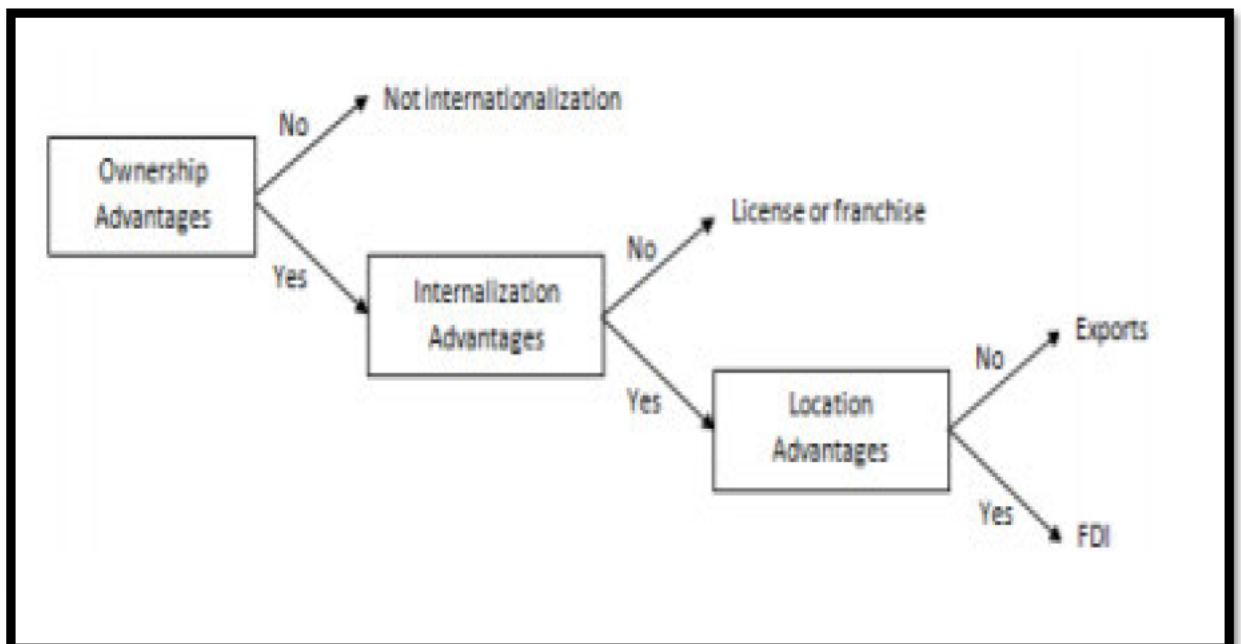


Figure 2.4: OLI paradigm

Source: (De Matías Batalla 2014)

The company owns ownership advantages, and they are transferable to other businesses out of the country. Dunning (1988b) hypothesizes that foreign countries are able to overcome operational costs in a foreign country because of the company's specific advantage they have. Brand name, competency, and economies of scale are some of the ownership advantages.

Location entails that a company's decision to move or to invest abroad is based upon factors in the foreign country's specific advantage and production factors (Dunning 1973). For example, land and labour are very important in establishing the MNE location for them to be able to generate profits. The choice of investment location depends upon various factors such as political, economic, social and also whether it is profitable to invest. Rugman (1981) noted that location advantages analysis is inherent to the fact that resources are non-marketable, thus transferring them to another location is impossible.

The review of ownership and location advantage in Dunning's study complement some of the neoclassical theories mainly those that refer to allocation of factors (Hymer 1960; Posner 1961). On the other hand, when compared to other theories the Eclectic was different because it considered the factors to be specific to the company and as such they were able to move them even though imperfectly (Dunning and Lundan 2008). One of the differing elements in Dunning was his emphasis on the imperfect transference of ownership advantages that could not allow companies to transfer their specific competitive resources abroad (Rugman 1981).

Internalisation refers to the "internalisation advantages" on how to invest out of the country. MNEs when entering a foreign country, they have many options that they can choose from and these vary from arm's length transactions to the hierarchy (Ferreira, Pinto, Serra and Santos 2018). If the markets were performing poorly, the MNE would choose internalisation because the external route has higher transactional costs. An MNE could encounter additional costs compared to the local competitors in the foreign country.

Dunning (1988a) identified some costs as follows:

- i. Culture and language differences
- ii. lack of information on local markets
- iii. increases in costs of operating at a distance.

According to Ferreira *et al* (2018), internalisation advantages are benefits that a company enjoys when they exploit internally their ownership advantage, rather than through market transactions thus, internalisation advantages explain the existence of MNEs.

Furthermore, the theory suggests that a company should have distinctive advantages for it to be competitive in foreign markets. Having distinctive advantages enables the company to overcome operational costs that are associated with foreign markets. These advantages are referred to as firm specific advantages and they assist the company to generate higher profits or minimise costs compared to domestic companies Three types of ownership advantages were identified by Dunning (1997)as:

- i. technological advantages,
- ii. Economies of scale,
- iii. Monopolistic advantages that occur because of ownership of scarce resources or privileged access to inputs.

Summing up, the ownership advantage is the main highlight of the eclectic theory. The theory suggests that a company should have a distinctive advantage of overcoming costs associated with operating in a new country for them to be more competitive. The eclectic theory in this regard is considered an important contributor to FDI discussions. Like the other models, the theory has weaknesses. The OLI variable has been suggested to be independent of each other and it has been noted that separation of the variables is impossible since they work hand in hand. Furthermore, the eclectic paradigm was also criticised that it loses operational practicality because of so many variables that are included. According to Nayak

and Choudhury (2014), Dunning accepted this fact and indicated that incorporating different motives behind FDI into a generalised theory was an inevitable consequence.

In this study, the eclectic theory is relevant because it identifies the determinants of investing in foreign markets as depicted in the OLI variables. For example, location advantage enables the foreign investor to select the location where they would want to build their factory. Usually, for ease of transportation these locations are close to the FDIs harbour. In addition, FDIs have ownership advantages that includes technology, economies of scale benefits and brand name.

2.4.2 Industrial organisation theory

Developed by Hymer (1960), the Industrial Organisation Theory suggested that the decision to invest abroad rest on the individual company's characteristics rather than the country's and state capital availability. The theory explained international production in detail, and the works of (Knickerbocker 1973; Caves 1974; Dunning 1974; Cohen 1975) among others supported this. Two points were emphasised by the theory. First, companies venture into MNEs because they can maximise productive capacities utilizing competitive advantage in a foreign market. Secondly, some industries encourage companies to internationalise more because of competitive structures.

In industrialised countries, Caves (1974) hypothesised that profit rates tend to decrease because of domestic competition, thus enabling companies in underdeveloped economies to engage in foreign investments. The key requirement of the theory consists of the removal of competition and tradable ownership advantages for an individual company in a given industry to invest abroad. The essence of Hymer's theory according to Nayak and Choudhury (2014), is that foreign companies have to compete with local domestic companies that have consumer preference, culture, legal system and language advantages. Furthermore, there is the element of foreign exchange risk to foreign companies.

For international investment to be profitable, some forms of market power should eliminate the disadvantages discussed above.

Furthermore, Hymer (1960) argued that multinational enterprises are found in imperfect market, where companies do not have financial ownership advantages. This implies that MNEs determinants lie within the individual company as opposed to availability of capital in a country as indicated by the eclectic theory. In agreement with Dunning (1973), Hymer (1960) noted that foreign investors are faced with risks and additional costs when investing in foreign countries. Thus, a company should have specific advantages if it seeks to invest in foreign countries through FDIs in order to gain a competitive advantage over the local firms. Notably, these advantages include low-cost funding accessibility, technological developments, marketing and managerial skills, and exchange rate disparities. A significant feature of this theory according to Caves (1971), is that it enunciates the point that advantages are transferred efficiently in different units of the company regardless of the fact that the company might be located in one country or different countries.

Yamin (2000) criticised Hymer's theory that it only discusses "how" and "why" companies invest in foreign countries and does not take into account how companies operate in foreign markets. According to Yamin (2000), Hymer (1960) assumed that companies only react to structural markets failures whilst in reality companies are proactive to advantage usage. Hymer (1960) believed that the company's main objective is to expand and maximise profits whereas, Yamin (2000) were of the opinion that the company's main objective is to improve internal efficiency through acquiring and development of assets. Hence, it is believed that because of size not ownership advantage oligopolies were able to succeed since the purpose of oligopolies is to remove conflict.

In this study, the theory is relevant as it outlines the reasons why foreign companies are involved in setting up value added operations in foreign countries depending on the characteristics of the company and the industry too. Thus, companies that seeks to invest through FDIs should have a competitive edge over the local companies based abroad because of accessibility to lower, research and development, exchange rate differentials and technology.

2.4.3 Product life cycle theory

Raymond Vernon developed the Product Life Cycle theory. According to Vernon (1966), MNCs venture into FDIs because of market knowledge, innovations and competition. The PLC theory shows how firms make decisions regarding the location of production. The theory stipulate that the development of the product is done in the firm's country and manufacturing factories are set up in foreign markets that possesses expertise compared to those of the firm. For FDIs to happen, the mode stipulates that there are four stages in the product life cycle and these include growth, innovation, maturity, and decline.

Innovation is the first stage of the product, where the new product has been developed successfully for local market (Vernon 1966). The product is non-standard at this stage and its inputs and final specifications are uncertain. Firstly, the producers concern is with the uncertainty of their product and the degree of freedom when they want to make changes to their product. Secondly, price elasticity of demand is relatively lower. Thirdly, effective communication is greatly needed between producers and suppliers and at times competitors. During the stage the sales are being undertaken in the local market and improvements to the product are done. This stage will end when the product has been accepted and there has been growth in sales. However, Zlatan and Stiff (1973) noted that some new products take time to diffuse into the market, whereas some products bypass this stage. The diffusion rate is determined by the product's availability and information. The product must not only be readily available for purchase, but the products benefits, and description should be made aware to the buyer.

The second stage is growth, increase in the demand of the product are noted in this stage. During this stage, the producer can improve the production process and they are faced with imitation products from other producers. As a result, consumers will become price sensitive, and the producer will be faced with challenges of cost saving as their original products will be competing with imitations product that are being offered at lower prices.

During the third stage, the product will reach maturity and the cost is reduced. Competition will continue to rise from producers of imitation products. According to Vernon (1966), producers should consider lowering labour costs so as to narrow their profit margins. The magnitude of this stage will result in production location being moved to lower cost labour countries as a form of foreign investments. Vernon noted that moving the production of goods and services to a foreign country tends to reduce costs that are associated with production. Figure 2.5 shows the stages involved in the PLC.

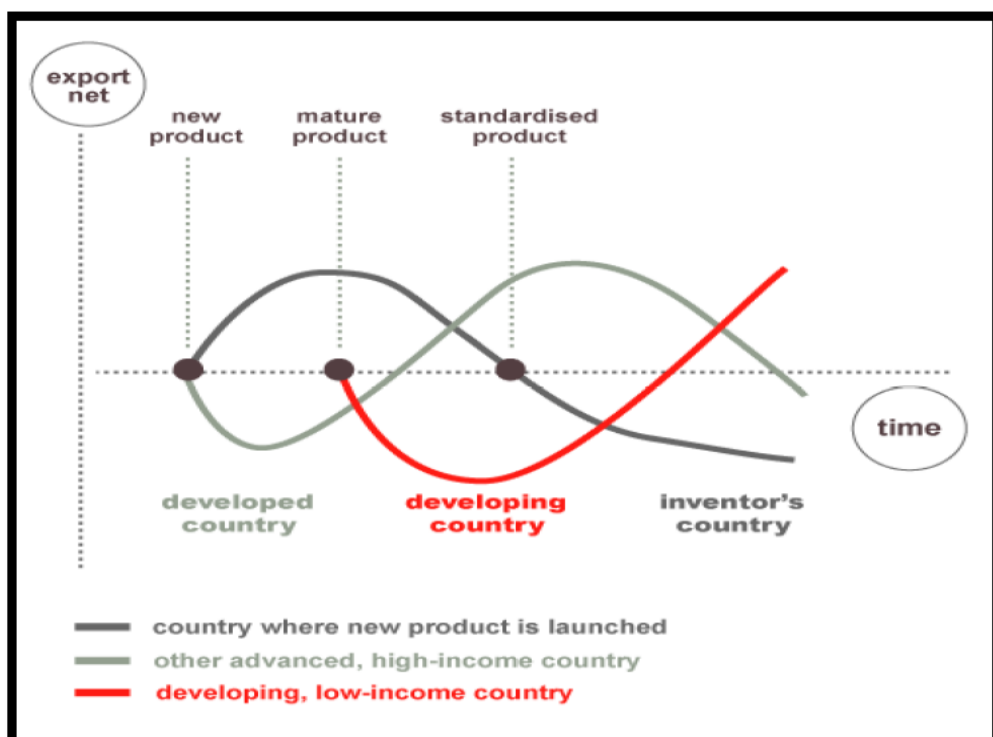


Figure 2.5: Product life cycle

Source: Vernon (1966)

Despite its extensive use, the PLC theory was rejected by Storper and Walker (1983: 15) as being too generalised as it failed to consider "*the particularities of industries as a necessary prism through which structural forces are refracted into specific outcomes*". Yap and Rasiah (2019) noted that the PLC theory failed to explain the trade patterns that occur around the world through innovation and manufacturing. International companies, for example, they conducted research in developing countries where high skilled labour force is considered cheaper.

Gao and Tisdell (2005) noted that when cost pressures become intense, companies are investing in foreign countries preferably developing countries where local production is supported by demand in that country. Vernon's theory, however, failed to explain why the undertaking of FDIs by companies at such times is more profitable rather than exporting from their home countries Hill (2012).

The fact that foreign country's demand is able to support production of good locally, it does not mean that undertaking local production is much more profitable. Hill (2012) further explained that production in the home country may still be more profitable than the foreign country, in that case the company would rather export to that country and enjoy economies of scale that arise from serving the international markets. Otherwise, licensing a foreign company to carry out production on their behalf might be more profitable for the company to produce its products for sale in that country (Hill 2012). The PLC ignores all these options and argues that FDI will occur as long as the foreign market is big enough to support local production.

2.5 Determinants of foreign direct investments

This section discusses the empirical literature on the determinants of FDIs. The most common determinants of FDI are labour cost, labour productivity, the infrastructure, trade openness, tax, market size, and exchange rate (Dahir 2017; Udi, Bekun and Adedoyin 2020; Ahmad *et al.* 2021; Joshua, Güngör and Bekun 2022). However, a review of literature identified market size and trade openness as key drivers of FDI (Abala 2014; Gupta and Singh 2016; Ridzuan, Ismail and Hamat 2017; Asiamah, Ofori and Afful 2019; Omoke and Opuala 2021). Mixed evidence has been obtained on the determinants of FDI across the world (Hlongwana 2015; Dahir 2017; Ahmad *et al.* 2021; Rehman *et al.* 2021) and the determinants found to be important to a country may not be applicable to other countries. Similarly, determinants also differ across regions of the globe. Figure 2.6 presents the most common determinants of FDI.

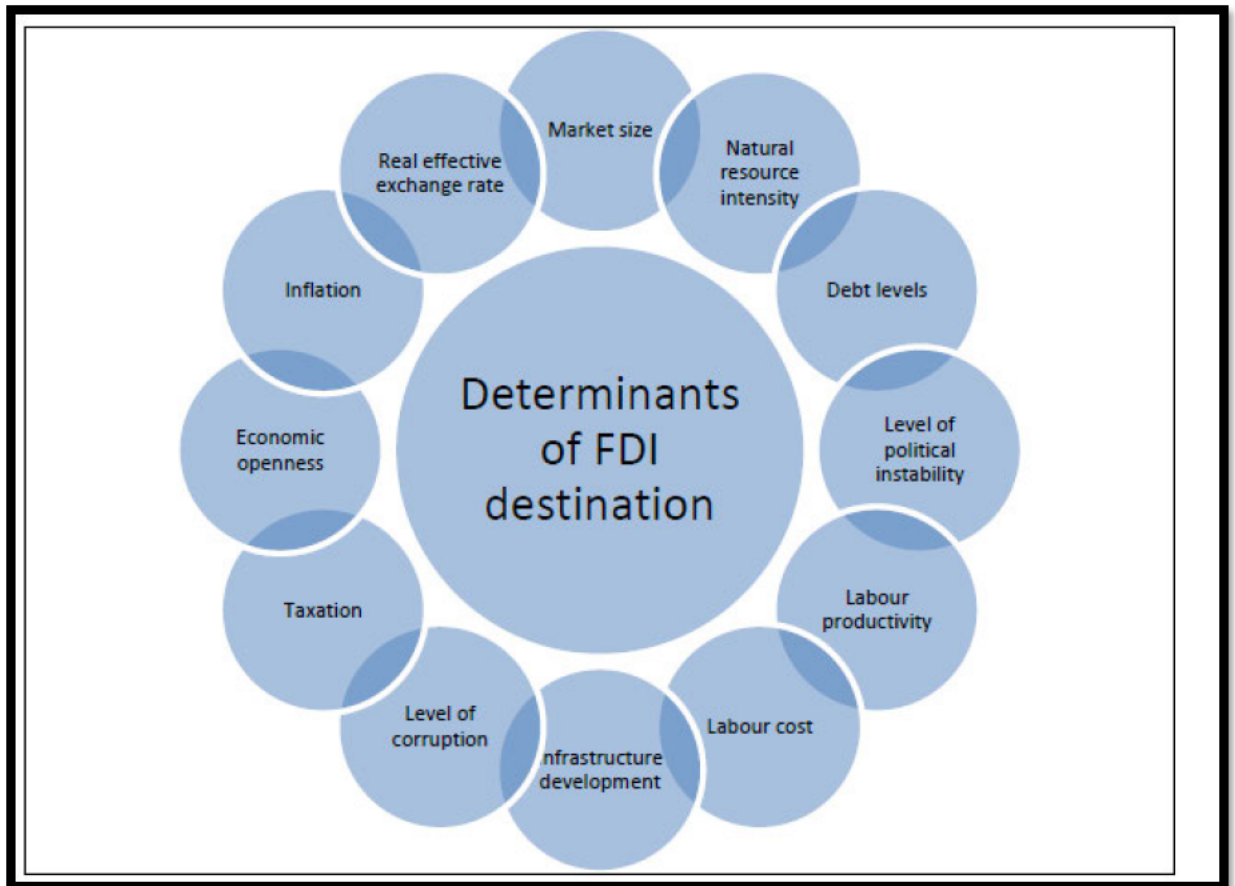


Figure 2.6: Determinants of FDI

Source: Alam and Shah (2013)

2.5.1 Market size

In developing countries FDIs seek to tap the domestic markets, thus market size is important for FDIs that are market oriented (Kumari and Sharma 2017). In this study, market size is defined as: *the attractiveness of market, which can be reflected by the GDP per capital* (Kinuthiaa and Murshed 2015). Market size is a good indicator of how sophisticated the domestic market is (Kumari and Sharma 2017). In addition, market size is an element to FDIs as it promotes local sourcing easier, greater profitability and diversity of resources. Thus, large market size enables foreign companies to attracts more FDIs as it enables foreign countries to enjoy increased sales and profits (Kumari and Sharma 2017; Asongu *et al.* 2018). Khobai *et al.* (2018) noted that host countries that have large market size promotes horizontal FDIs and vertical FDIs are indifferent to the size of the market.

Existing literature on the impact of market size on FDI is inconsistent and contradictory. Studies by Klaew *et al.* (2016); Akpan and Eweke (2017); Asongu *et al.* (2018); Şıklar and Kocaman (2018); Jaiblai and Shenai (2019); Shahbaz *et al.* (2021); Joshua, Güngör and Bekun (2022) found that market size does impact FDI positively. Whereas, Dahir (2017) found that market size impacts FDI negatively. The relationship between market size and FDI can be negative when cost incurred in transporting goods and services to foreign markets is greater than the costs incurred when production is within the domestic market (Shahbaz *et al.* 2021)

2.5.2 Trade openness

Trade openness alleviates the movement of investment or resources in and out of the country (Dahir 2017) and it is symbolized by the ratio of export plus import divided by GDP. FDI depends on the openness of the host country which can increase or decrease inflows of FDI (Gupta and Singh 2016; Keho and Miao 2017; Ridzuan, Ismail and Hamat 2017; Şıklar and Kocaman 2018; Omoke and Opuala 2021). For example, the country's openness to export does attracts FDI that are export oriented. Therefore, trade openness of the host country does have a positive impact on FDI inflows and economic growth. Studies by Ridzuan, Ismail and Hamat (2017); Sehrawat and Giri (2017); Rani and Kumar (2019); Tang, Tregenna and Dikgang (2019); Ciobanu (2020); Duodu, Baidoo and Lau (2020); Nwadike, Johnmary and Alamba (2020) found that trade openness of a host country have a positive impact on economic growth. In contrast, studies by Lawal *et al.* (2016); Malefane and Odhiambo (2019); Tang, Tregenna and Dikgang (2019), provided varied results they found that trade openness had no significant influence on economic growth.

2.5.3 Infrastructure facilities

The availability and quality of supportive infrastructure especially water, electricity, transportation, and telecommunications are essential for smooth operation of trade activities and production. Literature has suggested that when some level of

economic infrastructure is available, the effect of FDIs on economic growth is maximised (Asongu *et al.* 2018). Infrastructure that is well developed reduces overhead costs which tends to influence the investors location decision (Shah 2014; Sehwat and Giri 2017). Furthermore, Nguea (2021) noted that improved infrastructures provide a favourable business environment for profit-maximizing foreign investors and an important engine for sustainable economic growth.

In developing countries, infrastructure functionality is important for promoting economic activities (Khan and Kim 1999), as most foreign investors are constantly communicating from headquarters to their subsidiaries, they do require improved communication infrastructure. According to Shah (2014), infrastructure availability influence foreign investors' location decision and improved infrastructural facilities are key drivers of FDIs. Thus, undeveloped infrastructure hampers access to both "local and international markets" which eventually deters the growth of FDIs. In summary, various studies have indicated that infrastructure that is well developed does attracts FDIs (Kumari and Sharma 2017; Wekesa 2017; Asongu *et al.* 2018; Jaiblai and Shenai 2019; Nguea 2021; Shahbaz *et al.* 2021). Therefore, the positive impact of infrastructural developments does promote FDI inflows in developing countries.

2.5.4 Macroeconomic stability

The host country's macroeconomic stability is measured by inflation, interest rates, exchange rates and government budget balance. A country that has good financial stability, fiscal prudence and that is able to manage interest rates and inflation rates without abrupt fluctuations gains investors' confidence (Okafor, Ugochukwu and Chijindu 2016; Ogono, Nelson and Odhiambo 2017; Şıklar and Kocaman 2018). Hussen (2014) identifies macroeconomic conditions as essential but not enough in promoting growth in the economy.

The exchange rate has a significant impact on FDIs and a depreciation of the exchange rate makes production costs and local assets cheaper, thus it promotes more FDIs (Tan, Xu and Gashaw 2021). Whereas exchange rate appreciation

discourages the flow of FDI inflow, they however, increase production costs. On the other hand, high and unpredictable inflation rates cripple business. Investors prefer economies that are financially stable and have less degree of uncertainty (Kinuthiaa and Murshed 2015). Inflation discourages savings and foreign investments, and this is evident in African countries, Pacific countries, and the Caribbean countries (Morrissey 2008).

Literature shows that good macroeconomic policies are important determinants of long run growth whereas high inflation discourage FDIs (Iamsiraroj 2016; Asongu *et al.* 2018; Şıklar and Kocaman 2018). A study conducted in Ghana by Asiamah, Ofori and Afful (2019) found that inflation rate, interest rates and exchange rate have negative effects on FDI. The study highlighted that most African countries have implemented exchange rate policies that are governed by severity measures. Generally, these policies were implemented without proper analysis of the impact of exchange rate on foreign investments. Therefore, it is essential to implement corrective measures that can be adapted by the economic structures in Africa. This would enable African nations to capture the full impact of exchange rate on foreign investments and other economic aggregates.

The determinants discussed above are of great importance in determining the levels of FDI that a country receives. A positive relationship between the determinants of FDI and FDI inflows has been proven in literature. Although some of the above determinants like market size cannot be influenced and can however, have significant effects on the flows of FDIs.

2.6 Relationship between foreign direct investment and economic growth

Ridzuan, Ismail and Hamat (2017), noted that the empirical evidence on the relationship between FDI and economic growth is decisive, although there is a general belief that FDIs results in growth of the host country's economy. The empirical literature found weak support of an exogenous positive effect. Literature indicated that a host country might be limited by the local conditions, that is, absorptive capacities (such as lack of skilled workforce or educational level) for them

to take advantage of FDI externalities (*Drigă* 2011). Therefore, the host country should ensure that they have skilled workforce, human capital resources, good infrastructure, and financial systems for them to be able to enjoy the benefits of FDIs.

Most studies in the empirical literature have used panel data or times series data to conduct causality test, for example, (Emmanuel 2016; Ntembe and Sengupta 2016; Kumari and Sharma 2017; Şıklar and Kocaman 2018; Duodu, Baidoo and Lau 2020; Tan, Xu and Gashaw 2021). The impact of FDI inflows differences and economic growth disparities in developing countries has created much interest in research. Even though vast studies have been conducted, the impact of FDIs on economic growth remained unsolved. The contradictions in research findings have been ascribed to estimation techniques, time frame, study variables and the measuring technique employed in the study (Uwubanmwun and Ogiemudia 2016; Makhoba and Kaseeram 2019; Makhoba and Zungu 2021). This section reviewed selected studies that examined the relationship between FDI and economic growth.

2.6.1 Developed countries

Several studies Hyungsun and Miguel (2017); Ridzuan, Ismail and Hamat (2017); Ahmed and Ibrahim (2019); Baiashvili and Gattini (2020); Bilas (2020) have been conducted on the empirical relationship between FDI and economic growth in developed countries. Arguments have been noted in the empirical literatures, which suggested that economic growth is directly linked to FDI inflows (Hussen 2014; Sen, Senturk and Ozkan 2014; Pegkas 2015; Hlavacek and Bal-Domanska 2016). This prompted researchers to conduct studies that investigate the theories of FDI, determinants of FDIs, economic integration and costs and benefits of FDIs (Chintrakarn, Herzer and Nunnenkamp 2012; Tang 2015; Pegkas and Tsamadias 2016; Ridzuan, Ismail and Hamat 2017). This section reviews the studies that were conducted in developed countries.

Ridzuan, Ismail and Hamat (2017) conducted a study in Singapore covering the period 1970 to 2013. The analysis was performed using ARDL estimation technique.

The study showed mixed evidence on the relationship between foreign investments and the main pillars of sustainable development. The findings show that FDI inflows only bring favourable effects on growth of economy. These results suggest that policymakers should focus more on the attraction of foreign investors with the hope that they invest in various sectors, alleviate unemployment levels and offer better wages to the local workforce resulting in improved income distribution within the country. The following elements are some shortcomings of Ridzuan, Ismail and Hamat (2017) study. The inflation variance factor was not analysed as it could explain the high r squared as there could possibly be the presence of multi-collinearity. In addition, the study did not specify the specific test for serial correlation.

On the other hand, Pegkas (2015) conducted a study in Eurozone countries using the full modified ordinary least square and dynamic ordinary least square to investigate the relationship between FDI and economic growth. The study findings found a positive relationship between FDI and economic growth and since foreign investors play a critical role in alleviating economy growth, Pegkas (2015) recommended macroeconomic stability and reduction of market distortion, which are both necessary in creating a suitable environment that attracts FDIs. The potential drawback to the study was the time frame of the years 2002 to 2012. The study did not have significant coverage of all the 18 countries in the Eurozone, only countries that joined from 2002 were analysed. The results can be weakened because the sample of the countries used might not be representative of the entire population.

Tang (2015) found that FDI impacted economic growth negatively when they analysed foreign capital flow effect in the European Union from the years 1987-2012. In addition, Hyungsun and Miguel (2017) investigated the impact of FDIs on South-East Asian countries. The study period was from 1990 to 2013 and the main outcome from the study showed that FDI inflows does worsen the income equalities of the countries. The lack of the FDI effect in the above studies is surprising as they bring enormous benefits.

Another strand of literature focused on the causal relationship between FDIs and economic growth. Pegkas and Tsamadias (2016) analysed the causal relationship between determinants of FDI and Greece economic growth from the years 1970 to 2012. Time series analysis was employed to analyse the effect of the determinants on economic growth. The research findings revealed the existence of a unidirectional short and long run causality from FDI to economic growth. Furthermore, in the long run all the determinants had positive effects on growth of the economy. These findings suggest that structural reforms that enhance the contribution of these determinants to growth of the economy should be implemented in Greece.

Pandya and Sisombat (2017) used regression analysis to investigate the causal relationship between FDI and Australia's economic growth. Multiple regressions analysis was used to generate conclusions on the significance of FDIs. The study revealed that FDI inflows contributes to the growth of the Australian economy and the mining sector was identified as the lucrative sector contributing about 7% of GDP.

The literature reviewed above from the previous studies indicated mixed results on the impact of FDIs to economic growth in developed countries. The inconclusive empirical evidence may be suggestive of nonlinearity in the link between FDI and inequality although, it was observed that the studies did not use recent time series data and the following macroeconomic variables (trade openness, inflation, exchange rate and market size) to empirically quantify the relationship. Therefore, this study becomes important and unique in this light.

2.6.2 Developing countries

Vast studies have been conducted in developing countries to analyse the impact of FDIs on economic growth (Al-Shawaf and Almsafir 2016; Bermejo Carbonell and Werner 2018; Rafat 2018; Ahmed and Ibrahim 2019; Joshua, Bekun and Sarkodie 2020; Haider *et al.* 2021; Joshua, Güngör and Bekun 2022). Bermejo Carbonell and Werner (2018) have indicated that foreign investments do introduce new

technology, managerial skills and ideas and new production techniques which tend to increase economic growth. Furthermore, developing countries' growth rate is perceived to be dependent on the extensiveness of the countries when it comes to adopting and implementing new technology from developed countries. The adoption of these new technologies might result in them catching up to the developed countries technological levels.

In a similar line, FDIs are important channels through which developing countries can adopt and implement new technology and ideas. According to Findlay (1978), new technologies that are introduced by multinational companies can spill over to domestic companies. Kinoshita (1998) noted that the spillovers could take place through demonstrations, competitions, linkages, and training. The question to be asked is what conditions are necessary in maximising the technological spillovers discussed above in the host country? Literature has highlighted that the success of spillover effect is dependent on the host country's environmental characteristics. These characteristics are the ones that determines the absorption capacity of technological spillovers to the host country. Borensztein, De Gregorio and Lee (1998) argued that the adoption of management skills and new technology requires inputs from the labour force. High-level capital goods require labour force that knows how to work with new technology. Thus, a host country is able to enjoy technological spillovers only if a certain level of human capital is available (Borensztein, De Gregorio and Lee 1998). This means that FDIs and human capital are interdependent in the process of technological transmissions.

Melnyk, Kubatko and Pysarenko (2014) conducted a study in post-communist countries to analyse the impact of FDIs on economic growth using the neoclassical growth theory. The results indicate that FDIs have a positive impact on economic growth. These findings concur with the conclusion that FDIs are a valuable source of technology while fostering linkages with domestic companies in the host country that can assist in promoting economic growth. However, the study is criticised of using Engle and Granger (1987) cointegration techniques. Odhiambo (2009) noted that when the sample is small, the cointegration technique might not be appropriate. In their study, Odhiambo (2009) used (Pesaran, Shin and Smith 2001) cointegration approach which is relevant for a small sample.

With precise citation to Nigeria, mixed outcomes have emerged on the impact of FDIs to economic growth. Emmanuel (2016) conducted a study from the years 1981 to 2015, and the results revealed that FDI does have a positive significant impact on the growth of the economy. These findings corroborate the findings of GÜngör and Ringim (2017) who found a positive relationship between FDI and Nigeria economy growth rate. However, Uwubanmwun and Ajao (2012) used the VECM and the findings are read to suggest that FDI does not result in Nigeria economic growth and development during the period understudy. These findings concur with the conclusions made by Adams (2009) who argued that FDIs are necessary but they are not sufficient in promoting economic growth. Joshua (2019) found that FDI inflows promotes the growth of Nigeria economy. This was also consistent with the studies for Owusu-Nantwi and Erickson (2019); (Osei and Kim 2020) who argued that FDI is a driving force for economic growth. They highlighted the need for policies that attract FDIs in Pakistan, East Africa and Southern Africa.

Studies by Dahir (2017); GÜngör and Ringim (2017) focused on African countries using different types of estimation techniques like the vector auto-regressive models and VECM. The studies found that FDIs result in economic growth. Yeboua (2021) identified a nonlinear relationship between FDI and economic growth. That is, FDIs does not result in the growth of the economy. The study suggested synchronisation between policies that attract FDIs and policies that improve African organisations. Furthermore, conducted a study on fourteen African countries using the generalised method of moments and found that FDIs have a negative effect on economic growth. Whereas, the study by Seyoum, Wu and Lin (2015) showed a two-way Granger causality link between FDIs and economic growth.

There are several drawbacks to the methodology adopted by Adams and Opoku (2015); Seyoum, Wu and Lin (2015). Concurrent correlation across cross-section does not necessarily result in causation and these models have a weakness of endogeneity biases. Furthermore, Adams and Opoku (2015) have conceded that it is difficult to address some of the problems because of lack of accessibility to appropriate instrument therefore, without appropriate instruments cross section analysis will not be able to make a distinction between the hypothesis that increases in foreign direct investments will results in increases in economic growth, versus the

hypothesis that a country with increased growth rate has attracted more foreign investments (Pandya and Sisombat 2017; Sokhanvar 2019).

Other studies focused on the causal relationships between FDI and economic growth. Akpan and Eweke (2017) examined the causal relationship between FDIs and economic growth. The empirical findings suggest the existence of a bidirectional relationship between FDI and GDP. Uwubanmwun and Ogiemudia (2016) used the Error Correction Model (ECM), covering the period of 1979 to 2013 to analyse the short and long run effect of FDIs in Nigeria. The study argues that foreign investments have a significant positive effect on the growth of the Nigerian economy in the short run whereas in the long run there was a non-significant effect. Okafor, Ugochukwu and Chijindu (2016) analysed the relationship between FDI inflows to Nigeria economic growth from the years 1981 to 2014. The results showed the existence of a bi-directional causality from FDI to GDP. Likewise, Umaru, Gambo and Pate (2015) examined the relationship using the VECM and found a positive significant relationship between FDIs and Nigeria economic growth.

The differences in the results alluded in the studies of (Umaru, Gambo and Pate 2015; Okafor, Ugochukwu and Chijindu 2016; Uwubanmwun and Ogiemudia 2016; Akpan and Eweke 2017) implies that the advantages of FDIs are dependent on the absorptive capacities of the host countries. Studies that analysed the causal relationship between FDI inflows and economic growth have an important role in the development of the economy. The existence of a unidirectional relationship from economic growth to FDI means that national income growth can be used to attract FDIs. While, a unidirectional relationship from FDI to economic growth implies that FDI promotes the growth of the economy, employment and increased capital formation (Borensztein, De Gregorio and Lee 1998). A bi-directional causality means that both FDI and economic growth have an underpinning causal relationship, and both can be targeted to grow the economy.

Researchers such as Wasseja and Mwenda (2015), Abala (2014) and Kinuthiaa and Murshed (2015) conducted studies in Kenya on the determinants of FDI. Wasseja and Mwenda (2015) and Abala (2014) found that government expenditure, trade openness and human capital are the main determinants of FDI which is important

for economic growth. Thus, policies should be formulated that improve these factors. However, Kinuthiaa and Murshed (2015) study point out that FDIs does not have any impact on Kenya's economic growth. The reverse applies for Malaysia; FDI is a driver of economic growth. The study examined Kenya and Malaysia using VAR for the period 1960-2009. The interpretation of the findings assumes that Malaysia's was able to attract more FDIs inflows than Kenya during the period under study because of differences in trade policies, macroeconomic stabilities, and infrastructure developments. This finding is different from others because the results highlighted the conception that the impact of FDI is dependent on the host country attributes and the types of FDIs.

The researcher also identified weaknesses of the studies discussed above which included time frame, estimation techniques and coverage. Adams (2009) and Hussen (2014) had a substantial coverage of African countries, however, the results were enfeebled by the estimation techniques employed because the OLS does not address the issue of endogeneity properly. In addition, studies conducted by Agbloyor *et al.* (2014) and Adams and Opoku (2015) had greater geographical coverage, but they did not include human capital in their model although this is an important factor as it contributes to labour force efficiency.

2.6.3 South Africa

Many researchers have directed their focus on the impact of FDI South Africa. Others suggested the positive aspects of FDI, and some analysed the operation of FDI within the country. In this section, the views of different scholars and researchers on the impact of FDIs in South Africa is discussed.

Makhoba and Zungu (2021) did a more current study using time series analysis from the years 1960 to 2019. Vector Autoregression (VAR) was used to establish the interrelationship between South Africa's economic growth and FDI. The empirical findings revealed a mutual relationship between FDI and GDP. Positive shocks in FDIs results in increases in economic growth, similarly positive shocks on GDP stimulates FDI inflows. In a related study Joshua, Bekun and Adedoyin (2020) used

the ARDL approach and the empirical findings revealed that FDI inflows results in South Africa's economic growth which was similar to the works of (Meyer and Habanabakize 2018). The study analysed the impact of political risk and GDP on FDI from 1995 to 2016 using time series analysis. An ARDL approach was applied and the empirical results showed that political risk and economic growth does impact FDI inflows, with political risk having greater influence. To investigate the causality relationship between FDI and economic growth, Granger causality approach was adopted and the results indicated a bi-directional relationship between FDI and economic growth. The study concluded that political uncertainty affects foreign investors negatively.

Dahir (2017) analysed the effects of the market size, trade openness and employee productivity on FDI covering the period 1991 to 2015 using the ARDL. The results showed a long run association between size and trade openness and that employee productivity is stable in South Africa. The bound test showed that an increase in trade openness has a statistically positive significant impact on FDI that means that an increase of 1% in trade openness would cause 6.6% increase in FDI. Market size and labour productivity have negative significant impact on FDI since foreign direct investment decreased by 9.1 % and 5.2% respectively when labour productivity and market size increase by 1%. Overall, the finding implies that the improvement of FDI depends upon the overall consideration given to trade openness, which means that trade openness is very important for the attraction of FDI inflow, market size and labour productivity.

Sunde (2017) examined the influence of exports and FDI inflows on South Africa's economic growth. The ARDL bounds test approach was used in the study covering the period 1990 to 2014. The research findings showed that FDI and exports results in South Africa economic growth, thus confirming the FDI and export led growth hypothesis. To add more insight to the policy makers, Sunde (2017) employed the VECM granger causality and found unidirectional causality from foreign direct investments to economic growth, unidirectional causality from foreign direct investments inflows and export and lastly a bidirectional causality between FDIs and economic growth.

Hlongwana (2015) analysed the key determinants of FDI inflows in South Africa using the VECM. The results showed that trade openness of the country, return on credit and government size have a positive effect while inflation, and exchange rate had a negative effect on FDI. The results showed that when compared to other developing countries such as South Asia and Latin America, South Africa was not receiving much FDIs. Furthermore, the study established that primary sources of FDIs in South Africa are from United Kingdom and United States of America.

Mazenda (2014) used the VECM framework to analyse the impact of FDIs on South Africa's economic growth. The findings indicated that FDI does not influence the growth of the economy. Mazenda's point seems to be that the government is implementing policies that have little or no impact on the attraction of FDIs that could promote economic growth in the long-run. The argument agrees with Jeffrey (2016), who argued that the decrease in FDI within the country is clear evidence that foreign investors are losing confidence in the South African economy. According to the EY investment report (2015), South African economic growth is lethargic and investors are looking somewhere else to invest. Mazenda (2014) highlights positive growth effects of FDI but fails to fully control country-specific effects, endogeneity and lagged dependent variables in the regression analysis.

In contrast, Khobai *et al.* (2018) questioned the efficiency of FDI inflows in South Africa. They found that FDI negatively affects economic growth. In addition, Joshua, Bekun and Sarkodie (2020) established a non-causal effect between FDI and South Africa's economic growth, implying that FDI is not a driver of economic development contradicting their priori expectation.

A summary of the empirical literature is presented in table 2.1. The table is a compilation of empirical studies that were conducted using time series analysis for the purpose of depicting the variability of results from previous studies, to identify the gaps, assisting in the selection of study variables and the research approach to adopt. Thus, this current study aims to contribute and shed more light on the body of literature by employing recent and advanced time series estimation techniques.

Table 2.1: Empirical studies conducted using time series analysis

Study	Type of data	Countries and time period	Empirical approach	Variables used	Results
(Uwubanmwem and Ajao 2012)	Time series	Nigeria 1970-2009	VECM	GDP, FDI, openness, government size, return on capital, inflation, exchange rate	FDI does not result in economic growth
Abala (2014)	Time series	Kenya 1970-2010	Regression analysis using OLS	RGDP, FDI, GFDI, human capital, inflation, government size	FDI is important for growth of the economy
Belloumi (2014)	Time series	Tunisia 1970-2008	ARDL	FDI, trade, labour, capital stock	FDI inflows is not the main driver of economic growth
Melnyk, Kubatko and Pysarenko (2014)	Time series	26 Post communistic countries 1998-2010		GDP, FDI, infrastructure tertiary education, openness	FDI influence economic growth of the host countries
Kinuthiaa and Murshed (2015)	Time series	Kenya and Malaysia 1960-2009	VAR	FDI, GNI, wage, openness, inflation, infrastructure, exchange rate, financial depth, governance	FDI directly influence Malaysia economic growth and in Kenya, growth is the driver of FDIs.
Wasseja and Mwenda (2015)	Time series	Kenya 1980-2013	OLS regressions	GDP, openness, interest rate, exchange rate, inflation rate	In Kenya, the most significant determinant of FDI inflows is trade openness
Hlongwana (2015)	Time series	South Africa 1970-2013	VECM	GDP, government size, trade openness, inflation, exchange rate, inflation, interest rate	Study variables impacted FDI positively except inflation and exchange rate

Adams and Opoku (2015)	Times series	22 Sub-Saharan African countries 1980-2011	GMM	Labour marker, credit market, business regulation, FDI, GDP	FDI does have a positive impact on economic growth
(Uwubanmwem and Ogiemudia 2016)	Time series	Nigeria 1979-2013	ECM	GDP, FDI, exchange rate, total debt, GDI, inflation, openness,	FDIs does have a significant impact on economic growth in the short run
Emmanuel (2016)	Time series	Nigeria 1981-2015		GDP, FDI, exchange rate	FDI results in economic growth
Ridzuan, Ismail and Hamat (2017)	Time series	Singapore 1970-2013	ARDL	RGDP, FDI labour force, gross fixed capital formation, secondary school enrolment, export, openness financial development	FDI inflows results in increased economic growth.
Sunde (2017)	Time series	South1990-2014 Africa	ARDL	GDP, FDI and EXP	FDI and exports spur economic growth
Dahir (2017)	Time series	South Africa 1991-2015	ARDL	FDI, market size, trade openness, labour productivity	Improvement of FDI depends upon the overall consideration given to trade openness
Akpan and Eweke (2017)	Time series	Nigeria 1980-2015	VAR	FDI, GDP, industrial sector output	FDI have a slight influence on GDP
Bilas (2020)	Times series	Croatia (2000 -2019)	ARDL	GDP, FDI	There is no relationship between FDI and GDP and FDI does not impact the GDP growth rate
Joshua, Bekun and Sarkodie (2020)	Time series	South Africa (1970-2017)	Granger causality	GDP, FDI, coal consumption and industrialization	Non-causal effect between FDI and South Africa's economic growth, implying that FDI is not a driver of economic development
(Makhoba and Zungu 2021)	Time series	South Africa (1960-2019)	VAR	GDP, FDI, Gross fixed capital formation, employment, trade open	A mutual relationship between FDI and GDP was established.

As shown in table 2.1, previous studies Dahir (2017); Ridzuan, Ismail and Hamat (2017); Sunde (2017); Joshua, Bekun and Sarkodie (2020); Makhoba and Zungu (2021) that were conducted to investigate the relationship between FDI and economic growth in developing countries including South Africa have found controversial results. This prompted this study to analyse the relationship in South Africa. By analysing the roles played by FDIs, this study can draw some important lessons and guidelines for policymakers in the pursuit of a more effective scheme to promote South Africa's economic growth, which currently has low GDP rates. Since the year 2016, South Africa's economy is in the doldrums, economic prospects remain largely unfavourable, and economists predict the economy could continue shrinking in the near future especially after the pandemic hit the economy negatively. Thus, what role can FDI play in South Africa to meet these challenges. This study, therefore, contributes to existing literature which provides conflicting results between FDI and economic growth.

2.7 Conclusion

This chapter reviewed literature on economic growth and FDI. Economic growth theories reviewed in this chapter are the neoclassical growth theory and the endogenous growth theory. The neoclassical theory has shown that FDIs results in economic growth of the host country through increase in the efficiency of investments and technological developments. The theory suggested that economic growth improves as a result of greater share of gross domestic allocated to investments. Although the theory has weaknesses, the model was an essential tool in explaining the impact of FDIs to economic growth. The endogenous growth theory challenged the neoclassical growth theory and the model leaves an open possibility that increase in human capital could results in sustained growth rates. The theory postulates that human capital development contributes to output growth, however, the theories were relevant in this study because they considered technology endogenously determined.

FDI theories reviewed in this chapter are the Eclectic theory, the Industrial Organisation theory, and the Product Life Cycle. The main insight from these theories is that foreign investors are investing abroad because of location advantages,

country's specific advantages, ownership advantages and internationalisation. Location advantage entails a firm's decision to invest abroad is based upon factors in the foreign country, for example, land and labour are very important in establishing MNE locations. A country's specific advantages looks at the availability of raw materials, political and performance of the economy. Internalization advantages are benefits that a company enjoys when they exploit internally that ownership advantage. The main highlight of the PLC theory is that MNCs value into FDIs, because of knowledge about the market, innovation, and competition. For FDIs to happen, the model stipulates that there are four stages involved in the product life of a new product

In addition, literature has shown that benefits of FDIs do not occur automatically and equally across countries. The benefits tend to vary from one country to the other and it is difficult to separate and measure them. Therefore, the government of the host country must play a leading role in attracting FDIs and managing for them to achieve their development goals. Furthermore, the review of literature emphasised that the success of spillover effects is dependent on the host country environment characteristics. Literature on the determinants of FDIs is very rich and several studies have been carried out assessing the key determinants of a given location. However, there is no agreement as some researchers did not find any statistically significant determinants. In addition, some determinants found to be important to a country may not be applicable to other countries.

There may be no gain saying, the fact that the extensive literature review revealed that discussions on the determinants of FDI and the impact of FDIs on growth of the economy would continue for a longer time because of the perceived benefits of FDIs on host country. However, factor that determines the flow of FDIs and its impact is country specific and dependent on the host country. The effects can be either beneficial or adverse to the economy. The few country studies that were reviewed indicated that endogenous relationship does exist between FDI and economic growth that may have to be considered if the results are robust. The next chapter discusses an overview of South Africa's economic growth and FDIs.

CHAPTER THREE: AN OVERVIEW OF ECONOMIC GROWTH AND FOREIGN DIRECT INVESTMENTS IN SOUTH AFRICA

3.1 Introduction

Economic growth is a powerful instrument for poverty alleviation and improvements in the quality of life. One of the most important determinants of economic growth is FDI. In order to grow their economies, many countries around the world formulate and implement policies that promote FDI inflows. This chapter presents an overview of economic growth and FDIs in South Africa addressing research objective one and two. The chapter discusses trends in the country's economic growth and gives a comparative analysis of the country's growth relative to other emerging economies. Subsequently, trends in the South Africa's FDI flows and how these relate to economic growth are discussed. An overview of economic growth and FDI flows essentially gives an understanding of South Africa's economic performance (World Bank 2020)

3.2 South Africa economy overview

South Africa is an industrialised economy and is classified in the top five of sub-Saharan Africa despite several years of low growth (International Monetary Fund 2022). South Africa produces raw and processed mined products and the manufacturing and textile sectors are well developed employing many people (International Monetary Fund 2022). Furthermore, the transport sector, financial sector, tourism and legal sectors are well developed and they form the overall services sector that has contributed 61% of GDP in the year 2020 (International Monetary Fund 2022).

Due to its political engagement in the region, trade and investment relations, South Africa is influential in the African continent and has an active role in the African Union (AU) (Cook 2020). In Africa it is considered as the most diversified and developed economy (Economist Intelligence Unit 2017), and it has an open FDI regime. Although investors are succumbed to high taxes, volatility in the exchange rate and Black

Economic Empowerment (BEE) compliance costs (Economist Intelligence Unit 2017). Some foreign investors have uttered concern over the removal of special foreign direct investments rights by the South Africa's 2015 Protection of Investment Act. These rights were enjoyed by the investors under bilateral investment treaties. Such investors are now settling their disputes through the South African legal system. On the other hand, one of the key government goals is to increase FDI and as such in the year 2018 President Cyril Ramaphosa pledged to attract "\$100 billion worth of new investment over five years" and at least \$55 billion have been invested already (State Department 2019). Examples include investments announced by United States of American companies such as Amazon, Procter and Gamble, McDonalds and Microsoft. In addition, South Africa's motor industry has focused more on job-intensive FDI and it has hosted Ford and Toyota plants, and other automakers. Nissan and BMW have announced significant manufacturing capacity investments according to (State Department 2019).

Figure 3.1 shows the general map of South Africa's nine provinces and its neighbouring partners (Namibia, Botswana, Zimbabwe, and Mozambique). South Africa has nine provinces and each has its own language, population, landscape, history, government and cities. The nine provinces are Gauteng, KwaZulu-Natal, North West, Free State, Eastern Cape, Mpumalanga, Limpopo, Northern Cape and the Western Cape. Each province has provincial government seat and a capital city, which is typically the largest city in the province. Exceptions are in KwaZulu-Natal where Pietermaritzburg is the city and Bisho in Eastern Cape where smaller cities have been considered as capitals because of historical reasons. Furthermore, Cape Town and Bloemfontein stand out for being both provincial capitals and two of the three capital cities of South Africa.

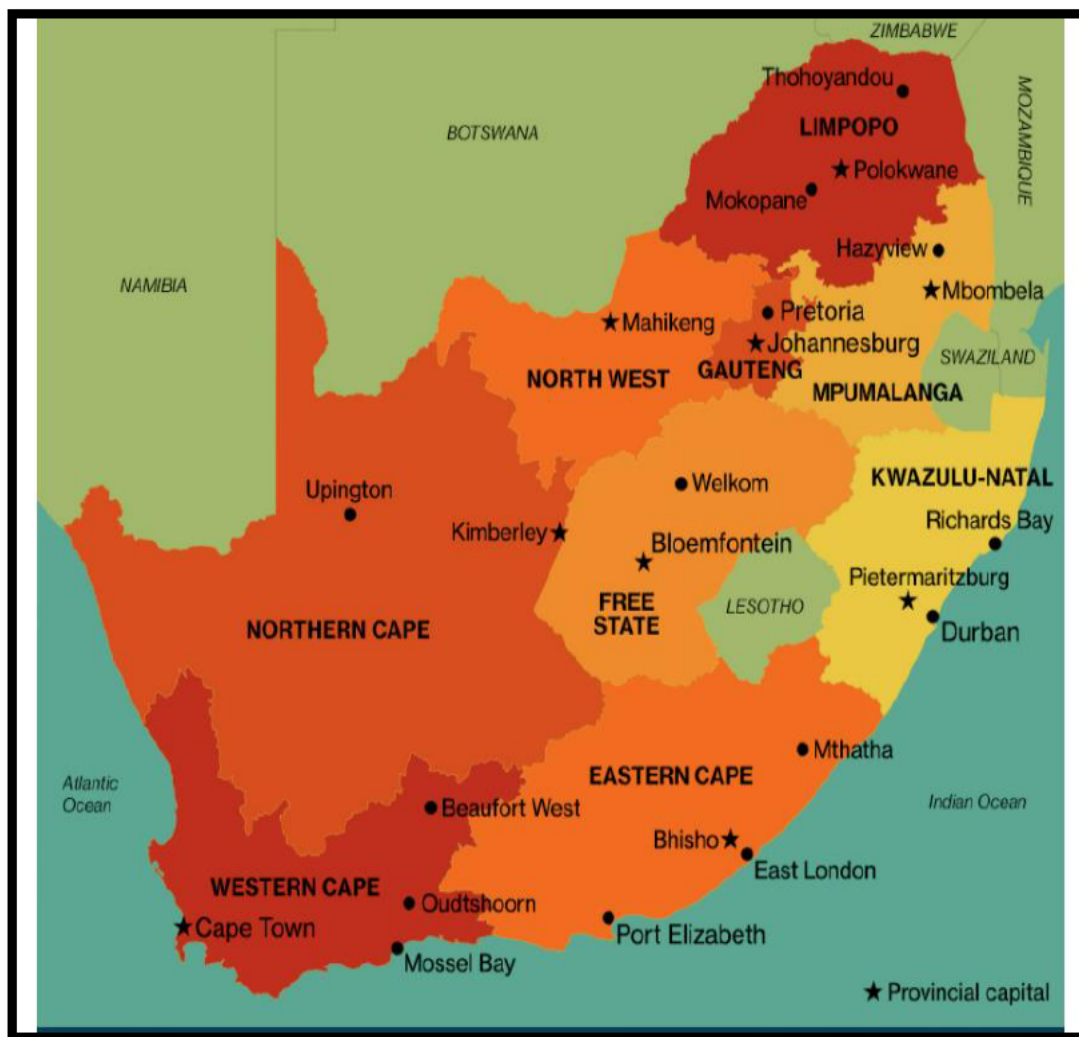


Figure 3.1: South Africa's nine provinces

Source: World Bank Development Indicators (2020)

According to World Bank (2020), South Africa is a dual economy with high inequality rates and Gini coefficient of 0.63 in the year 2015. Formerly, race and geographical origins used to determine inequality. Even though race remains a central determinant of inequality, variables such as jobs status, employed versus unemployed, skilled versus unskilled are now determinants of inequality. Since the year 1995, there has been increases in wage inequality reflecting a severe mismatch between a labour market that demands skills and a labour force that is not fully able to respond to such demand. Since its transition to democracy, South Africa has made substantial developments in improving the well-being of its citizens. However, in the last decade there has not been much progress. There has been a decrease in the upper middle-income poverty line of population from the years 2005 to 2010; in 2015, there was an

increase of up to 57% and the World Bank (2020) has projected an increase of up to 65% by the year 2025. Weak growth and structural challenges have made it difficult to reduce poverty, which has been deepened by the COVID-19 pandemic (UNCTAD 2020).

The outbreak of COVID 19 pandemic found a susceptible South Africa's economy that was already experiencing two consecutive quarters of recession. Citing the lockdown restrictions, many companies were not able to operate effectively resulting in them being unable to meet contractual obligations (Wining 2020). Employees were losing their jobs, salary cuts, several companies were declared bankruptcy and dividends were reduced. Subsequently, the COVID 19 pandemic escalated the economic crisis, many people have gone for long without income because of the job cuts, as a result, there is great expectation that poverty will deepen and inequality will widen. Given this calamitous, the economic response should either match or surpass the disturbances caused.

3.3 South Africa's economic growth and performance

During the apartheid era, South Africa experienced a decline in economic growth and investments. According to Nowak (2005), this was because of economic sanctions and political isolations from the rest of the world. The economy improved radically when the country transitioned to democracy, and it was reasonably robust and stable throughout the democratic era (UNCTAD 2015). Whilst global growth was increasing, the South Africa's economy was experiencing slow and inconsistent growth (IDC 2017). Statistics show that South Africa has been recording low growth rates over the recent past. Factors attributing to low economic growth rates include labour unrest, insufficient energy supplies, decrease in demand from the country's trading partners, and external forces from the international economy (Dahir 2017). In the mid-2000s, South Africa's GDP growth rate averaged above 5%, and it contracted to 0,8% between the years 2015 and 2019 which prompted the economy to slid into a recession in late 2019. Growth was estimated to be under 20% in the year 2019, and because of COVID 19, the economy would decrease by 8% (International Monetary Fund 2020).

A detailed analysis of the real gross domestic product growth rates of the South African economy between the years 1980 and 2020 is illustrated in figure 3.2.

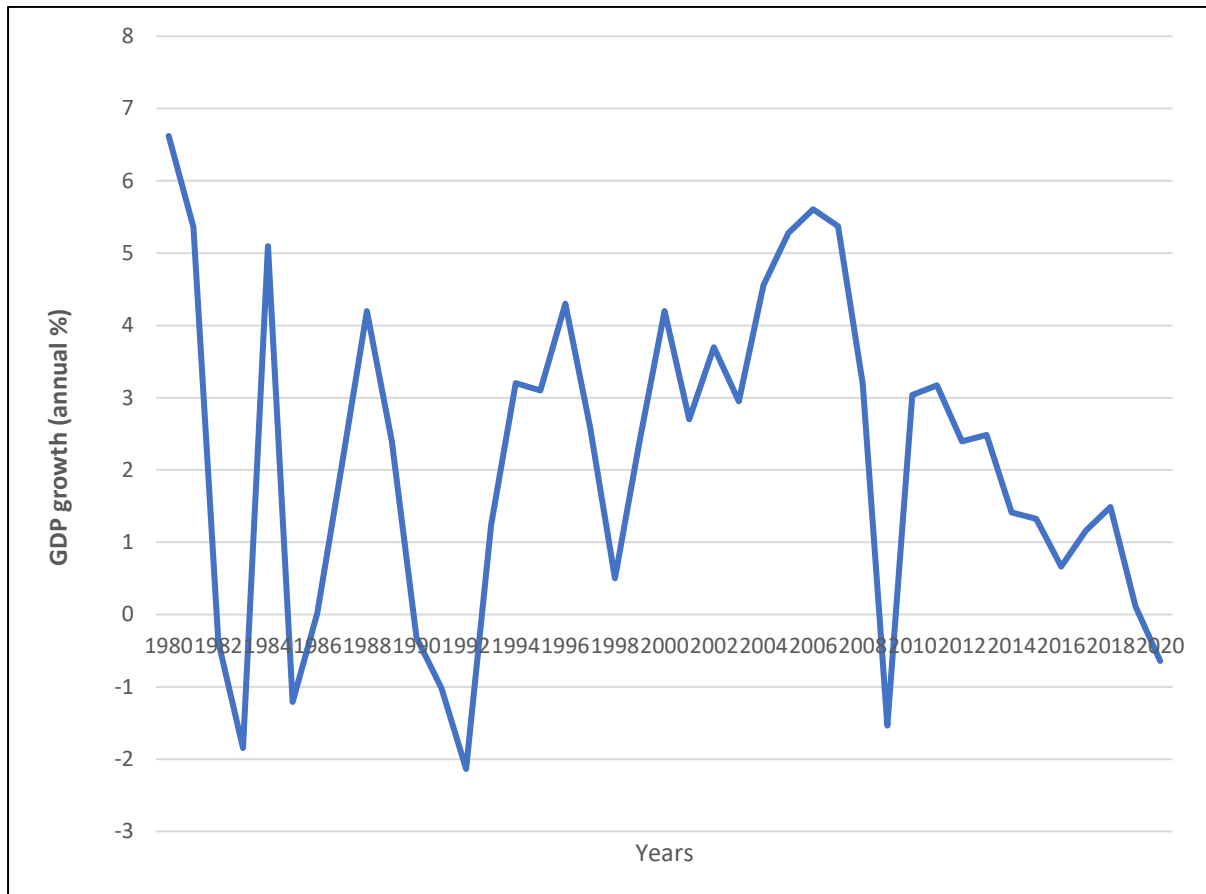


Figure 3.2: South African GDP growth rate from the period 1980 to 2020

Source: World Bank 2022

<https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=ZA>

The World Bank provides statistics for South Africa economic growth rate from the years 1980 to 2020. These statistics were tabulated, and the researcher came up with the graph as shown in figure 3.2. South Africa's real GDP growth fluctuated substantially in the 1980s and figure 3.2 shows the magnitude of the decline from the years 1981 to 1983, when the gold price fell. From the year 1983 to 1984, the economy grew by 5%, however, there was intervention of political factors and the implementation of the new constitution by then state president P.W. Botha elicited increases in unrest and debt crisis that paused growth (Jones and Inggs 2014). The

economy experienced robust growth in the years 1981, 1984 and 1988. For the whole decade, the economy only grew by 1,3% a year (World Bank 2021a). During that period, the growth performance was average as can be seen in the figure above.

From the post period of 1994, the economy performed reasonably well. The South African economy registered an average annual rate of economic growth of 3,3% since the year 1994 (GEAR 1996). The first ten years after apartheid, South Africa's average growth rate was below the expectations of many and significantly lower than what was considered sufficient to boost a lasting transition to democracy (GEAR 1996). From 2004 to 2007, the economy recorded its fastest growth with an average growth rate of 5,2% per annum. The period was characterised by strong booming commodities markets. The global financial crisis of 2008/2009 affected the country tremendously resulting in a decline in the country's average GDP growth rate by (3,1%) in 2008 and (-1,5%) in the year 2009 (SARB 2011). The economy did recover in 2010 with a growth rate of 3%.

SARB (2011) further postulated that increases in real GDP growth rate in 2010 was primarily driven by a stable increase in consumer spending partially attributed to the FIFA World Cup soccer tournament hosted by South Africa, faster global economic growth, lower interest's rates and strong commodity prices. The period of the years 2015 to 2016 saw an upward revision of national accounts suggesting that the economy was recovering from a difficult time which marked the end of the super-commodity cycle and severe drought. The World Bank (2018) projected GDP growth to increase from 1,3% in the year 2017 and expected to reach 1,8% in the year 2021. This ultimately results in a broader rebound among developing economies, commodity exporters and the global growth.

One of the main reasons for the economic growth registered in South Africa after the year 1994 lies in the lifting of economic sanctions and the subsequent reintegration of the country into the global economy. The economic growth of South Africa improved significantly with the transition to democracy and has been mostly robust and stable during the democratic era (UNCTAD 2015). The principal drivers of economic growth include higher household consumption expenditure, increasing private investment, and improved export performance (IDC 2018). In addition, more contributions came

from investment in energy infrastructure, the Gautrain rapid rail link, fuel pipelines, transport and logistics networks and the construction of new soccer stadium and upgrades existing stadiums for the FIFA World Cup 2010. In South Africa, infrastructure development is regarded as a key driver of economic growth prospects. Government expenditure towards infrastructure building programmes, averaged about R300 billion a year (The Citizen 2018). In the year 2020 the country experienced a robust decline of 7% in economic activity. The economy was negatively affected by the outbreak of COVID 19 pandemic and the lockdown restrictions. According to StatsSA (2021a), this has been the biggest annual fall in economic activity that the country has ever experienced since the year 1946. To provide some perspective, the second biggest fall was recorded in the year 1992 when the economy contracted by 2,1%, as shown in figure 3.2. At that time, the country was struggling through a two-year-long recession which was caused by the global economic downturn.

In order to gain more insight into the relative performance of the economy over the years, it is imperative for to compare South Africa to other leading African countries. The best performing African countries according to World Bank (2020) statistics, in terms of economic growth include Nigeria, Egypt, Algeria, Angola, Morocco and South Africa. Figure 3.3 shows the average economic growth rates for these selected African over the period 2013 to 2020.

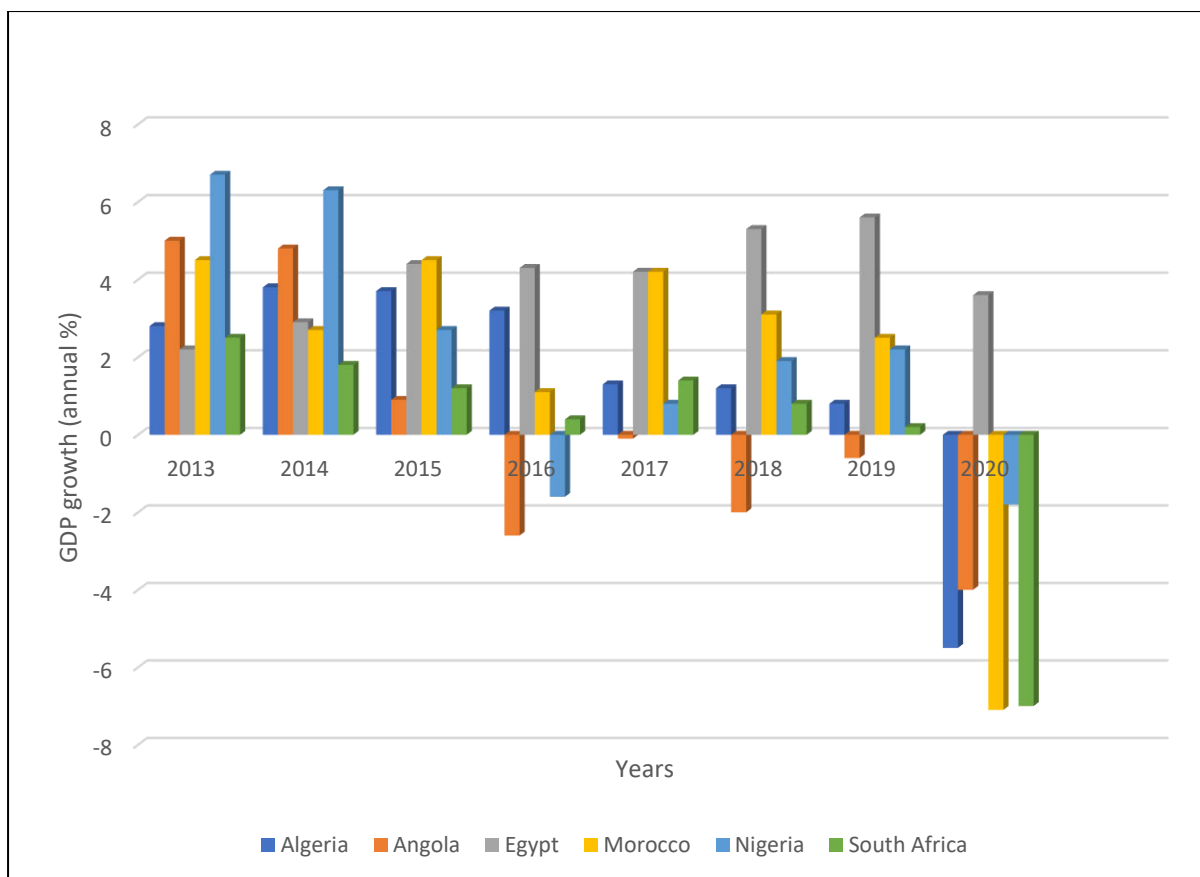


Figure 3.3: Average growth rates for selected African countries (2013 – 2020)

Source: World Bank (2021)

<https://databank.worldbank.org/reports.aspx?source=2&series=NY.GDP.MKTP.KD.ZG&country=DZA,AGO,EGY,MAR,NGA,ZAF>

The World Bank provides statistics of historical data for the selected countries highlighted in figure 3.3. These stats were tabulated, and the graph was generated by the researcher. Figure 3.3 shows that all the recorded countries in the diagram recorded average growth rates above 3%. Various reasons can be noted for the performance of these countries. Such reasons include investments in oil, minerals, and other commodities have helped lift GDP since the year 2000. Due to slowdown in the global economic, most commodity processes decreased in the international markets since the second half of the year 2014 and most African economies experienced growth with a marginal impact on GDP figures. According to World Bank (2021a), the following are important drivers of economic growth trade, prudent fiscal policies, and investments, improvement in governance, infrastructure, relative peace, and sound macroeconomic management .

Figure 3.3 shows that Nigeria recorded the highest average economic growth rate of 6,7% and 6,3% respectively for the period 2013 and 2014. Reaching a low record of -1.8% in the year and -1,8 in the year 2018. Most economies are dependent on oil rents as a share of GDP, the decrease in oil prices has constrained markets and impacted negatively the local prices and demand whilst causing shortages in power and fuel supply. With a 4,2% average growth rate, Egypt recorded the second highest average economic growth in the period while Morocco had the third largest average growth rate at 4,1%. Of the five countries, Egypt's economic growth has been strong and resilient since the economic reforms initiated in the year 2016. The launch of Egypt's economic reform in the year 2016 enabled officials to focus on policies and measures that effectively prioritise the stabilisation of macroeconomic indicators and prioritisation of fiscal and monetary reform policies. The country experienced a rebound in tourism sector and infrastructure development through increased spending by government on infrastructural projects. This resulted in an increase in GDP, foreign reserves and ability to withstand market shocks. The country was able to maintain a stable growth rate as shown in figure 3.3.

In the year 2020, Egypt was one of the few African countries that recorded a positive growth rate of 3.6% despite the adverse impact of COVID 19 pandemic. The economy grew at a slower rate compared to the year 2019 growth rate of 5.6%., however, the economy did not enter a recession because of increased domestic consumption (World Bank 2021a). Furthermore, from mid-March to July of the year 2020 the tourism sector which contributes around 5.5% to GDP and 9.5% of employment was shut down because of the pandemic (UNCTAD 2021). Despite pandemic related expenditures and decreases in revenues, the fiscal balances were expected to remain positive at 5% of GDP. In addition, the fiscal consolidation reforms enabled the overall deficit to remain unchanged at 8% of GDP in the year 2020 compared to a 7.9% deficit in the year 2019 (UNCTAD 2021).

Given the above statistics, it can be inferred that South Africa compares relatively well with these leading African economies. However, the country faces serious challenges from inequality, poverty, and high levels of unemployment. Since the onset of democracy in the year 1994, poverty and inequality alleviation are the most important concern for South Africa's development programmes and policies. The Reconstruction

and Development Programme (RDP) was chosen as the primary socio-economic programme. Although the RDP have resulted in some notable gains, the country continues to face the challenges of high unemployment levels, high inequality and high poverty (South Africa History Online 2014). The tenacious of these challenges does call for meticulous evaluation of their drivers, constraints and evaluation of opportunities. Unskilled workers and the youth withstand the worst of the problem as employers seek skilled workers. According to StatsSA (2021b), in the year 2018 the youth unemployment rate was 53,79%. As a result, poverty rates continue to increase in South African communities. South Africa ranks among the most unequal societies in the world with a GINI co-efficient of 0.6 (Citadel 2018).

3.4 Sectoral composition of GDP

South Africa's economy has traditionally been rooted in the primary sectors due to the abundance in favourable agricultural conditions and mineral resources (Department of Trade Industry 2021). However, there have been a structural shift in the recent decades, and this was consistent with trends observed in the advanced economies of the world. As part of developmental processes, the South African economy has shifted to tertiary sector. Since the early 1990s, economic growth has been driven mainly by the tertiary sector (IDC 2017). The economy is moving towards e-commerce, financial services with greater focus on technology enabling it to become a "knowledge based economy" (Department of Trade Industry 2021). Figure 3.4 shows the distribution of the GDP across the three economic sectors in South Africa from 2010 to 2020.

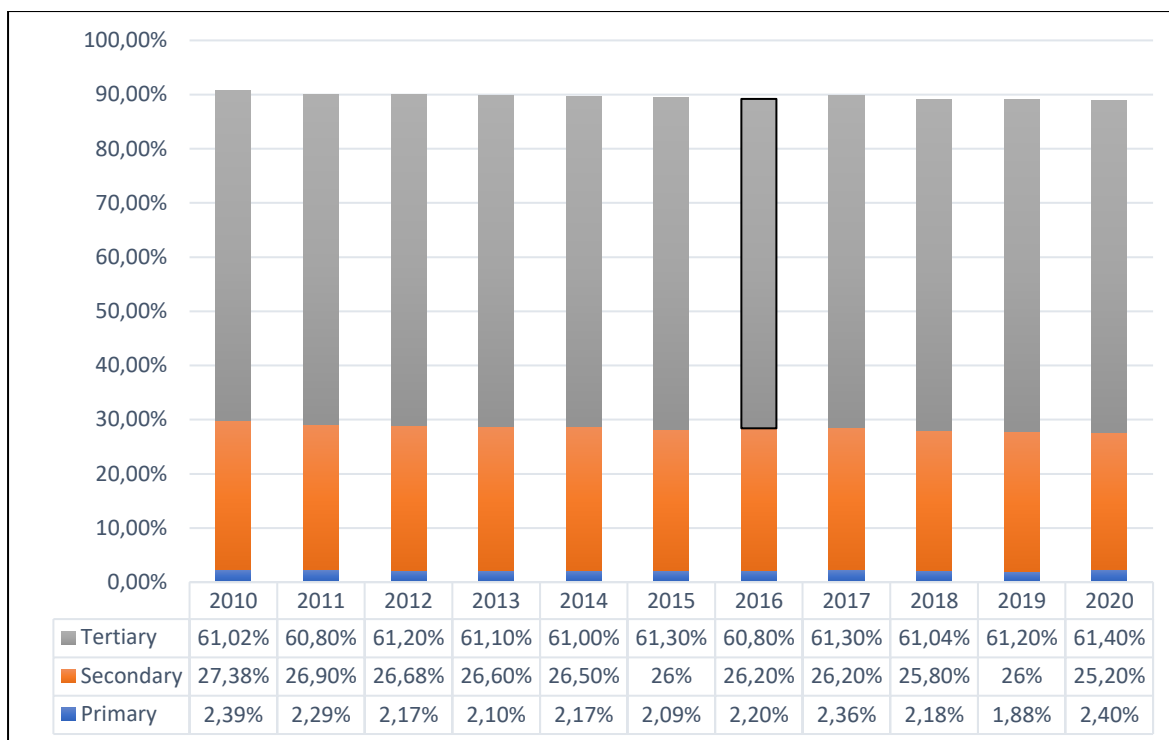


Figure 3.4: Sector contribution to GDP 2020

Source: (StatsSA 2021c)

The contribution of the primary sector to South Africa’s GDP maintained a growth of 2% from the years 2010 to 2020, whereas the secondary contributed within the range 26% tertiary sector maintained at least 60% contribution. South African Reserve Bank (2020) traced the background to the South African primary sector and propounded the primary sector contribution dropped over the last decade, whilst the secondary sector almost stayed the same. They noted that some of the challenges facing agriculture were the “political environment (in the areas of land reform and party-political imperatives); the economic environment (terms of trade, the uneven international playing field, high input costs and the exchange rate); the social environment” (South African Reserve Bank 2020: 15). In 2020 the sector saw a positive turnaround with forestry and fishing industry increasing at a rate of 5,9%, contributing 0,2% in 2020 Q4 (StatsSA 2021c). The increase was a result of increased production of animal products.

The secondary sector contributes a greater percentage to GDP since it is involved in creating value (goods) and is considered the engine of economic growth which is

important for all developing countries although the trend in developed countries, the tertiary sector predominates (Gayathri 2016). According to Rob (2020) the secondary sector has contributed significantly in increasing productivity levels and also creating employment opportunities within the country. However, the expansion pace is marked by differences in trends and fluctuations in growth (StatsSA 2021c). It is clearly understood from the Figure 3.4; primary sector has been experiencing decreases from the years 2010 to 2019. The sector experienced an increase in the year 2020 and agriculture and mining were the most contributing industries. Growth of the secondary sector has been slow compared to the tertiary sector, however, there is potential for growth within the sector (StatsSA 2021c). Reported positive growth rates were in the following divisions: parts and accessories, non-ferrous metal products, food and beverages; machinery; motor vehicles, transport equipment; basic iron and steel, metal products and wood products, and publishing and printing (StatsSA 2021c).

The tertiary sector consists of heterogeneous sub-sectors with varied contributions to the economy. The largest sub sectors are wholesale and retail trade and government services contributing 15% and 17% respectively to GDP in the year 2019. In addition, modern service industries have become increasingly important and growth has been noted in the business, finance, and communications services industries. From the years 2010 to 2020 there has been increases in growth in tertiary sectors as shown in figure 3.4 with the highest peak recorded in the year 2020 with a contribution to GDP of 61,4% (StatsSA 2021c). The increase is partly attributable to increases in general government services (0,7%) and personal services (4,8%) (StatsSA 2021c). Furthermore, the easing of lockdown restrictions enabled operation of services such as gyms, sports centres and recreational activities, which also contributed positively on the GDP. Figure 3.5 shows the contribution of the key sectors in the economy for the year 2020.

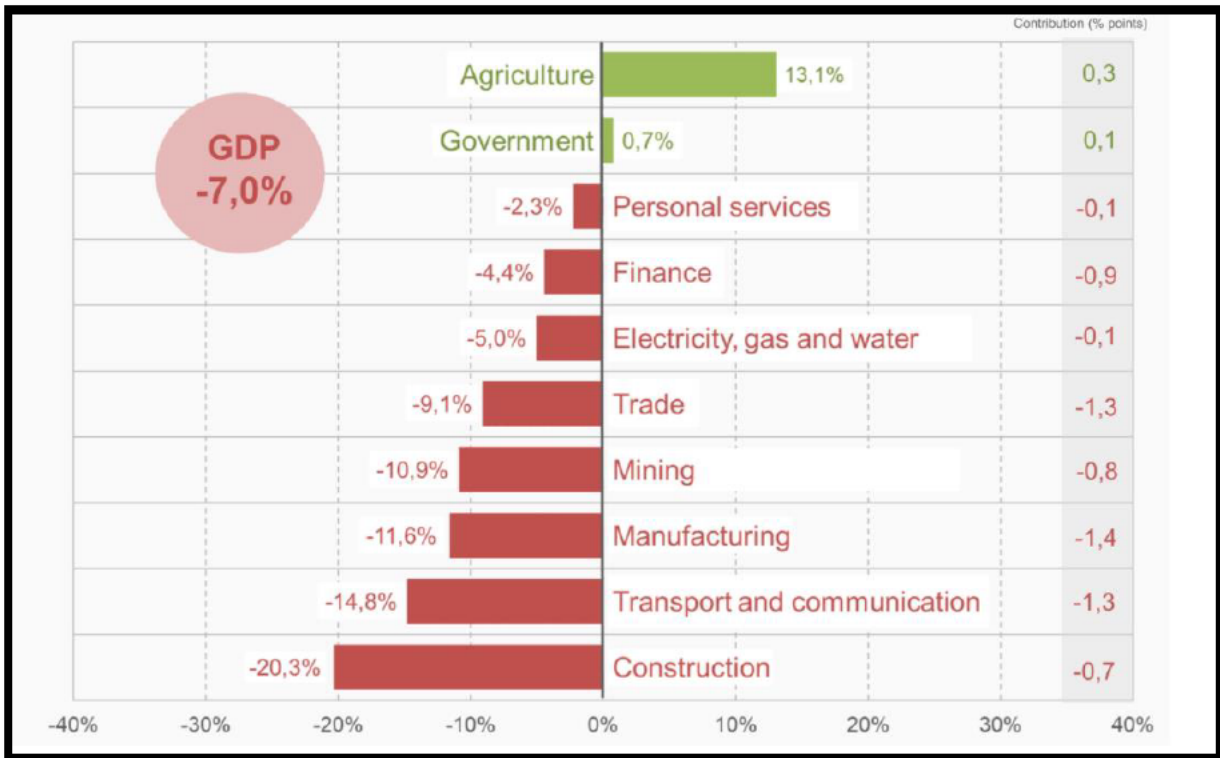


Figure 3.5: Sectoral composition of GDP in the year 2020

Source: StatsSA (2021)

According to StatsSA (2021c), real GDP decreased by 7% in the year 2020 compared to the year 2019 which experienced a growth rate of 0,2%. The GDP growth rate of (-7%) in the year 2020 was as a result of decreases in manufacturing by (-11,6%); transport and communication (-14,8%) trade and trade (-9,1%). In spite of a strong growth in the fourth quarter, manufacturing production decreased by 11,6%. The decrease was as a result of decline in the demand for steel and disruptions in production amongst other reasons.

Despite the impact of the pandemic on economic growth, agriculture recorded a positive growth rate of 13% in the year 2020. The economy was experiencing a recession as it confronted the Covid-19 pandemic and the impact of measures taken domestically as well as globally to contain the spread. According to International Monetary Fund (2020), the increases in the agriculture sector was largely attributable to favourable weather conditions and also the sector's activities were classified as essential services during the initial lockdown restrictions imposed in the second quarter of the year 2020. This enabled continuance in agricultural production while

other sectors of the economy were unable to operate because of the lockdown operational restrictions (StatsSA 2021c). Positive growth of 0.7% was also realised in government services which grew marginally in the year. Extra-budgetary institutions and increased employment in provincial government resulted in increases in government services.

However, other industries were affected. Finance, real estate, and business services experienced a decrease of 4,4%. According to (StatsSA 2021c), the decrease was primarily led by reduction in auxiliary activities and financial intermediation. The construction industry contracted by 20,3% and the industry was already experiencing problems before the pandemic. The industry faced a decline of four consecutive years. Furthermore, trade, catering and accommodation industry decreased at a rate of 9,8%. Transport and communication were affected by cuts in air travel because of the pandemic. Also, during the second quarter of the year 2020 rail and road freight operators were impacted by the restrictions that were placed on production and movement of goods. The personal services industry decreased at a rate of 2.3%, this was due to decreases in economic activities for community and other producers. Lastly, finance decreased at a rate of 4.4%, reduced economic activity was reported for financial intermediation and auxiliary activities (StatsSA 2021c).

In summary, the review of literature indicated that agriculture, financial services, manufacturing, mining and communication are the key sectors that contribute to GDP growth rate. The analyses of these key sectors in the economy assisted the researcher in identifying the sectors to include in the interviews and categorising the participants as per sector in Chapter 4.

3.5 Factors impacting South Africa economic growth

South Africa's has been experiencing slow economic growth since the global financial crisis in the year 2008. According to World Bank (2021a), between the years 1999 and 2008 the economy experienced average growth of 4% per year and during the period of the years 2010 to 2019 GDP decelerated to 1.7%. External factors have contributed to South Africa's lack of economic dynamism. External factors include the "commodity

super cycle” that lasted from the early 2000s to the aftermath of the global financial crisis. South Africa also faces a range of domestic constraints such as social unrest, high crime rates and structural issues. These constraints have affected the productivity and profitability of local companies internally (resulting in decrease in growth and creation of jobs) and externally (resulting in market share loss in global trade). In addition, business confidence has been eroded over the past decade by these constraints (World Bank 2021b). Some of these constraints are discussed below:

Skills scarcity in the labour force: Regardless of stable progress, the legacy of “bantu education” continues to deprive South Africa of the skills its economy needs. The country’s policy uncertainty and poor economic prospects have contributed in the emigration of skilled workforce and strict immigration policies has restricted the inflow of skilled migrants (World Bank 2021b).

High cost of non-tradable inputs: According to World Bank (2021a), state-owned enterprises dominate transport, information, communication technology and energy sectors. Lack of competition and inefficiencies have resulted in higher costs for the past fourteen years (World Bank 2021a). Furthermore, power outages have been a feature of electricity supply with load shedding being implemented across the country

Policy uncertainty and deteriorating state capacity: According to World Bank (2021a: 36), “South Africa has strong institutions, a vibrant democratic system, and a generally capable civil service. Yet institutional quality has been eroded. A perceived rise in corruption, associated with state capture in the last decade, contributed to policy uncertainty and declining business confidence. The capacity of public service has been reduced and political (rather than merit-based) appointments has increased (World Bank 2020). This coupled with lack of skills, has impacted service delivery negatively.

Furthermore, COVID-19 pandemic severely affected South Africa and it brought the deepest recession since the end of apartheid. World Bank (2021a) reported that in the year 2020 South Africa’s GDP decreased by 7% compared to other emerging economies. Lockdown restrictions that were implemented brought domestic production to a halt resulting in decreases in GDP by 16.6% in the second quarter

(StatsSA 2021c). In the third quarter, South Africa experienced a GDP growth rebound 13,7%, the easing of the lockdown restrictions did contribute to the growth. The economy experienced a “second wave” of the pandemic in the fourth quarter. Despite some restrictions that were imposed, economic activities continued to normalize. This resulted in GDP growth by 1.4% and a rebound in global economic activity did contribute to growth (World Bank 2021a).

Citing lockdown restrictions and unforeseen effects of COVID-19, most companies were not able to meet contractual obligations (Winning 2020). Employees were laid off, salaries were cut and several companies declared bankruptcies. As a result, the pandemic reinforced the economic crisis (Faull 2020). Most of the people who were laid off have gone for long without income. The decline in income has resulted in increases in poverty and inequality (unequal distribution of income). Thus, the economic response required should be able to match or even exceed the scale of disruptions caused (Bhorat *et al.* 2020). In addition, other socioeconomic challenges include crime, social inequality, poverty, unemployment and protests over public service delivery and corruption.

3.6 Government policies for economic growth

The post-apartheid South African government introduced several key macroeconomic policies to promote economic growth, employment and redistribute income. The major macroeconomic policies implemented are the Reconstruction and Development Programme (RDP), New Growth Path (NGP), Accelerated Shared Growth Initiative South Africa (AsgiSA) and Growth Employment and Redistribution (GEAR). These policies are briefly discussed below.

The RDP was implemented in the year 1994, it was the first main policy plan to try to recompense the social, economic, and spatial imbalances of the apartheid segregation era. The RDP main objective was to develop the lifestyle of South Africans in particular the marginalised societies (Dotto 2019). Also, the programme was introduced to stimulate the growth of the economy through measures such as curbing government’s spending, reducing tax and government fiscal deficit (Kearney and Odusola 2011).

The RDP combined growth reconciliation, development, redistribution and reconstruction into one strategy. Their argument was that development and growth are not mutually exclusive especially development without growth would not be financially feasible (Edwards, Flowerday, Rankin, Roberts and Schöer 2014). The RDP focused on seven crucial elements, among them was upgrading infrastructure, focusing on industry, trade and commerce, changing labour and worker rights and centering on resource-based industries. In addition, Mosala, Venter and Bain (2017) highlighted the success of RDP on the creation of extensive welfare system such as free health care for pregnant women and children, and provision of free meals to government schools.

In the face of continued macroeconomic uncertainty, particularly in relation to the fiscal sustainability of the RDP, the government introduced a new growth plan in the year 1996, the GEAR. GEAR was a macroeconomic framework aimed at increasing employment, redistribution of income to the poor and economic development strengthening. Since the mid-1990s, the GEAR programme was the major contributing policy drivers with a real GDP growth rate of 6% per annum and job creations of at least 40 000 per year (Chirwa and Odhiambo 2016). To expedite the attainment of these goals, the government identified key drivers, among them was, promoting domestic and foreign investment; real exchange rate stabilisation, inflation control and human capital development (Kearney and Odusola 2011). In general, GEAR was based on the premise that creating a business environment that is investment friendly would result in the attraction of FDI. This would lead to the creation of a competitive environment resulting in South African companies being able to compete globally (Edwards *et al.* 2014)

There was divergence from “commodity-specialisation” to “service sector specialisation” in 2014. This saw the emergence of the AsgiSA. The AsgiSA framework targeted the reduction of poverty and unemployment rate to 15% by 2014 (The Presidency, 2006) and massive development of skills and infrastructure. The main objective of ASGISA was “accelerating economic growth to an average of at least 4.5% between the years 2005 and 2009 and further to a sustainable 6% average annual growth rate between 2010 and 2014” (The Presidency 2006:2). Furthermore, Kearney (2010) noted that it was launched as a coordinating framework, which

enables the attainment of the government's new goals of reducing unemployment and poverty massively between the years 2001 and 2014. The GEAR-AsgiSA phase advocated the importance of the market and refuted government intervention in the economy. Reiterating some of the RDP problems faced small businesses, AsgiSA wanted to ensure development of small business landscape by increasing investments and easing barriers to growth of businesses (Edwards *et al.* 2014)

In the year 2010, the NGP policy was introduced, and it brought the importance of the government as a key contributor to the economy. The NGP emphasises on job creation, social development, rural development, mining, skills development, and agriculture. It rose out of a dynamic changing economic environment that emerged during the global economic recession of the year 2008. The policy proposes a "restrictive fiscal policy" and "looser monetary policy" backed by microeconomic measures. The policy argued that monetary policy must continue targeting low and stable inflation, nonetheless, it also must aim supporting an exchange rate that is more competitive and lower real interest rates (Kaplan 2013). The policies discussed above have led to the conversion of South Africa's economy.

3.7 FDI in South Africa

Foreign direct investments is whereby an investor from another country invests in a local business and have a certain percentage of control over the business (Hill 2012). In South Africa, when an investor holds at least 10% of the company stock it is considered a long term investments or when an investor participate in a joint venture with another foreign investor (UNCTAD 2016). The investor acquires an ownership stake, which is substantial to ensure significant influence. FDI include the transferring of quality control systems that are necessary for the successful operation of a business, financial capital, technology, knowledge and production management (UNCTAD 2021). Furthermore, FDI foreign investments are recognised as an important determinant of economic growth (UNCTAD 2021), especially in emerging countries that have limited capacity to promote finance long-term development and domestic investments. In South Africa, FDIs have always been considered more suitable in directing portfolio investment as a means of overcoming lower savings

inadequacies in the economy (Evans 2002; Ahmad, Cova and Harrison 2004). Thus, policies that have been designed to draw foreign investors have become a fundamental part of South Africa's broader policy (Newman *et al.* 2015), because of the economic benefits of FDIs. This section provides an overview of South Africa FDI inflows, sectors attracting FDI flows in South Africa, government initiatives to attract FDI, and a comparison of South Africa FDI inflow to inflows in other leading African countries.

3.7.1 Trends in South Africa FDI inflows

Most of South Africa's FDI inflows are from European and American countries (UNCTAD 2018). European countries that are the main source of FDI inflows include United Kingdom, Netherlands, Germany, and Switzerland. Other countries include Japan, China, Australia and United States of America. These inflows are predominantly market and efficiency seeking. Market-seeking investment are those that seeks to gain access in new markets that are lucrative. Whereas, efficiency-seeking investments, seeks to take advantage of distinct factors that enable it to compete in international markets. These normally occur in the telecommunication sectors, financial services, and manufacturing. Additionally, there is a percentage of FDI that is resource seeking they invest in the mining and sector. South Africa is rich in natural resources, gold and platinum does attract investors that are natural resource seeking (UNCTAD 2018). In addition to sound economic policies, the country has urbane banking and financial systems, and developed infrastructure, which are all important influences on the attractiveness of a country. Furthermore, the inclusion of South Africa into BRICS is an added advantage in attracting foreign investors (OECD 2015).

Regarding recent trends in FDIs, South Africa does have an open investment climate which plays an important part in economic development (DTI 2009). InvestSA, a division of the Department of Trade and Industry (DTI) rolled out several One-Stop-Shop (OSS) service to investors across country with the aim of making South Africa a more investor-friendly country (Santander 2020). The Department of Trade and Investment and Trade and Investment South Africa (TISA) provided different

incentives to investors. However, FDI inflows in South Africa remain highly unpredictable. According to Sunde (2017), the volatility in FDI is as a result of commodity price changes sensitivity since South Africa FDIs are mainly export oriented. Figure 3.6 shows the South African FDI inflows for the period 1994 to 2020.

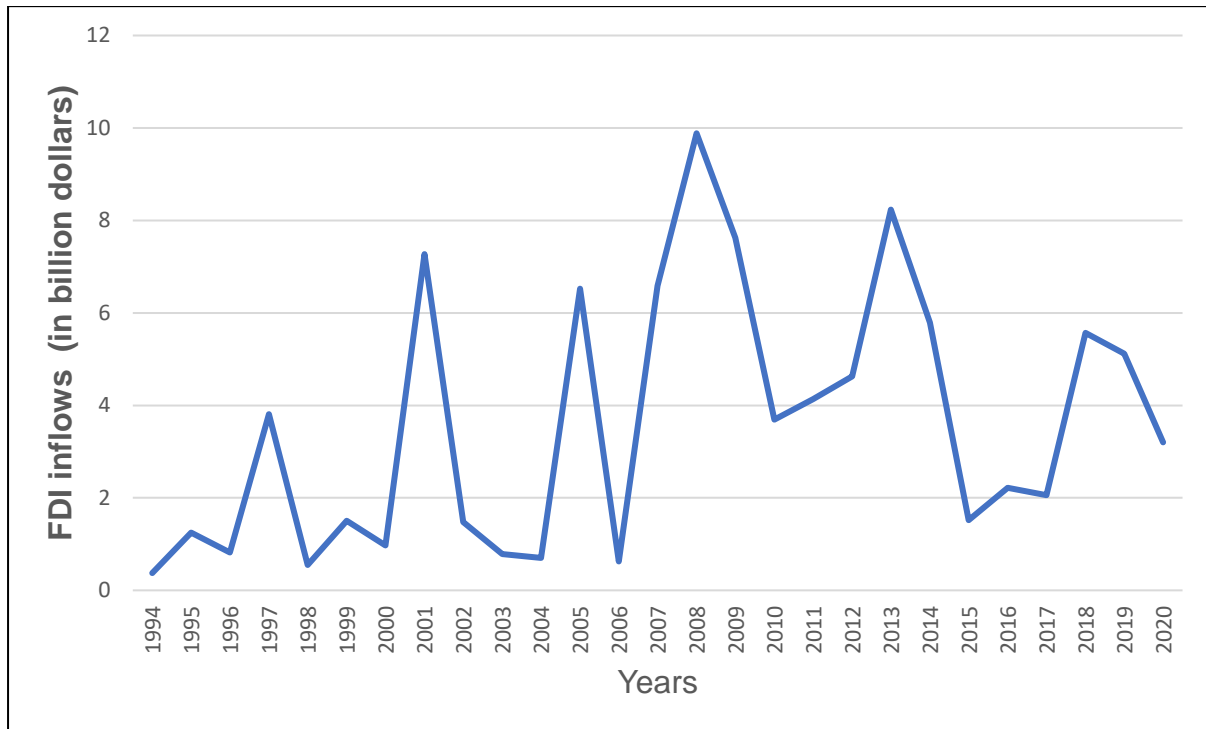


Figure 3.6: FDI inflows in South Africa from 1994 to 2020

Source: World Bank (2021)

Figure 3.6 shows that the FDI inflows have been volatile over the years. The first major remarkable increase occurred in the year 2001 when about US\$7.2 billion FDI inflows were recorded in South Africa. Some of the reasons for this sharp spike include the selling of Telkom’s strategic stake to Thintana consortium for R1.2 billion, and the acquisition of De Beer’s minority shareholders by Anglo American (UNCTAD 2006). The following year, FDIs inflows declined sharply by 20% from US\$7.3 billion to US\$1.5 billion in the year 2002. This was because of the South African rand depreciation against the United States Dollar (US\$). After 2006, FDI inflows increased, reaching the period’s maximum in the year 2008. According to (Wöcke and Sing 2013), these dynamics relate to price booms on global commodities, which took place until the year 2009. Literature contends that FDIs that are directed mainly at a certain

commodity have negative or limited effect on economic growth, because of spill-over effects and weak linkages.

FDI inflows continue to fluctuate post of the year 2008. Among other reasons, the country faced labour unrest in the mining industry which negatively affected FDI inflows. Major foreign companies disinvested in South Africa during this period, these companies include UK pharmaceutical company Glaxo Smith Kline which sold 50% of its 12,4% stake in Aspen Pharmacare (UNCTAD 2016). FDIs have been volatile, since the year 2005 the lowest level was recorded in the year 2015. The decrease in FDI was because of the end of the commodity “super-cycle” which impacted negatively the flow of FDIs in South Africa (UNCTAD 2015).

After a sustained period of decreases in FDIs from the years 2015 to 2017, yearly FDI flows to the country were about \$2 billion. In the year 2018 FDI flows were \$5.57B, a 170,55% increase from 2017 (UNCTAD 2020). Most FDIs were devoted to communications technologies, petroleum refinery, food processing, mining, information and renewable energy (UNCTAD 2020). In the year 2019, FDI flows into the country were \$5.116B, a 16,97% decline from 2018. The decrease was after a strong recover in the year 2018 where inflows doubled from \$2-billion to \$5.3-billion (UNCTAD 2020). Lastly, the COVID-19 pandemic had a significant impact on FDIs in the year 2020 as flows fell by 39% to \$3.2B. According to UNCTAD (2022), cascading economic and health challenges due to the pandemic and low prices of energy commodities weighed heavily on FDI flows to the continent. An analysis of FDI flows in South Africa is shown in table 3.1.

Table 3.1: Foreign Direct Investments flows in South Africa

Foreign Direct Investments	2017	2018	2019	2020	2021
Inward FDI (\$ billion)	2.01	5.45	5.13	3.11	40.89
FDI Stock (\$ billion)	156.35	138.56	145.25	136.74	173.06
Greenfield Investments	106	109	130	103	115
Greenfield Investments (\$ billion)	3.56	4.81	4.12	5.6	6.5

Source: UNCTAD (2022)

South Africa experienced an increase in FDI from \$2 billion in the year 2017 to \$5.4 billion in the year 2018. However, the increase was still lower than the highest peak of \$9.2 billion which was achieved in the year 2008. Furthermore, FDI stocks in the year 2019 increased to \$145 billion, well above \$138 billion in the year 2018 (UNCTAD 2020). The trend is related to Government initiatives in attracting \$100 billion of FDIs by 2023 (Santander 2020). According to UNCTAD (2020), South Africa recorded a decline of FDI inflows in 2020 to \$3.1 billion, compared to \$5.1 billion recorded in 2019. Furthermore, FDI stocks decreased to \$136 billion compared to \$145 billion recorded in the year 2019. Data from OECD (2022) has shown that the first half of the year 2021, South Africa FDI inflows reached \$1.6 billion, up from \$234 million year-on-year. Literature has indicated that South Africa has traditionally been a key investor, however, the pandemic has reversed this trend weighing heavily on investment flows. Furthermore, UNCTAD (2021) identified the following largest investors in recent years investing in South Africa, Mainstream Renewable Energy Nissan, BMW and Beijing Automotive Industry holding.

In the year 2021 FDI inflows in South Africa hit a high record of \$40 billion because of inter-firm financial transaction. The strong increase was due to a share exchange between Naspers and Prosus and new project announcements within the country including the clean energy project finance worthy \$4.6 billion and a \$1 billion greenfield project by US-based Vantage Data Centers (UNCTAD 2022). An analysis of greenfield investment shows a decline from the year 2019 to 2020 of foreign investors that are interested in starting new operational facilities in South Africa. However, in the year 2021 South Africa saw a jump in greenfield projects discussed above, though the growth is still low compared to the year 2019.

3.8 Sectors attracting FDI flows

Foreign direct investment in South Africa comes from different sectors and they are grouped into primary sector, secondary sector and tertiary sector see table 3.2. The primary sector is the largest contributor to the FDI inflows within the country though the tertiary sector does have the most industries (PWC 2021).

Table 3.2: Sectoral composition of FDI inflows in South Africa

Sector		Industry
Primary		Agriculture and hunting
		Mining and quarrying
Secondary		Unspecified secondary
Tertiary		Electricity, gas and water
		Community, social and personal service activities
		Construction
		Wholesale and retail trade
		Transport, storage and communications
		Business activities

Source: FDI intelligence, 2020

3.8.1 The primary sector in South Africa

The primary sector involves the direct use of natural resources, and it comprises the following key industries agriculture, mining and quarrying, and hunting. Mining industry is regarded as the biggest contributor contributing 31% of the FDI inflows and it has different divisions (minerals, coal and gold). The annual mining report compiled by PwC (2013) highlighted that the mining industry is lucrative in attracting FDIs. However, there are surveys that have been conducted more recently and they have highlighted the reasons why the industry might not be able to attract more FDI inflows in the near future. Some of the causes highlighted include rigid labour legislation, labour unrest, lack of wage flexibility, unskilled personnel and inefficiency in government spending (PWC 2021).

In addition, Leon and Grove (2018) highlighted some of the challenges the industry is facing include labour unrest which has resulted in production loss, increases in labour cost and difficulty in ensuring the safety of employees. All these constraints have resulted in job losses, because if labour cost increases but production levels decrease,

it is difficult for mining companies to absorb labour. Thus, the industry needs to provide a stable environment, efficient operating and regulating environment to be able to attract more FDI inflows.

3.8.2 The secondary sector in South Africa

The manufacturing of finished goods dominates the South Africa secondary sectors. Some of the largest industries within the sector includes machinery and equipment, metal, food and beverages, rubber and plastic, tobacco, chemicals and petroleum products (Brand South Africa 2020). Furthermore, between the years 2008 and 2019 the sector has contributed 18% of FDI inflows (Brand South Africa 2020). According to Blue Line Capital (2022), intercompany financing has played a greater role in increasing FDI inflows the past years. Some of the largest investors include BMW, Mainstream Renewable Energy, Beijing Automotive Industry holding and Nissan. Blue Line Capital (2022) highlighted that South Africa's manufacturing sector has a greater opportunity in attracting FDIs because it has attractive assets for investors such as diversified, productive and advanced economy.

3.8.3 The Tertiary Sector

South Africa's tertiary sector is dominated by the following key industries transport, storage and communications, retail and wholesale trade and business activities see table 3.3. The sector is regarded as one of the biggest contributor to the economy with the business sector contributing 36% of FDI inflows, transport and communications, 10% and retail and wholesale 5%. Between the years 2000 and 2012 electricity, construction and gas did not contribute to FDI inflows because Eskom was the sole provider of electricity while government provided gas and social products while gas and social products were provided by government. Goldberg (2018) asserts that countries that have "well supervised" and "well regulated" financial sectors are able to improve risk management tools and the country's mix of financial services. This suggest that the development of financial sectors does attract FDIs into the country and encourage investments.

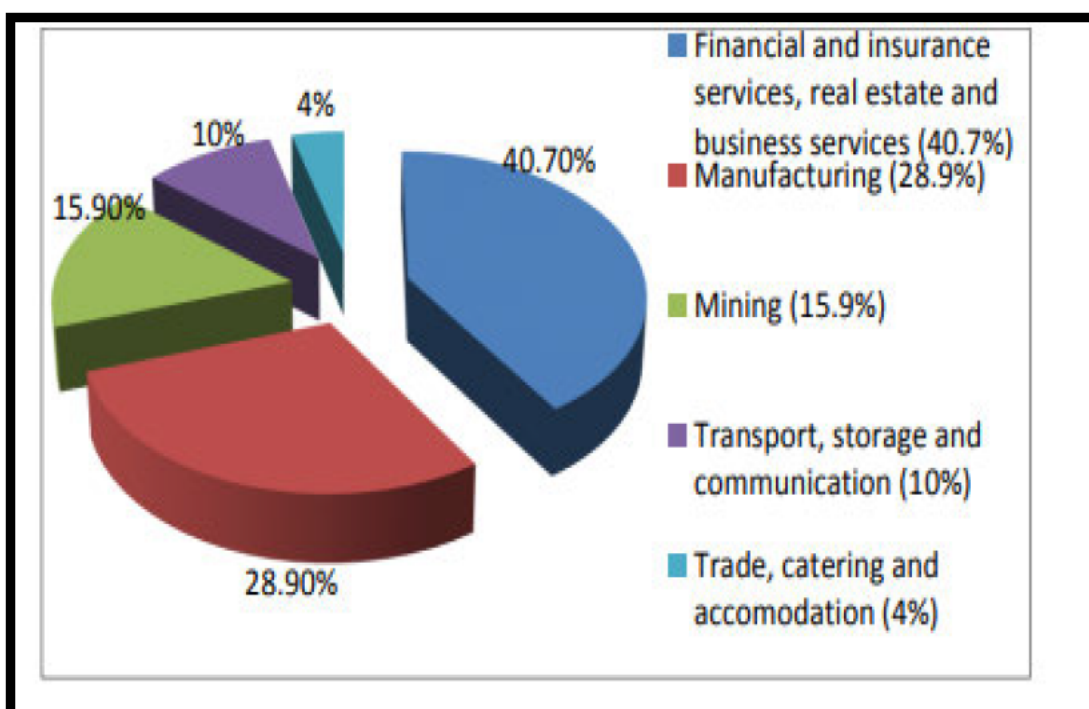


Figure 3.7: South Africa FDI inflows key industries

Source: SARB 2020

Figure 3.7 shows the industries in the tertiary sectors that received FDI inflows. On top of the rankings is the financial and insurance services (40.7%), followed by manufacturing (28.9%) and transport and storage (10%). Trade and catering received the least FDI inflows with only 4% invested into the industry.

3.9 Government initiatives to promote FDI in South Africa

As previously discussed, two departments have been dedicated to focus on investment and trade in South Africa namely; DTI and TISA. To promote the growth of FDI in the country, the following incentive programmes were implemented, the Manufacturing Investment Programme (MIP), the Foreign Investment Grant (FIG), and the 12I Tax Allowance Incentive (12I TAI). An in-depth discussion of these programmes follows.

3.8.1 Manufacturing Investment Programme (MIP)

According to Department of Trade and Industry (2015), MIP was formulated for foreign and local manufacturers who wanted to expand an existing production facility or starting a new a new production plant. The MIP primarily goal was to promote investment in the manufacturing sector by supporting small enterprise and medium to large sized investments projects. Furthermore, the MIP was designed to encourage investments into the manufacturing sector as part of the government's initiative in creating employment and ensuring continual growth within the sector.

The programme offers investments support to both local and foreign companies. The grant covers 30% of the costs related to land and buildings, equipment, machinery and business vehicles (Department of Trade and Industry 2015). The grant can also be used for establishment of new production, expansion of existing production and/ or upgrades of production capability. Investment projects that are worthy five million rands and below do qualify for 30% investment grant. Whereas, investment projects that are more than five million rands do qualify for grant ranging between 15 and 30% payable within two years (Department of Trade and Industry 2019). The grant also covers upgraded and expansions, so existing manufacturers who intends to expand are entitled to 30% grant.

Furthermore, the grant does cover costs involved in moving equipment and machinery to South Africa from abroad, which is an added advantage to foreign investors. The investors can receive a relocation payment of up to ten million rands. In addition, Department of Trade and Industry (2019) highlighted that manufacturers that have been granted the incentives they are not restricted to MIP only, they can consider other investments incentives

3.8.1.2 Foreign Investment Grant (FIG)

According to Department of Trade and Industry (2019), FIG is a reimbursement grant given to foreign investors to cover the costs incurred during relocation of equipment and new machinery to South Africa excluding vehicles. Approval is needed from an

appointed DTI consultant engineer if the investor wants to ship second hand machinery and equipment. The consultant must certify that the machinery and equipment are of current technology. The grant is given to first time foreign investors, and it covers 15% of the machinery and equipment value. Furthermore, the manufacturer needs to be approved of manufacturing investment programme to qualify for FIG. The grant, however, excludes countries from the Southern African Development Community (SADC) and the South African Customs Union (SACU).

The FIG is subject to the condition that MIP should be approved. Prior to shipment from abroad, the FIG application should be submitted together with the MIP application. For each project, relocations are limited to a maximum of two phases on condition that the execution of the phases is done within one year commencing production. Furthermore, for a manufacturing project only new machinery and equipment acquired abroad are considered in South Africa. There are special cases where second hand machinery and equipment qualify on condition that a consulting engineer certifies the equipment to be of latest technology. Table 3.3 shows a summary of the points discussed above as sourced from (Department of Trade and Industry 2019).

Table 3.3: Summary of Foreign Investment Grant

Objective	Qualified foreign investors are compensated by FIG the relocation costs they incurred from moving new equipment to the country.
Recipients	Foreign investors that have been approved for MIP
Advantages	A cash grant, calculated as the lesser of 15% of the value of new machinery and equipment; or the actual relocation cost of new machinery and equipment; to a maximum of R10 m
Implementing Agency	The Department of Trade & Industry

Source (DTI 2019)

3.8.1.3 12I Tax allowance Incentive.

According to Department of Trade and Industry (2019), in the year 2010 the 12I Tax Allowance Incentive (12ITAI) programme was established with the aim of supporting green field investments that uses new manufacturing assets and brown field investments that have an intention of upgrading or expanding their industrial facilities. Its aim is to develop production in the manufacturing sector and training of workers so that they become upskilled resulting in labour productivity improvements. For green field investments, the allowance is 55% of the qualifying assets (Department of Trade and Industry 2019). In addition, the programme offers R36 000 for each employee that is employed full time. A total of fifty projects worthy thirty-six billion rands has been supported by the tax allowance between the years 2010 and 2015 (Department of Trade and Industry 2019). Table 3.4 below shows a summary of the points discussed above as sourced from DTI.

Table 3.4: Summary of 121TAI

Objective	12I TAI is designed to support new greenfield investments and expansions of existing projects on brownfield investments.
Beneficiaries	Investors approved for the 121 TAI
Benefits	Training allowance of R36 000 per full time employee, offers support for capital investment of up to R900 million
Implementing Agency	The Department of Trade & Industry

Source (DTI 2019)

3.9 Foreign Direct Investments in Africa

Although the African continent lags compared to other regions, there has been increases in FDI inflows over the years which has been stimulated by the growth in markets in Africa. Africa is well known for its natural resource's endowments, however, investors are exploring the prospective in existing markets and they are involved in the creation of new markets. UNCTAD (2018) noted that with the green field investments, the recipient of most FDI inflows is the service sector. Specifically, investors are exploring investments in telecommunications, business services and construction.

Furthermore, UNCTAD (2018) conceded that policies that have been designed to encourage FDI in Africa, concentrated in the provision of substantial incentives with minimum efforts towards the creation of domestic investments that attract the investment. This has partly contributed to Africa's low share of FDIs compared to other developing continents in the world. Between the years 2001 and 2013, the continent share of global FDI was 3%, which was very low compared to other continents, for instance, Latin America and Asia their share was 12% and 23% respectively. In

addition, there has been an unequal distribution of foreign investments in different sub regions in the continent and across countries.

In the continent, Northern Africa is the leading host of foreign investments despite political upheavals. Policies designed to improve efficiency and privatisation reforms have contributed to the growth of FDIs in North Africa and also investments that were directed to the exploration of oil in Morocco, Algeria, Libya and Egypt (Loots and Kabundi 2012; UNCTAD 2018). In East Africa, it was noted that resources seeking investments on gas and oil in Uganda, Kenya and Tanzania have resulted in the increase of FDIs (UNCTAD 2014). As for West Africa, they continually attract investors that are resource seeking particularly in the oil sector.

Over the past years, Southern Africa has attracted greater FDI inflows as compared to other sub-regions in the continent. In the year 2016 Southern Africa received \$21.2 billion FDI inflows and was ranked the largest sub region recipient, North Africa received \$14.5 billion, West Africa \$11.4 billion, East Africa \$7.1 billion and lastly Central Africa received an inflow of \$5.1 billion (UNCTAD 2018). In addition, to its resource's attractiveness the region attracted FDI through the integration agenda which involves the provision of preferential access to a growing market. Even though member State offers incentives and investment policies to improve the business environment, they still face obstacles in attracting FDIs because of political instability and uncertainty within the region.

Literature acknowledges that economies that are large and rich in resources attracts more foreign investments in the continent (UNCTAD 2021). In West Africa, Ghana and Nigeria are regarded as large resource rich countries, representing FDI stock of 71.65% in the sub-region over the period 2010 to 2016 (UNCTAD 2018). The leading recipient of FDI with the largest economy in North Africa is Egypt. According to UNCTAD (2018), FDI inflows in Egypt are driven by cheap labour costs and population size. In African economies, OECD countries are the largest investors. In the year 2017 USA, France and the United Kingdom (UK) were the leading investing economies in the continent with a total FDI stock of 64% (UNCTAD 2018). OECD countries are driven by availability of natural resources to the continent. Notably USA invested a significant percentage of investments into mining and extractive industries. Though

Egypt is not a resource rich country, USA saw it as a key destination of FDI to the North African region.

China and India are also attracted by the availability of natural resources in Africa (UNCTAD 2016). Countries that are rich in natural resources include, Niger, North Africa, DRC and Sudan are the major recipients of Chinese investments (Brown 2018). Furthermore, Brown (2018) attested that China undertook a significant investment in oil and gas in some African countries. These countries include Tanzania, DRC, Nigeria and Equatorial Guinea. On the other hand, Sudan received substantial investments in their oil industry from India.

Although investments driven by natural resources constitute a greater percentage of FDI from emerging economies and OECD countries, literature has also indicated the existence of efficiency seeking investments in Africa. According to UNCTAD (2015), efficiency seeking investments has been facilitated by the adoption of preferential schemes granted under the European Union “Everything but Arms” (EBA), USA, African Growth and Opportunity Act (AGOA). The leading recipient of efficiency seeking FDI is Mauritius, and it serves as a platform for easing inter regional FDI to other sub-Saharan African countries (UNCTAD 2020).

After successive declines in the years 2016 and 2017, FDI inflows in Africa experienced an increase of 11% (\$46 billion) defying the global trend (Jere 2019). According to Jere (2019) some major economies (Ethiopia, Nigeria and Egypt) experienced decreases in FDI, however, this was offset by increases in other significant countries like South Africa. Furthermore, Jere (2019) noted that most of the FDI inflows to the continent were as a result of growth in non-resource seeking investments and price of commodities

North Africa FDI inflows increased to \$14 billion (7%) in the year 2019, this was because of increased investments in most of the countries (UNCTAD 2020). Although FDI inflows in Egypt decreased by 8%, they have remained the biggest recipient of FDI inflows in Africa. Investments in Egypt are skewed towards oil and gas industries. Most investors were attracted by the discovery of offshore gas reserves this resulted

in the country becoming the net exporter of gas in the year 2019. Also, the company's investment stock in the country increased to more than thirty billion (UNCTAD 2020).

West Africa FDI inflows contracted by 15%, this was the lowest level since the year 2006 (UNCTAD 2020). The contraction was because of decreases in Nigeria, for two consecutive years. Nigeria experienced a huge decline of 43% to \$2 billion, and it was no longer considered as the largest recipient of FDIs in West Africa (UNCTAD 2020). Nigeria was experiencing disputes between government and some large multinational companies and instability risk associated with elections, most investors decided to withhold their planned investments. According to UNCTAD (2020), Ghana became the largest recipient of FDI inflows in West Africa, although the country experienced a decrease of 8%. The country has the largest Greenfield investment from Eni Group and foreign investments were directed to minerals and gas.

East Africa FDI inflows have remained unchanged at \$9 billion in the year 2018 (UNCTAD 2020). Ethiopia experienced a contraction of 18% to \$3.3 billion; furthermore, the country continues to be the biggest recipient of FDI inflows in East Africa. Investments in Ethiopia are directed towards the manufacturing sector, mineral extraction, petroleum refining, renewable energy and real estate. Investment prospects have remained positive because of its investment readiness, investment facilitation measures and economic liberalization. According to FDI intelligent Report (2021), Republic of Korea opened a Hyundai Motor Company manufacturing plant in East Africa and it is considered the first with a production capacity of 10,000 vehicles per year.

Central Africa FDI flows were stagnant at \$8.8 billion in the year 2018 (FDI intelligent Report 2019). The largest recipient of FDI inflows within the region was Congo with a total of \$4.3 billion and most of the investments were directed towards oil exploration and production. Switzerland (Glencore) and China (Molybdenum) mining companies expanded their presence within the country. In the year 2020, FDI inflows in Congo increased by 11% and investments have continued in mineral extraction especially of cobalt, of which the country holds 60% of the world's known reserves (UNCTAD 2020).

The COVID-19 pandemic impacted negatively on FDI flows to Africa resulting in a decline of 16% in 2020 from \$47 billion in the year 2019 to \$40 billion in the year 2020. According to UNCTAD (2021), lower prices of energy commodities and health challenges due to the pandemic affected foreign investors within the continent. The report indicated that resource-based countries were affected more severely compared to non-resource-based countries. Figure 3.7 shows the FDI flows of the top five host economies in Africa.

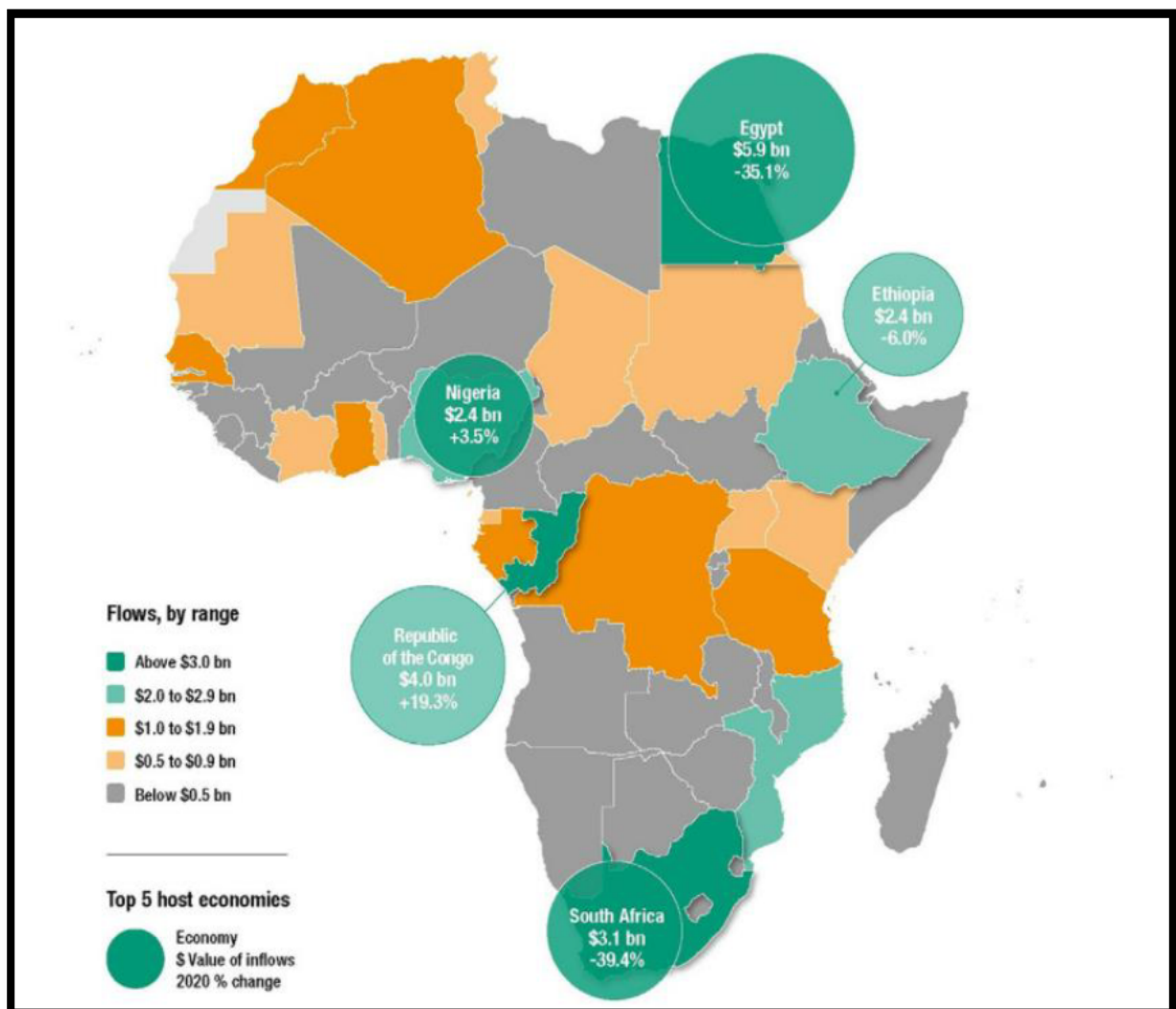


Figure 3.8: Africa's top five FDI host countries 2020 (value and change)

Source: UNCTAD (2021)

As shown in Figure 3.8 above Egypt, South Africa, Congo, Ethiopia and Nigeria are the top five FDI host countries. In the year 2020 most countries in North Africa experienced a decline of FDI inflows, this resulted in the continent experiencing a contraction of 25% to \$10 billion, down from \$14 billion in the year 2019 (UNCTAD 2021). The largest recipient was Egypt although it suffered significant decrease of (-35%) to \$5.9 billion in the year 2020. In sub-Saharan, FDI inflows contracted by 12% and few countries were able to experience growth. South Africa and Mozambique accounted for most inflows within the continent. FDI inflows in West Africa contracted by 18% in the year 2020 even though Nigeria experienced increases in FDI inflows from \$2.3 billion in 2019 to \$2.4 billion in the year 2020 (UNCTAD 2021).

According to (UNCTAD 2021), Senegal received high FDI inflows in 2020 (39% increase) within the continent and the investments were in energy. Central Africa was the only region that recorded increases in FDI from \$8.9 billion in 2019 to \$9.2 billion in the year 2020. Republic of Congo experienced an increase of 19% to \$4.0 billion, this assisted in preventing a decline (UNCTAD 2021). Lastly, East Africa FDI inflows contracted by 16% (\$6.5 billion) in the year 2020. Ethiopia accounts more than a third of FDI inflows in East Africa even though the country experienced a 6% decline.

Summing up, literature has proven the growth and development of FDI inflows in Africa. According to UNCTAD (2018), the increases was because of vast natural resources and improvements in FDI policies. FDI inflows in Africa are forecasted to increase by 25% in the year 2022 (UNCTAD 2021). This projection is supported by expectations in the continual growth recovery of commodity prices and strengthened interregional economic cooperation.

3.10 Conclusion

This chapter presented an overview of South Africa economic growth and FDIs. The first part of the chapter analysed South Africa's trends in economic growth since attaining democracy in the year 1994. The key macroeconomic elements that are considerably linked to South Africa's economic growth include international trade, real-exchange rate and human capital development.

The chapter also gave an overview of the major factors behind South Africa's economic growth performance as suggested in the literature. One of the main reasons for the economic growth registered in South Africa after the year 1994 lies in the lifting of economic sanctions and the subsequent reintegration of the country into the global economy. The economic growth of South Africa improved significantly when the country transitioned to democracy and has been mostly robust and stable throughout the democratic era. The largest contributions to overall economic growth over the period 1994 to 2012 sprang from increases in consumer spending, investment in energy infrastructure, the Gautrain rapid rail link and building and upgrades of stadiums for FIFA World Cup in the year 2020.

Furthermore, this chapter highlighted some of the key macroeconomic policies that the South African government has formulated and implemented to promote economic growth. The policies include JIPSA, RDP, AsgiSA, GEAR and NGP. The programme aim was to stimulate the growth of the economy through measures such as curbing government's spending, reducing tax and government fiscal deficit. These policies were instrumental in transforming South Africa's economy.

The second part of the chapter presented trends in FDI inflows in South Africa. South Africa has an open investment climate which plays an important part in economic development and since the end of apartheid, the country has embarked on extensive economic reforms that attract more foreign investors within the country. It was observed in this part of the chapter that FDI inflows have not been consistent in post-apartheid South Africa. The section also discussed the main sources of FDI for South Africa and the most sought-after sectors.

With a vast number of multinationals, Europe was identified as the main investor in South Africa. Sectoral analysis on FDI flows in South Africa showed that the largest recipient of FDI is the service industry through the financial sector. The government has also introduced various policies and incentives to promote FDI. Most of these incentives promote investment in the manufacturing sector, predominantly, "Greenfields and Brownfields". Also, the policies were designed to encourage FDI inflows and concentrated in the provision of substantial incentives that attracts investments. South Africa compares relatively well to other leading African countries

in terms of FDI inflows. To conclude, the chapter discussed FDIs in Africa. There has been growth, development of FDI inflows in Africa and investors are exploring prospective in existing markets, and they are involved in the creation of new markets. The next chapter reviews the research methodology of the study.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1 Introduction

Having established that there is some evidence on the relationship between foreign direct investments and economic growth, this study aimed to test empirically the impact of foreign direct investments (FDI) on South Africa's economic growth. The inconclusiveness that surrounds the impact is because of the variables that were used. Using a variety of variables enabled the researcher to establish whether FDI variables portray similar stories in relation to economic growth. The literature review in chapter two and the analysis of empirical studies have together given a clear picture as to the theories and practices of FDI and economic growth. The analytical framework of this study is formed with the theoretical and empirical underpinnings that were reviewed in chapter three. This chapter discusses the research methodology used in investigating foreign direct investments as a solution to South Africa's economic growth. The research approach, strategy, design, data collection and analysis techniques employed by the researcher are discussed. In addition, ethical issues that are associated with this study are discussed in this chapter. The chapter is organised as follows; research design is discussed in the first section followed by theoretical framework that underpins the study. A discussion of study variables and determinants of FDI is presented followed by the research techniques employed. The second section analysis the procedure of collecting the primary data and ethical issues associated with the study. The chapter ends with a conclusion.

4.2 Research Design

Creswel (2014) defined research design as the procedure and methods of collecting, analysing and interpretation of the data. Bhattacharjee (2012) describes research design as plans that are involved in obtaining information in research. Furthermore, Polit and Beck (2013) alluded that research design involves the researcher's overall methodology in analysing the research hypothesis. Thus, research design aims to guide the researcher from the beginning to the end by providing an outline in which all

the fundamental works will be accomplished. Bhattacharjee (2012) identified two categories of research design – positivist and interpretive. Positivist designs involve testing of a theory and they seek to generalise patterns. Whereas interpretive designs are intended for theory building and they seek subjective interpretations of social phenomena.

In this study positivist design was adopted and two key research methods were employed, secondary data (quantitative) analysis and field surveys (qualitative analysis). Secondary data analysis involves analysing of previously collected data that has been compiled by other sources. Field surveys are considered non-experimental designs as they are not involved in the manipulation of independent variables but rather they test their effects using statistical methods. The study analyses these two forms of research design divided into two parts. The first part discusses the empirical methodology used to analyse secondary data. The second part presents the field surveys used to collect and analyse information on FDI and growth from key personnel and macroeconomic experts.

4.3 Examining the impact of FDI on economic growth

This section examined the impact of FDIs on South Africa's economic growth. It involved the collection and analysis of data obtained from various databases and subsequently tested the impact of the variables using regression analysis. The subsections are organised as follows: theoretical framework and empirical model specification which supports the methodology applied in this study, followed by a review of the study variables and definition of the variables and the specification of the data that was used to analyse the impact. Since time series data is used in this study, the variables need to be stationary to avoid spurious regressions, thus unit roots and cointegration tests were carried out. In order to examine the impact of FDI on GDP the study applied the Auto Regressive Distributed Lag (ARDL). The model was developed by Pesaran, Shin and Smith (2001) and it can be applied irrespective of the integration order of the variables. This is explicitly linked with the Error Correction Model (ECM) which are called vector error correction models discussed in the next section. Compared to other cointegration methods, literature has shown that these methods

have several advantages and have been proven to be the best approach. The section closes with a discussion of diagnostic test and impulse response that were used to analyse the structural shocks time path of the dependent variables.

4.4 Theoretical framework

The theoretical framework that underpins the methodology is based on the endogenous growth model discussed in Chapter 2. The model assumes primary sources of growth to be physical capital, human capital, labour, and technological change. According to Romer (1986) and Lucas (1988), the equation below reflects the essence of endogenous growth theory.

$$Y = AK \tag{4.1}$$

Where, Y is aggregate output, A denotes technological factors and K includes physical and human capital.

We modified the underlying model by employing real GDP, FDI and exchange rate. The generic regression is specified as follows:

$$Y_t = f(FDI_t, EXR_t) \tag{4.2}$$

Where, Y_t is change in growth rate in year t , FDI refers to foreign direct investments in year t , and EXR represents exchange rate in year t . The dependent variable is GDP, the dependent variable is FDI is the independent variable, and the moderating variable is EXR . To minimise scale effects, the variables were transformed into natural logarithmic form as follows:

$$LNRGDP_t = \alpha_0 + \alpha_1 LNFDI_t + \alpha_2 LNEXR_t + \varepsilon_t \tag{4.3}$$

Where, α_0 is the intercept, regression coefficients are represented by $\alpha_1 - \alpha_2$ and error term is given by ε_t which represents the impact of the omitted variables.

4.5 Definition of variables

To examine the impact of FDIs on economic growth, the study used variables that have been widely used earlier in most studies on FDIs that were conducted in South Africa and other developing countries. This provides the basis for comparing results obtained. In previous studies that were conducted in South Africa, foreign direct investment and exchange rate were found to be significant. Thus, the variables selected have varying expected relationship either positive or negative.

Determinants of FDI inflows are the factors that attract foreign investors into the country. The study examined trade openness, government expenditure, market size, exchange rate and inflation rate. An examination on the effects of these variables on inflows of FDI and economic growth has an essence for academics and policy makers and gives them insights to estimate factors that stress FDI inflows of developing countries. According to Iamsiraroj (2016), developing nations such as South Africa aim to magnetise capital inflows that improves economic growth in the long term.

Real gross domestic product (RGDP).

The proxy for economic growth is RGDP, which is the dependent variable used in this study. RGDP is measured as nominal GDP deflated by the GDP deflator, (base 2000 =100). The RGDP has been used as a proxy for economic growth (Sunde (2017); (Sokang 2018; Qui 2019; Baiashvili and Gattini 2020; Ciobanu 2020).

FDI

In developing countries, FDI is a stimulator for economic growth and it is essential and significant forecaster of the economic growth Hussen (2014), Uwubanmwun and Ogiemudia (2016). This study hypothesises FDI to positively influence growth.

Market Size (MS)

According to Cuyvers *et al.* (2011) countries having large market size and locating strategic geographic positions usually attract Multinational companies to seize their market opportunities, that is, they benefit the scale of economies since they expect these markets to grow and develop higher economic growth. In line with the studies

by Dahir (2017), Hyungsun and Miguel (2017), Saini and Singhania (2018) Jaiblai and Shenai (2019), MS can be explained as the sum of the gross values added by any producer in the economy. In econometric studies, MS as measured by GDP is considered as the most robust FDI determinant (Hyungsun and Miguel 2017). Furthermore, Dahir (2017) mentioned that countries with expanding, larger markets and greater purchasing power tends to attract more FDIs because the firms would want to receive potentially higher returns on their capital and ultimately receive high profits too from their investments. To examine the impact of a country's market size and the dynamism of the host country on the volume of FDIs they receive, GDP is used. A non-significant relationship between foreign direct investment and market size would mean that foreign investors are more interested in exports rather than supplying the domestic markets. In this study, the expected sign for market size is positive.

Exchange rate

EXR variable indicates the value of one currency in relation to another country's currency. Following the studies of Mwinlaaru and Ofori (2017); Jaiblai and Shenai (2019); Asiamah, Ofori and Afful (2019); Tan, Xu and Gashaw (2021) exchange rate does has an impact on the "export- and import-driven" FDI. The exchange rate variable is measured using South African rand against the American dollar. A weak exchange rate makes exports cheap and imports expensive which tends to encourage FDIs. Therefore, the relationship between the exchange rate and FDI is dependent on the performance of the exchange rate.

Trade openness

The variable *OPEN* variable is considered as a pull factor for the host country. FDI depends upon the openness of the host countries which can increase or decrease the inflows of FDI (Keho and Miao 2017; Malefane and Odhiambo 2019; Nwadike, Johnmary and Alamba 2020; Omoke and Opuala 2021). According to Tang, Tregenna and Dikgang (2019) and Omoke and Opuala (2021) there is mixed evidence on the significance of trade openness measured by the ratio of exports plus imports to GDP. Omoke and Opuala (2021) postulated that the impact of trade openness on FDI depends on the type of investment. For example, the country's openness to export does attract FDIs that are export oriented, while tariffs increase and export barriers by host country discourages FDI inflows. The variable is anticipated to be positive

because higher trade openness of South Africa increases FDIs, and lower trade openness decreases FDIs.

Government expenditure

GOVSIZE is related to government levels of consumption, in relation to GDP. This variable is calculated as the ratio of government consumption to GDP. A positive relationship is anticipated between FDI and government consumption due to government expenditure being related to infrastructure and social investment, including education, which, in turn, serves to encourage production. Joshua (2019) postulates that government spending adjustments not only secure economic stability, but they also accelerate and generates economic growth through creation of employment which ultimately reduce poverty. However, in the event that there is wasteful in government expenditure, increases in spending would have a negative effect on FDI (Jaiblai and Shenai 2019). Joshua (2019) notes that higher levels of general government consumption provide social capital that promotes production and growth. The variable is anticipated to be positive.

Inflation rate

The variable *INF* affects prices of goods and FDIs. High levels of inflation are directly linked to escalating economic problems and literature has documented that a negative relationship exists between inflation and economic growth (Ogono, Nelson and Odhiambo 2017; Asongu *et al.* 2018; Kunofiwa 2018). The proxy for this variable is Inflation, GDP deflator (annual %). In line with literature, a negative correlation between inflation and the dependent variable is expected.

Annual time series was employed in this study covering the period 1980 to 2020 with particular attention to the period from the year 1994, during which South Africa underwent political and economic transformation, after the abolishment of apartheid. The data were collected from the World Bank and the SARB.

Table 0.1: Proxy of each variable and expected sign

Variables	Proxy	Expected sign
RGDP	nominal GDP deflated by the GDP deflator	positive
FDI	Annual FDI	positive
EXR	US\$	positive /negative
MS	GDP (current US\$).	positive
OPEN	(x + m)/GDP	positive
GOVSIZE	Government consumption	positive/ negative
INF	CPI	negative

4.6 The determinants of FDI

In line with previous empirical and theoretical works on FDI and economic growth (Sunde 2017; Bermejo Carbonell and Werner 2018; Malefane and Odhiambo 2019; Rani and Kumar 2019), tried to establish the major determinants of FDI inflows using estimate of a model, in which FDI is a function of GDP, government expenditure, exchange rate, inflation, market size and trade openness on FDI. The augmented model is stated as follows:

$$FDI_t = \alpha_0 + \alpha_2 GOVSIZE_t + \alpha_3 EXR_t + \alpha_4 INF_t + \alpha_5 MS_t + \alpha_6 OPEN_t + \varepsilon_t \quad (4.4)$$

Where, FDI_t is FDI measured as a percentage of GDP; $GOVSIZE_t$ is the government expenditure; EXR_t is the exchange rate; INF_t is inflation ; MS is market size ; $OPEN$ is trade openness. All the variables are given in year t and ε_t is the error term assumed to be normally and independently distributed with constant variance and zero mean. FDI is the dependent variable in equation 4.4.

To minimise the variability of data, the model is transformed into logarithm and made to conform more closely to normal distribution,

$$\begin{aligned} LNFDI_t = & \alpha_0 + \alpha_2 LN GOVSIZE_t + \alpha_3 LN EXR_t + \alpha_4 LN INF_t + \alpha_5 LN MS_t + \\ & \alpha_6 LN OPEN_t + \varepsilon_t \end{aligned} \quad (4.5)$$

When modelling variables with non-linear relationships, there is a possibility of errors being negatively skewed. Thus, taking the logarithm of a skewed variable improves the fit of the model by transforming the distribution of the features to a more normally bell-shaped curve.

4.7 Research techniques

4.7.1 Test for stationarity

One of the conditions of time series data is that before running causality, stationarity must be tested on the variables. Abdullah, Marashden and Malkani (2012) indicated that there is presence of unit roots in most macroeconomic time series, hence there is need to analyse the stationarity of the time series. This involves testing the order of integration and a stationary series can be integrated of order (d) if it achieves stationarity after being differenced (d) times (Newbold 1974). A model with non-stationary variables is unreliable on the test statistics (t, F, DW and R^2) since the regressions are spurious. The ARDL bounds test assumes that the variables are order 1(0) or 1(1). Thus, using unit root tests require determining the variables order of integration before applying the ARDL test. The objective is to avoid spurious results and ensure that the variables are not of order 1(2). If the variables are integrated of order 1(2), F statistics by Pesaran, Shin and Smith (2001) values would not be possible to interpret.

In line with other current studies (Dahir 2017; Sunde 2017; Cañal-Fernández and Fernández 2018a; Sarker and Khan 2020), the Augmented Dickey-Fuller (ADF) (1979)

and the Phillips-Peron (PP) (1988) were employed. The ADF and the PP test are considered as the most suitable tests for very short time series.

4.7.1.1 Augmented Dickey Fuller (ADF)

Dickey and Fuller (1979) developed the ADF test, it was named after them and it is widely used because of its simplicity and reliability. Also, studies by Monte Carlo showed that ADF works properly and has an added advantage on minimising auto correlated errors. However, ADF is a non-standard distribution even if the sample size is big, hence critical values of the normal distribution cannot be used in the ADF regression. The ADF test regression is as follows:

The coefficient size of δ_2 is the one that need to be determined in the equation below:

$$\Delta Z_t = \delta_0 + \delta_1 t + \delta_2 Z_{t-i} + \sum_{i=1}^n \beta_i \Delta Z_{t-i} + \varepsilon_t \quad (4.6)$$

At time t , the ADF regression tests the existence of unit root of Z_t , variables ΔZ_{t-i} indicates the first difference of the series with n lags, ε_t is the variable that adjusts the error of autocorrelation and δ_0 , δ_1 , δ_2 and β_i are the coefficients that need to be calculated.

The null hypothesis for the presence of unit root in variable Z_t is given as follows:

$$H_0: \delta_2 = 1 \quad H_1: \delta_2 \neq 0$$

The null hypothesis is rejected if p-value is less than the 5% significance level indicating that the series is stationary. Acceptance of the null hypothesis indicates that the series is non-stationary.

4.7.1.2 Philips-Peron test

Peter Phillips and Pierre Peron developed the Phillips-Peron (PP) unit root test in the year 1988. Although, the Philips-Peron test is similar to the ADF, the way each test manages serial correlation is different. The Philips-Peron ignores any serial correlation whereas the augmented Dickey-Fuller uses parametric autoregression to estimate the structure of the errors. Having said that, the PP has the following advantages over the ADF test;

- i. the user does not have to specify the lag length of the regression test
- ii. the PP is robust to heteroskedasticity general forms of the error term μ_t
- iii. the PP has advantages over the ADF if a time series has moving average components.

The hypothesis and equations to be tested are the same as the ADF discussed above. The only difference is the variable lag that are excluded from the model.

$$\Delta Z_t = \delta_0 + \delta_1 t + \delta_2 Z_{t-i} + \varepsilon_t \quad (4.7)$$

4.7.2 Cointegration

The statistical method used to test the correlation between two or more non-stationary time series in the long run is known as cointegration. According to Rao (2007), the method helps in estimating long run parameter in systems with unit roots. Variables are cointegrated if two set of variables in a linear combinations have a lower order of integration. For example, if a set of I (1) variables are modelled with linear combinations that are I (0) cointegration exist. According to Burke and Hunter (2005), the order of integration I (1) tells that a single set of differences can transform the non-stationary variables to stationarity. Literature identified the following methods of cointegration: Engle–Granger, Johansen test and ARDL model.

The Engle Granger method involves, constructing residuals based on the static regression. The augmented dickey fuller or a similar test is used to test the presence of unit roots on the residuals. If there is cointegration on the time series, then the

residuals are stationary. Armstrong (2001) noted that the Engle-Granger has a major issue on choosing the dependent variable which may result in conflicting conclusions. However, the issue has been rectified by the Johansen's and Phillips-Ouliaris tests.

Johansen test involves testing cointegration between different time-series data at a time. The test overcomes the problem of an incorrect test result of the Engle-Granger method. The methods avoid issues created when errors are carried from one-step to the next and the issue of choosing a dependent variable. Thus, the test can identify multiple cointegration vectors.

Following the studies of (Dahir 2017; Sunde 2017; Cañal-Fernández and Fernández 2018b; Nyiko, Tumelo and Olebogeng 2021) the study employed the Auto Regressive Distributed Lag (ARDL) developed by Pesaran, Shin and Smith (2001). ARDL involves testing whether a long run relationship exists between the variables. Gujarati (2009) noted that the model generates reliable estimates in the context of endogenous variables and applied the ARDL model to examine the causality between the country's foreign investments and economic growth. Studies by (Sunde 2017; Nyiko, Tumelo and Olebogeng 2021; Rehman *et al.* 2021) reported that when it comes to estimation and interpretation of dynamic relationships of economic variables, the ARDL test is an important tool.

The study employed the ARDL because of its numerous advantages over other cointegration methods discussed above. Some of the advantages include:

- i. ARDL does not stipulate that the variables should be integrated of the same order, the underlying variable can be of order $I(1)$ or order $I(0)$ (Pesaran, Shin and Smith 2001).
- ii. ARDL is not sensitive to sample size.
- iii. Harris and Sollis (2003) noted that ARDL provides unbiased estimates even when the regressors are endogenous.

The ARDL generalized model with q lags of X_t and p lags of Y_t is as given as :

$$Y_t = \beta_0 + \beta_1 Y_{t-1} + \beta_2 Y_{t-2} + \dots + \beta_p Y_{t-p} + \delta_1 X_{t-1} + \delta_2 X_{t-2} + \dots + \delta_q X_{t-q} + \mu_t \quad (4.8)$$

Where, unknown coefficients are represented by $\beta_0, \dots, \beta_p, \delta_1, \dots, \delta_q$, the error term with μ_t and $E(\mu_t | Y_{t-1}, Y_{t-2}, \dots, X_{t-1}, X_{t-2}) = 0$

The model for this study is expressed as follows:

$$\begin{aligned} \Delta \text{LN}GDP_t = & \alpha_0 + \beta_1 \text{LN}GDP_{t-1} + \beta_2 \text{LN}FDI_{t-1} + \beta_3 \text{LN}EXR_{t-1} + \\ & \sum_{i=1}^n \delta_{1i} \Delta \text{LN}GDP_{t-i} + \sum_{i=1}^n \delta_{2i} \Delta \text{LN}FDI_{t-i} + \sum_{i=1}^n \delta_{3i} \Delta \text{LN}EXR_{t-i} + \varepsilon_{1t} \end{aligned} \quad (4.9)$$

Where, $\Delta \text{LN}GDP_{t-1}$, $\Delta \text{LN}FDI_{t-1}$, $\Delta \text{LN}EXR_{t-1}$ (exchange rate) are the dependent variables, $t - 1$ Indicates the previous period value called first lag, α_0 represents the equation constants and β_1 , β_2 and β_3 represents the model long run relationship $\delta_{1i} \dots \delta_{3i}$ denotes the model short run dynamics. The logarithm operator is represented by LN, the first difference is denoted by Δ and ε_{1t} is the error term. In equation (4.9), the F-test is used to investigate the long run relationships. According to Koop (2005), in cases where there is more than one long run relationship, the F-statistic does indicate the variable that should be normalised.

In this study, the null hypothesis of no cointegration in equation (4.9) will be tested against the alternative hypothesis of cointegration

$$H_0 : \beta_1 = \beta_{12} = \beta_{13} = 0$$

$$H_1 : \beta_1 \neq \beta_{12} \neq \beta_{13} \neq 0.$$

If the calculated F-statistic is below the lower bound, the study can conclude that there is no cointegration. But if the F-statistic is above the upper bound, then there is cointegration. In summary, if the calculated F-statistic for the lagged levels is greater than the upper bound critical value tabulated by Pesaran, Shin and Smith (2001), this supports the hypothesis of a long run relationship between the variables.

Assuming the results of the F-statistic leads to the conclusion of cointegration, the long-run relationship is estimated using the following model:

$$LNGDP_t = b \sum_{i=1}^n \mu_{1i} \Delta LNGDP_{t-i} + \sum_{i=1}^n \mu_{2i} \Delta LNFDI_{t-i} + \sum_{i=1}^n \mu_{3i} \Delta LNEXR_{t-i} + \varepsilon_{1t} \quad (4.10)$$

To obtain the short-run dynamic parameters by estimating an error correction model (ECM) associated with the long-run estimates, the model is specified as follows

$$\Delta LNGDP_t = c + \sum_{i=1}^m \alpha_i \Delta LNGDP_{t-i} + \sum_{i=1}^m \beta_i \Delta LNFDI_{t-i} + \sum_{i=1}^m \delta_i \Delta LNEXR_{t-i} + \varphi ECT_{t-1} + \varepsilon_{2t} \quad (4.11)$$

Where ECT_{t-i} is the one-period lagged error correction term, specified as follows

$$ECT_{t-i} = LNGDP - b - \sum_{i=1}^n \mu_{1i} \Delta LNGDP_{t-i} - \sum_{i=1}^{m_1} \mu_{2i} \Delta LNFDI_{t-i} - \sum_{i=1}^{m_2} \mu_{3i} \Delta LNEXR_{t-i} \quad (4.12)$$

Where $\alpha, \beta, \text{ and } \delta$ are the short-run dynamic coefficients of the model's convergence to long-run equilibrium and φ is the speed of adjustment.

The model for the determinants of FDIs is shown below. The aim of ARDL is to estimate the relation among the variables as shown in Eq. (4.5):

$$\begin{aligned} \Delta LNFDI_t = & \alpha_1 + \beta_1 LNFDI_{t-1} + \beta_2 LNGOVSIZE_{t-1} + \beta_3 LNEXR_{t-1} + \beta_4 LNINF_{t-1} + \\ & \beta_5 LNMS_{t-1} + \beta_6 LNOPEN_{t-1} + \sum_{i=1}^n \delta_{1i} \Delta LNFDI_{t-i} + \sum_{i=1}^n \delta_{2i} \Delta LNGOVSIZE_{t-i} + \\ & \sum_{i=1}^n \delta_{3i} \Delta LNEXR_{t-i} + \sum_{i=1}^n \delta_{4i} \Delta LNINF_{t-i} + \sum_{i=1}^n \delta_{5i} \Delta LNMS_{t-i} + \\ & \sum_{i=1}^n \delta_{6i} \Delta LNOPEN_{t-i} + \varepsilon_{1t} \end{aligned} \quad (4.13)$$

Where, $LNFDI_{t-1}, LNGOVSIZE_{t-1}, LNEXR_{t-1}, LNINF_{t-1}, LNMS_{t-1}, LNOPEN_{t-1}$, are the regressors observations

Government expenditure is denoted by GOVSIZ; exchange rate is denoted by EXR; INF is inflation; MS is the market size; OPEN is trade openness, $t - 1$ indicates the previous period value called first lag. α_1 , is the equation constant, Δ is first-difference

operator and n is the optimal lag length, $\beta_1 \dots \beta_6$, and are the elasticity of long run, and $\delta_{1i} \dots \delta_{6i}$ are the short run dynamics.

To ensure validity of the data, diagnostics of serial correlation, normality tests and heteroscedasticity are conducted.

4.7.3 Vector Error Correction Model (VECM)

The VECM involves testing short run and long run relationships. Engle and Granger (1987) noted that if variables are co-integrated and of order I (I), the error correction term (ECM) should be included in the short run analysis hence VECM assists in investigating the short run and long run causality. Thus, the model shows the speed of adjustment from the short run equilibrium to the long run equilibrium. Literature has acknowledged that the greater the coefficient of the parameter the greater is the speed of adjustment of the model (Ghali 1998; Basu, Chakraborty and Reagle 2003; Gupta and Singh 2016; Kurtishi-Kastrati *et al.* 2016).

Following (Chibvongodze, Kwenda and Sibanda 2014; Mahembe 2016; Makhoba and Zungu 2021; Nyiko, Tumelo and Olebogeng 2021) the estimate of the dynamic error correction models is as follows:

$$\Delta \text{LN}GDP_t = \alpha_0 + \alpha_1 \sum_{i=1}^n \Delta \text{LN}GDP_{t-i} + \alpha_2 \sum_{i=1}^n \Delta \text{LN}FDI_{t-i} + \alpha_3 \sum_{i=1}^n \Delta \text{LN}EXR_{t-i} + \beta_1 \text{ECM}(-1) + \varepsilon_t \quad (4.14)$$

Where Δ is the first difference operator, α_1 to α_3 are the intercepts, ε_t error term, β captures the long run impact, ECM should be negative and statistically significant because it indicates the speed of adjustment. A significant coefficient implies that the past equilibrium errors play a role in determining the current outcomes.

4.7.4 Diagnostic tests

Diagnostic tests involve testing the obtained residuals from the VAR or VECM. The tests are used to verify the statistical significance of the fitted regressed model by testing the residuals and to analyse the behaviour of cointegrated variables in the model. The tests performed are autocorrelation, heteroscedasticity, AR inverse roots and normality. In order to formulate a “robust” and well “explanatory model”, the goodness of fit is performed on the model using all these tests.

4.7.4.1 Heteroscedasticity

In OLS regression, an assumption is made on the residuals/errors that they have the same variance, but the variance is unknown. This is known as constant variance or homoscedasticity. A violation of this assumption would result in a problem called heteroscedasticity. The presence of heteroscedasticity affects the estimation and test of hypothesis. Brooks (2002) formulated quite a number of formal heteroscedasticity tests which include Bartlett test which can only be used only when replicated data is available, Breusch Pagan test can be applied when the replicated data is not available, but only single observations are available. Goldfeld Quandt test assumes that one of the explanatory variables explains the heteroskedasticity in the model and the Glesjer test assumes that there is only one variable which is influencing the heteroskedasticity.

This study used the general test for heteroscedasticity by White (1980) which has advantages since it considers numerous assumptions. It assumes linearity on regression model, that general test for heteroscedasticity is indicated by acceptance of null hypothesis and that heteroscedasticity is indicated by the rejection of null hypothesis.

4.7.4.2 Residual normality test

In this study, the Jarque – Bera test is employed to run the residual normality test. The Jarque – Bera tests the sample data for kurtosis and skewness. Skewness measures

the asymmetry of the probability distribution of the variable output and Kurtosis measures the peak of the probability of a variable. Following Jarque and Bera (1980) the null hypothesis assumes normality on sample data. The Jarque–Bera t-statistic is defined as:

$$JB = \frac{N}{6} \left(S^2 + \frac{(k-3)^2}{4} \right) \quad (4.15)$$

Where, N denotes sample size, S denotes skewness and K denotes the kurtosis. According to (Gel and Gastwirth 2008), we reject the null hypothesis if the calculated t-statistic is greater than the chi-squared value.

4.7.4.3 Autocorrelation language multiplier (LM) test

To test the existence of a serial correlation the language multiplier test is used. Autocorrelation in a regression model occurs when error terms are correlated and cross-signals at times. On the auxiliary regression the language multiplier focuses on the value of R^2 . Thus, in the model if the coefficients are statistically significant, the value of R^2 will be relatively significant and if the coefficients are non-significant, the value of R^2 will be relatively low. To obtain LM test, the R^2 from the auxiliary regression is multiplied by the number of observations N. The equation is illustrated as:

$$NR^2 \approx X^2(m) \quad (4.16)$$

Where, m denotes number of regressors in the auxiliary regression.

4.7.5 Impulse response function and variance decomposition

To evaluate the inter-relationship between the variables under study, impulse response function and variance decomposition are analysed. Impulse response functions show the effects of shocks on the adjustment paths of the variables and variance decomposition measures the contribution of each type of shock to the error

variance. Both computations can be produced after using the VECM or VAR commands

4.7.5.1 Impulse response function

The impulse response traces the structural shocks time path of the dependent variables in the VAR system. Sims (1980) states that framework of Cholesky decomposition is used to analyse the shocks time path in the VAR model. However, there has been criticism on this approach because of sensitivity on the ordering of variables because it assumes system errors to be “orthogonality”. To overcome these problems, the Generalised Impulse Response Function (GIRF) by (Peseran and Shin 1998) was employed in this study. The uniqueness of this approach is that it shows correlation on the structural errors. The generalised impulse response function is based on the following assumptions (i) it assumes stationarity (ii) regressors are not aligned (iii) disturbances are normally distributed. To obtain the generalised impulse response function, VAR is transformed into moving average that is infinite.

$$X_t = \sum_{i=0}^{\infty} A_i \mu_{t-i} \quad (4.17)$$

A is obtained by a recursive process

$$A_j = \phi_1 A_{j-1} + \phi_2 A_{j-2} + \dots + \phi_p A_{j-p} \quad (4.18)$$

$j = 1, 2, \dots, A_0 = I_n$ and $A_j = 0$ for $j < 0$

According to Peseran and Shin (1998) GIRF is given as follows:

$$GI_X(h, \delta, \Omega_{t-1}) = E(X_{t+h} \mid \varepsilon_t = \delta, \Omega_{t-1}) - E(X_{t+h} \mid \Omega_{t-1}) \quad (4.19)$$

Where, δ is a known vector, and its choice in a GIRF is important for determining time profile. Peseran and Shin (1998) notes that for co-integration VAR models, GIRF can also be calculated. The GIRF on the effects of shocks to the $i - th$ variable on the co-integration relation of the $j - th$ is as follows

$$GI(\beta_{jxt}N) = \frac{\beta'_j AN \sum ei}{\overline{wii}} \quad (4.20)$$

4.7.5.2 Variance decomposition

Variance decomposition in macroeconomic analysis is used more narrowly for a specific tool that interprets the relationship between variables in the VAR model. The analyses of percentage contribution of innovation each variable brings to other variables in the model is known as variance decomposition. The analysis assists in determining variables that are exogenous or endogenous to the system through the decomposition of proportion variance. If the dependent variable, forecast error-variance is explained fully by the independent variables' shocks, the dependent variable is considered exogenous. Sims (1980) advocated the models and many econometricians and economists have used them hence, variance decomposition enables the determination of how much of the variability in dependent variable is lagged by its own variance.

The form of the VAR model is as follows:

$$Y_t = A_1 Y_{t-1} + \dots + A_p Y_{t-p} + \mu_t \quad (4.21)$$

Where, $(Y_t = Y_{1t} \dots \dots Y_{kt})$ is a vector of K of observed variables of interest, A_i is (K x K) parameter matrices, the lag order is denoted by p , μ_t is a zero mean error process assumed to be white noise $E(\mu_t)=0$.

4.8 An analysis of expert views on foreign direct investments

After the completion of analyses and observations of trends, interviews were scheduled with some of the experts in the field of macroeconomics. The second section presents the qualitative approach used to collect and analyse information on FDI and growth from key personnel and macroeconomic experts. The key experts were interviewed to validate the results and discuss the current South African

economic environment regarding FDIs. Interviews were conducted in two parts; an informal discussion and semi-structured questions. To obtain accurate information, interview questions were developed from the literature review analysis. The interview questions are included in the Appendix H.

4.9 Target population

Various scholars (Leedy and Ormrod 2010; Thomas 2015; Saunders, Lewis and Thornhill 2019) concur that the research population is the entire undefined research elements from which a target population and research sample can be derived. According to Saunders, Lewis and Thornhill (2019), the target population is a subset of the research population defined by the researcher as something more manageable and is the actual focus of the research inquiry. In this study, the third objective was to establish how FDIs can be made a valuable tool in enhancing economic growth of South Africa according to key people in the economic sector. As such, the target population for this study were participants who were experts in the field of FDIs and economic growth. The target population was drawn from key people in the economic sector in South Africa's discussed in Chapter Three, who are well knowledgeable of the key variables that were identified in Chapter Two. More specifically, this population was well-informed on foreign direct investments and were able to provide the researcher with detailed information on the impact of FDIs.

As discussed in Chapter Three, the secondary and tertiary sectors are the key sectors in the economy. In South Africa, reported positive growth rates were in the secondary and tertiary sector. This is one of the reasons why we choose the manufacturing sector (Toyota) to conduct our interviews. Furthermore, the tertiary sector has a variety of different sub-sectors which makes varying contributions to the broader economy. In South Africa, two largest sub-sectors are wholesale and retail trade and government services accounting for 15% and 17 % of GDP respectively (South African Reserve Bank 2020). In order to gain insight on these sectors, the researcher was able to secure interviews in the retail, financial sector, academia and government. The participants include senior or middle investment managers, monetary/fiscal authorities, economic analysts, political analyst and economics scholars/academics.

More specifically, this population was well-informed on foreign direct investments and were able to provide the researcher detailed information on the impact of FDIs.

4.10 Sample size

Sample is the subset of the target population that represents all organism of specific area. Sekaran (2003: 266), defined sampling as *“the process of selecting a sufficient number of elements from the population, so that a study of the sample and an understanding of its properties or characteristics would make it possible for us to generalize such properties or characteristics to the population elements.”* Sekaran and Bougie (2013) highlighted the importance of selecting participants that mirror the diversity of the population. The sample size for this study was ten experts. The study focused on experts on foreign direct investments and economic growth hence a smaller sample size was appropriate to achieve meaningful results. The table below shows the detailed breakdown of the participants profiles in the sample and because of confidentiality and anonymity the names of the individuals will not be stated.

Table 0.2: Profile of sample

Sector	Organisation	Department/Position
Manufacturing	Toyota	Finance Manager
Retail	Amazon	Investment Manager/
	Wal-Mart (Massmart)	Finance Manager
Financial Sector	PWC	Strategy & Economist
	Standard Bank (Gauteng)	Investment Manager
Academia	Public and Private Universities	Department of Economics and Finance
Government	Provincial Government	Manager in the Office of the Premier, (Political Analyst)
	Trade and Investment	Investment Manager

The specific sample of investment managers were from multinational companies, which are doing business in South Africa. The level of investment by the firm was used as a formula for inclusion in the target population since most of this information are available in the public domain. This criterion enabled the selection of the relevant foreign companies. The selection criteria for the other participants includes economic analysts who specialise in the analyses of the exchange rate, government expenditure, trade openness, economic growth and FDIs, political analyst and academics who had prior experience and knowledge. This was essential to provide significant information about FDIs and South Africa's economic growth. The participants were committed to provide unbiased and accurate data for this study.

To explore the financial sector and retail sector, the researcher conducted interviews at Standard Bank and PWC, Amazon and Wal-Mart. An insight on both online shopping and in-store shopping was provided, as discussed in Chapter Three, growth has been noted in online shopping because of COVID-19, hence the inclusion of online retail in the sample. Furthermore, the researcher was able to conduct interviews at Provincial Government and Trade and Investment. However, there is a disadvantage of seeking experts and high-level individuals, at times it is difficult to gain access to them. But once an interview has been secured, the quality information and insight gained made these participants invaluable.

4.11 Sampling Methodology

The sampling methodology adopted in research studies depends on the sampling size, population and method of analysis to be used. In this study non-probability sampling technique was used because the sampling plans are reliable and they have an added advantage of offering a significant lead to potential valuable information (Cavana, Delahaye and Sekaran 2001). Purposive sampling technique was adopted in this study. In qualitative research purposive sampling is widely used for identifying and selecting of rich- information using limited resources effectively Patton (2002). Creswel (2014) notes that it involves the identification and selection of participants(either individuals or groups) that are well informed about the phenomenon of interest. The

aim is to gather a sample with participants that would provide an accurate and deep understanding of the phenomenon at hand.

4.12 Measuring instrument

According to Sekaran (2003), the researcher must specifically set up the research participants whose opinion may be sought on specific issues. In qualitative research, instruments include in-depth interviews, diary accounts, focus groups, documentary review and analysis, amongst others (Saunders, Lewis and Thornhill 2019). In this study the research instrument adopted was interviews. The interview questions were developed based on the literature, a few theories which informed this study and further enhanced by including suggestions and comments from the pilot study. The interview questions in (Appendix H) were developed to provide solutions pertaining to research objective earlier stated in Chapter One.

4.12.1 Interviews

Interviews are a way of collecting data about experiences, opinions, views and ideas by the interviewers through asking the participants questions. In addition, interviews are a two-way conversation between the interviewer and interviewee. Maree (2015) noted that if used correctly they are a valuable source of collecting data and they aim to see the world through the participants' eyes. In this study, interviews were chosen because they allowed the researcher to take note of verbal leads, which tends to lead to profound data been collected with better clarity. When collecting primary data, interviews are the most efficient way as they allow greater insight compared to other methodologies and they also allow better profundity (Sekaran and Bougie 2009). The type of interview adopted in this study is semi-structured interviews a blend of structured and unstructured interviews. Semi-structured interviews allow participant to answer open-ended questions allowing flexibility and probing of questions (Valenzuela and Shrivatsava 2008). The researcher also has more control over the topics of the interview since the thematic framework is designed beforehand.

Furthermore, semi-structured interviews are performed with an open framework that allows conversational and two-way communication. According to Bradford and Cullen (2011), in social sciences semi-structured interviews are the most dominating and widely used data collection methods. They are considered valuable because they enable the researcher to gather in depth accounts of people's experiences (Flick 2009) and also explore subjective viewpoints. Following Choak (2012) an interview schedule was used which allowed addressing defined topic by the researcher and participants able to respond on their own terms.

4.12.2 Interview development

The interview questions were designed to cover six areas which are;

- background information,
- determinants and factors impeding foreign direct investments,
- changes in the economy that can be implemented to attract more foreign investors,
- impact of FDIs on South Africa economic growth,
- challenges prohibiting South Africa economic.

Section (A) collected background information of the participants. This was done to enable a better analysis of the participants views on FDIs and economic growth. The participants' views were therefore analysed using responses to the following questions:

1. What is your gender?

Gender	Male	Female
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Based on gender, it may be possible to provide a more detailed statistical interpretation on whether or not more females as compared to males know more about FDIs and vice-versa.

2. What is your age?

Age (years)	19 – 25	26 – 35	36 – 45	46-55	56-65	66+
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The age of the participants was asked to make a reasonable interpretation of how much the participants knew about FDIs and economic growth based on their age group.

3. Educational qualification:

Educational qualification	Certificate	Diploma	Degree	Postgraduate
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Educational qualification was used in the interview in order to determine whether the participants awareness of FDIs and economic growth was related to their educational qualification.

4. Name of company:

The name of the company was used to provide more background information on the firm which formed part of the study.

5. The position you currently hold:

The position held was asked in the interview in order to determine whether the participants awareness of FDIs was related to their position in the company.

6. Number of years in this company:

The participants were asked the number of years in the company to measure the level of expertise they had.

Section (B) of the interviews was aimed at collecting the information relating to FDI and economic growth. The interview questions were linked to research objective three of the study which seeks to establish how foreign direct investments can be a valuable tool in enhancing economic growth. To address the objective mentioned above, the following questions were asked in Section (B) related to the areas identified above

The first part sought to identify the determinants of foreign direct investments, the following question was asked

1. In your view what factors are the most important drivers of foreign direct investments in South Africa?

Second part addressed the factors impeding foreign direct investments. The following questions were asked:

2. In your own opinion, what factors are impeding foreign direct investments in South Africa?
3. What impact, if any would social unrest, as demonstrated by strikes and service delivery protests have on foreign direct investment opportunities?
4. What are the effects of COVID-19 lockdown on foreign direct investments?

The third part sought to identify changes in the economy that can be implemented to attract more foreign investors. Participants were asked the following question.

5. What are the three most important changes in the economy or in government policies that would attract more foreign investors? (Please provide explanation)

- (1) _____
- (2) _____
- (3) _____

The fourth part sought to investigate the impact of FDIs on South Africa's economic growth. Participants were asked the following questions.

6. How does the presence of foreign investors in a developing country such as South Africa affect the economic growth of the country?
7. How can foreign direct investment be a valuable tool in enhancing South Africa economic growth?

Lastly, to identify the challenges prohibiting South Africa economic growth and strategies that government can implement the participants were asked the following questions:

8. In your own opinion, what are the challenges prohibiting South Africa economic growth?
9. What should the South African government do to promote economic growth?

Having discussed the interview questions and the reasons for question choice, the next section discusses data collection procedures.

4.13 Data collection procedure

In a semi-structured interview, data collection involves the interaction between the participant and researcher that need to be documented. In this study, the interviews were recorded with the interviewer's cellphone and notes taken on direct quotes that were found to be relevant. The following measures were considered when scheduling the interviews.

The researcher ensured that each interview was conducted in a relaxed, secure environment and a place that was more convenient to the interviewee. This was done to ensure that the interviewees would feel more comfortable in their own space and not feel intimidated during the interview. In addition, confidentiality was assured to the participants regarding information they were going to provide during the interview that it was going to be treated in the utmost confidence. To achieve this each participant was allocated a pseudonyms and permission was sought first to record them as they responded to the questions.

Lastly, the researcher served as a facilitator only by encouraging the participants to respond. The researcher was able to achieve this by adopting a non-judgmental attitude and a neutral stance towards the participants. The researcher created a friendly atmosphere encouraging the participant to request a repeat of a question that they did not fully understand.

4.14 Data analysis techniques

Data preparation involves checking the data for accuracy, data logging, entering the data in the system, data transformations and developing a base structure that integrates different measures (Babbie, Wagner and Zaino 2015). The research data were prepared using interview questions which were designed in a suitable, concise,

and objective manner that allowed participants to provide their feedback without finding any difficulties in answering the research instrument. The questions were checked for completeness and usability before being processed.

Duggal *et al.* (2021), defines data processing as the collection of a set of raw data and interpreting it into useable information. The raw data were collected, cleaned, organised, processed, analysed and presented in an understandable format. To produce results that leads to resolving a problem or improve an existing state, data was manipulated. In this study, the data were first entered onto an Excel spreadsheet and thereafter were inputted into the qualitative analysis data software NVIVO 12.

Since data are usually collected in raw format, it is difficult to understand. Thus, raw data should be summarised, processed and analysed in an effective way that minimises data loss (Junyong and Lee 2017). In this study, data were presented in textual and graphs format. The principal method adopted in this study is the textual technique which were used to explain the findings and provide contextual information on how FDIs can be made a valuable tool in enhancing economic growth. Tables and figures were used to summarise the data.

4.15 Pilot testing

A pilot study is a pre-testing of the research instrument in order to make necessary changes as per the feedback from pilot respondents (Foster 2013). Furthermore, Saunders, Lewis and Thornhill (2012), alluded that a pilot test enables the researcher to refine the questions in the research instrument so that ambiguity or bias is eliminated. The draft research interview questions were therefore subjected to pretesting on three participants (manager at investment institution, academic and economist). They were asked to comment on any perceived ambiguities, omissions or errors concerning the research instruments. The draft instruments were also submitted to two experts, the researcher's private research mentor to add their input before being administered on a full-scale survey. This was done through the use, interviews (face-to-face/telephonic and zoom). The participants indicated that questions 5 and 7 had a degree of ambiguity; hence, they were corrected by the researcher.

4.16 Validity and reliability

Validity ensures that the research truly measures what is intended to do. Validity is comprised of two potential threats which are internal threats and external threats (Creswel 2014). The secondary data to be collected and analysed in this study poses no threats to internal validity. However, on the primary data, interviews will be validated prior to commencing data collection. Pilot interviews were conducted with three participants to ascertain user friendliness of the questions and any problems that might influence the participants' responses. Validation is also meant to identify questions that the participants are not willing to answer. Throughout the study, the researcher ensured accuracy on the interpretation and analysis of data collected. This is evidenced by the stages engaged in, to ensure that the research instrument is valid and that accurate conclusions on the concept of interest are made more accurately.

Silverman (2004: 125), defined reliability as "the degree to which the findings of the research are independent of accidental circumstances and it is closely related to assuring the quality of field notes and guaranteeing the public access to the process of the publication of the research results. Bashir, Afzal and Azeem (2008) defined reliability as the extent to which results are a true representation of the entire population under study and consistent over time. If the study results can be reproduced under the same conditions or methodology the research is considered reliable. Thus, reliability ensures quality of the field notes and how consistently the research instrument measures something. To ensure validity and reliability in this study, a well-defined research design was created, appropriate methodology and sample were chosen and the research was conducted consistently. The interviews were scheduled to avoid bias in interpreting response and also unfairness on the participants. During the interview the responses and specific behaviours of the participants were clearly defined and the questions were phrased the same way.

Lastly, qualitative market research focuses on data trustworthiness rather than focusing on the data. In this study trustworthiness was achieved by demonstrating that research findings were dependable, credible, confirmable and transferable. Dependability was used to measure the consistency and reliability the study's results.

then on credibility triangulation was used to show that the research findings were credible. To ensure confirmability, findings were based on participants' responses and not any potential bias or personal motivations of the researcher. This involves making sure that researcher bias does not skew the interpretation of what the research participants said to fit a certain narrative.

4.17 Triangulation

In order to enhance validity and reliability of research findings triangulation is used. Triangulation involves the use of multiple data collection methods to address a phenomenon (Cohen, Manion and Morrison 2018). Furthermore, triangulation enables the researcher to search for convergence among different sources of information to form themes in a study and enable a clear understanding of the research problem. In this study, three data sources are placed at the points of a triangle where each data source provides a starting point for the other data source. Figure 4.1 shows the data sources of the study and how they were triangulated.

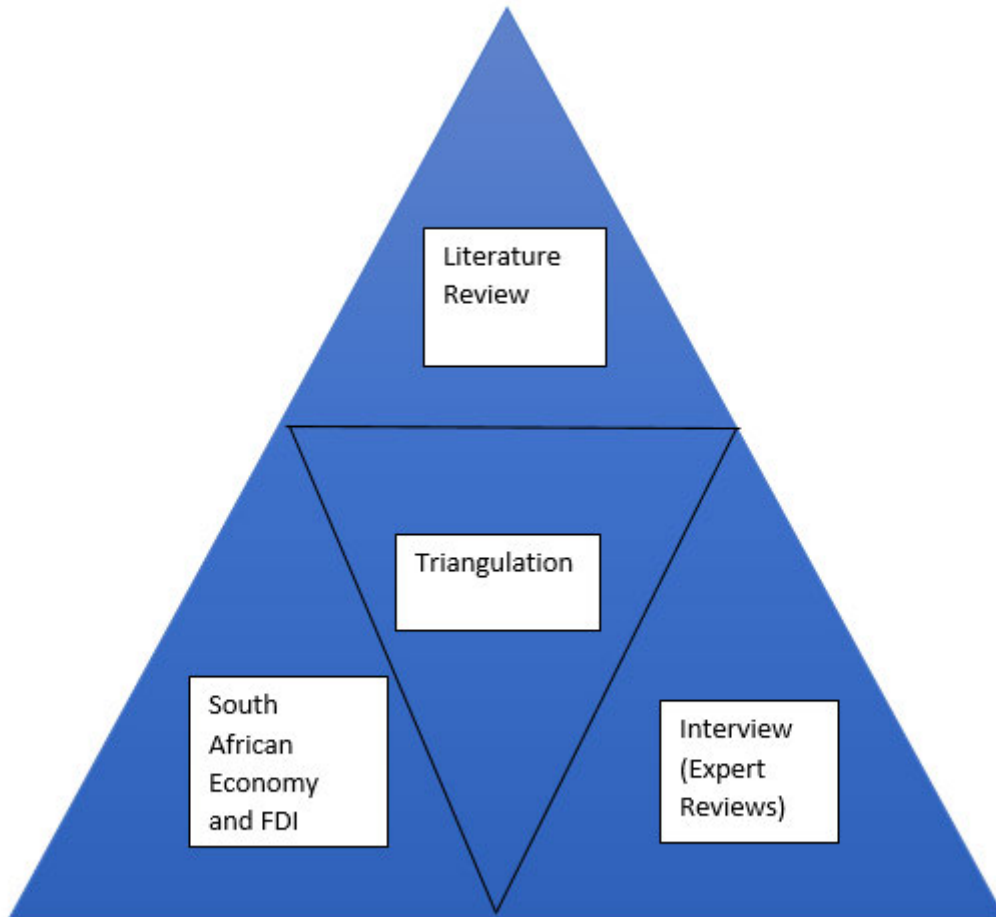


Figure 0.1: Triangulation of data sources

As shown in the figure 4.1 data sources include; literature review, South Africa's economy and foreign direct investments and interviews. The three data sources and different phases involved are discussed below in detail. First phase, the initial framework was built from the data collected from the relevant literature. The literature review gave an overview of the factors behind South Africa's economic growth performance and FDIs inflows. Also, literature review focused on variables related to FDIs and economic growth. The literature review provided scientific explanations for the research objective(s) and enabled the researcher to verify the findings and to compare these with the work of other scholars. The second phase, an overview of the South Africa's economy and FDI flows essentially gives an overview of the major factors behind South Africa's economic growth performance as suggested in the literature which assisted the researcher to develop models aimed to test empirically

the impact of FDIs on economic growth and determinants of FDIs. The third phase, interviews was conducted with experts and the interview questions are drawn directly from the literature and the South Africa's economy analysis. In-depth interviews were conducted to gain insight on what the participants perceives as ways of enhancing economic growth. During the analyses stage, responses from the participants feedback were compared to establish convergences and divergence.

In summary, triangulation enabled the researcher to cross check evidence by collecting data from multiple sources which complemented and verified each other. Also, it enabled a clearer understanding of the research problem and more comprehensive information were provided by engaging three data sources.

4.18 Ethical considerations

According to David and Rensik (2015), research ethics are norms for conduct that distinguish between acceptable and unacceptable research behaviour. Blaxter, Hughes and Tight (2013) suggest that a common cause of ethical challenge is conflicts of interest between the researcher and the participant. In every research, there is need to seek ethical clearance from the university or organisation so as to avoid putting the university/organisation into disrepute. In light of this, the researcher applied for ethical clearance from the University's Faculty Research Committee (FRC) using the ethical issues checklist for research approval form and received approval referenced as 207/16 FREC clearance number (Appendix A).

General research ethics were also upheld with utmost professionalism in this doctoral research. All research data were gathered with informed consent of all parties involved. There was no pressure or coercion on individuals to participate in this research, individual autonomy is respected in order to avoid causing harm. Research participants were given a consent letter to ratify their decision to participate in this research at their own individual discretion and highlighted the liberty to exit the research process at any point during the research. All information received from the participants were used only for academic and scholarly purposes and not for personal gain or any form of economic espionage. Information received from participants were

treated they are and not exaggerated so as to bring out the true findings of this research. Moreover, participants were also made aware that they can withdraw from the research at any given time in case they were not comfortable at providing any information based on the administered interview questions. The Letter of permission to conduct the study (Appendix D) and the Letter of information (Appendix E) and Letter of consent (Appendix F) are attached.

4.19 Confidentiality and anonymity

Saunders, Lewis and Thornhill (2019) highlighted that confidentiality refers to the right to accessibility of the research data provided by the participants and, the need to keep these data secret or private. In this study, confidentiality means that the information collected from the participants were not going to be disclosed to colleagues, public or superiors and the need to retain the data. Confidentiality was preserved by the use of a consent form which assured the participants that all information disclosed in this research were to be used solely for academic research purpose.

In order to eliminate any form of bias, interviews were administered and executed on condition of anonymity unless the respondent(s) wants to be known. All information received by the researcher in the course of this research process were used strictly for academic and scholarly purposes and not for personal gain or any form of economic espionage. In addition, David and Rensik (2015) notes that making research data anonymous involves removing the participants' name. For the purpose of this study, the mere fact of providing anonymity of information collected from the participants implies that the researcher does not collect identifying information of the participants and individual responses were not linked to any identity. Thus, the participants names are not disclosed.

4.20 Conclusion

The chapter discussed the methodology and the estimation techniques used in investigating the impact of foreign direct investment on south Africa's economic growth. It outlined the data, variables and measurement used to collect the data. In addition, an overview of the models that were applied in this study was also discussed. The study employed the ARDL co-integration to examine the causality between the country's foreign investments and economic growth. The VECM was used to test the short run and long run relationship. The following diagnostic tests were also performed in this study: Lagrange multiplier, Jarque–Bera test, AR inverse roots graph and heteroscedasticity test autocorrelation. The chapter ends with a discussion on qualitative research that were chosen for collecting primary data. A discussion of sampling design, measuring instrument and data preparation and analysis were also presented. To ensure validity and reliability of research findings, triangulation was used which involves the use of multiple datasets to address the research objectives. Confidentiality and anonymity were also preserved in this study by use of a consent form which assured the participants that all the information disclosed in this research was to be solely used for academic research objectives. The contents discussed in this chapter provides a basis for the actual estimations to the study, as portrayed in the preceding Chapter Five. In the next chapter, the researcher discusses data presentation and analysis.

CHAPTER FIVE: DATA ANALYSIS

5.1. Introduction

An overview of the estimated results and empirical findings are presented in this chapter. The data were analysed in line with the stated objectives in Chapter One as well as the research methodology discussed in Chapter Four. The empirical data sought to meet the first and second objectives on investigating the impact of foreign direct investments on economic growth and quantify the determinants of foreign direct investments flows to South Africa. The theoretical data from the interviews sought to meet the research objective three on establishing how foreign direct investments can be made a valuable tool in enhancing South Africa's economic growth. The chapter comprises two main parts, the empirical findings and the interview results. The empirical findings start with a discussion of descriptive statistics results followed by stationarity in Sections 5.2 and 5.3 respectively. The ARDL and Vector Error Correction Model results are presented in the sections 5.4 and 5.5 respectively. Section 5.6 discusses the impulse response function and variance decomposition analysis closing the discussion of empirical findings. The second part of the chapter presents interview results. The first part of the section discusses the demographics of the research participants followed by a discussion of determinants of FDIs and factors impeding FDIS. The next section presents changes in the economy that would attract foreign investors and impact of FDIs on economic growth. Lastly, a discussion of challenges prohibiting South Africa's economic growth are presented in Section 5.14 and policy implication on Section 5.15. The chapter ends with a conclusion in Section 5.15.

5.2 Data and descriptive statistics

This section discusses the data and descriptive statistics of the research data. This study used time series data sourced from The World Bank and SARB from 1980 to 2020. To evaluate the advanced statistical analysis, a summary of descriptive statistics is presented for all the variables in the data series. This enables an analysis of whether

or not the observed frequencies are within the anticipated range. Agung (1992) noted that the summary of descriptive statistics is a true statistical value for all individuals in the sample as a result a relevant summary statistic would become an excellent input for policy makers.

Table 5.1 below presents the descriptive statistics. An analysis of the mean, minimum and maximum values of RGDP, EXR, MS, and GOVSIZE are almost within the same range. The standard deviation measures interval approximately to the mean of all the variables. The more distributed the variables, the greater the number. The standard deviation of trade openness 7.601 appears to be far more perilous compared to other variables, and it is nearly 4.5 times higher than the RGDP.

Table 0.1: Descriptive statistics

Variable s	N stati c	Minimum statistic	Maximum statistic	Mean statistic	Std. deviation	skewnes s	kurtosi s
RGDP	25	-1.538	5.604	2.75	1.699	-0.428	0.394
FDI	25	37441044 1	955800129 3	3539810181 6	2.888577 7	0.651	-0.844
EXR	25	3.551	14.709	8.084	3.062	0.627	-0.237
MS	25	1.154	4.164	2.518	1.012	0.035	-1.560
OPEN	25	40.769	72.865	55.716	7.601	-0.024	-0.234
GOVSIZ E	25	2.171	8.271	4.967	2.157	0.125	-1.581
INF	25	-0.692	10.055	5.899	2.369	-0.613	1.419

For all the variables, the skewness values are less than ± 1.0 ; this means the skewness for the distributions are not outside the range of normality, indicating that the distributions are not skewed. Thus, the distributions can be considered normal. The kurtosis for RGDP 0.394 is within the range hence the distribution is normal. For FDI, exchange rate and trade openness they have negative kurtosis, meaning that the distributions are slightly flatter than normal distribution. Market size and government expenditure kurtosis values (-1.560 and -1.581) respectively the values are less than

-1.0 meaning the distributions are platykurtic. For inflation, the value is greater than + 1.0, the distribution is leptokurtic, and the curve is peaked with higher values.

5.2.1 Kernel density

Summary statistics that are presented graphically are more easily understandable than inferential statistics; this motivated the researcher to present in graphs format to provide a clear picture of how the variables are distributed. Figure 5.1 Kernel Density shows that the variables are skewed and they are not normally distributed. Even though this is common, the argument however, should not be based on the subject of normal distribution rather on sampling distribution.

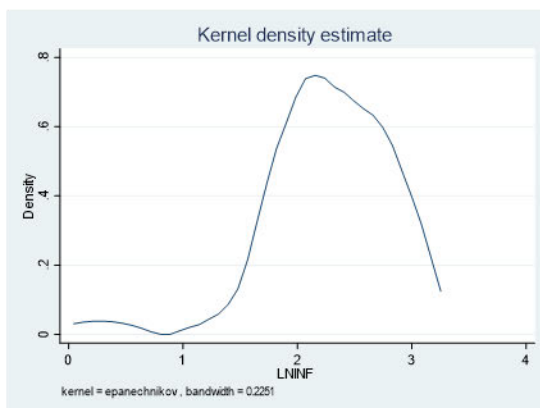
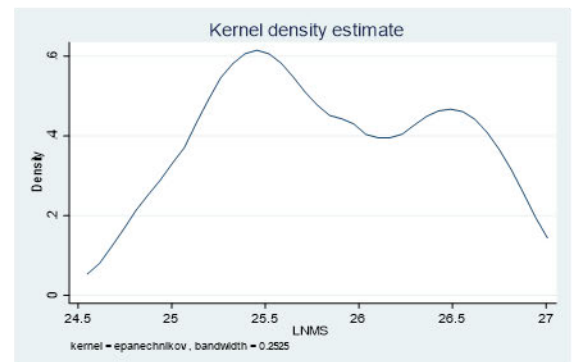
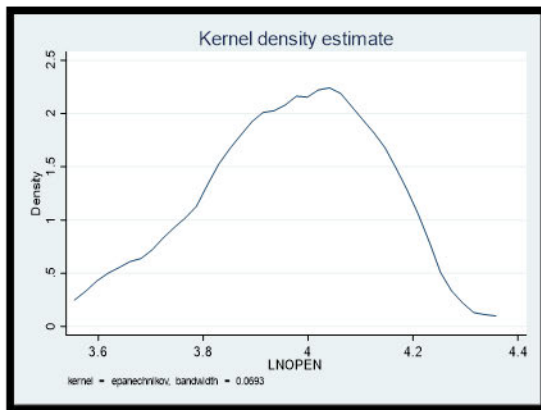
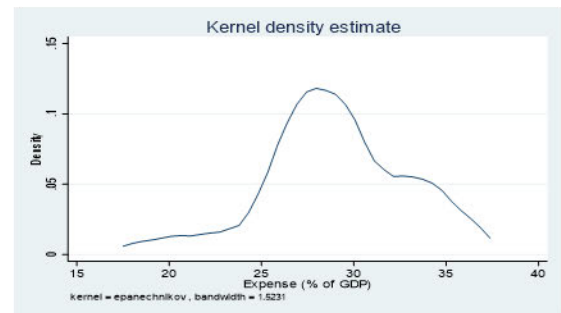
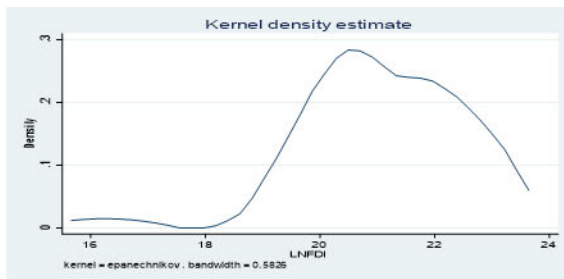
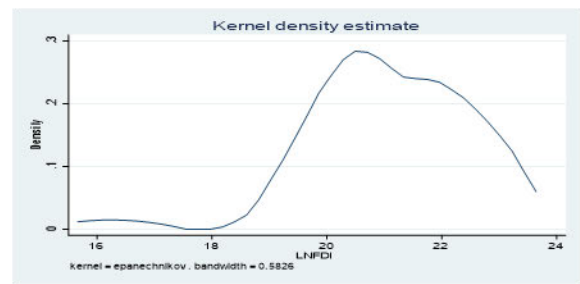
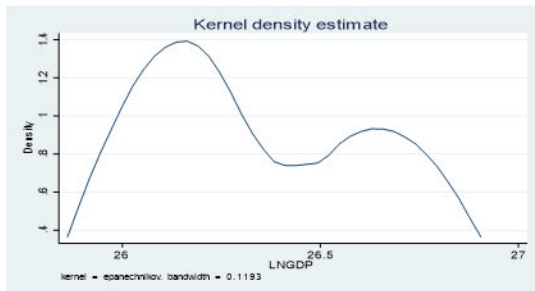


Figure 0.1: Kernel density

5.2.2 Pair-wise correlation

This study adopted the pair-wise correlation matrix to determine the exact relationship between the variables used in the study. Correlation coefficient measures the strength and direction of the relationship between two variables. Understanding the relationship is important because it enables the prediction of other variables using the value of one variable. Furthermore, there is hypothesis test in correlation coefficients and this test evaluates two mutually exclusive statements about the population from which the sample was drawn. Table 5.2 presents the correlation matrix results.

Table 0.2: Correlation Matrix

Variable	LNGDP	LNFDI	LNEXR	LNMS	LNOPEN	LNGOVSIZE	LNINF
LNGDP	1	0.718	0.486*	0.177	0.110	-0.227	-0.104
LNFDI	0.718	1	0.426*	0.537*	0.626*	0.528**	-0.115
LNEXR	0.486*	0.426*	1	0.547**	0.767**	0.571**	-0.222
LNMS	0.177	0.537**	0.547**	1	0.691**	0.996**	-0.390
LNOPEN	0.110	0.626**	0.767**	0.691**	1	0.672**	-0.161
LNGOVSIZE	-0.227	0.528**	0.571**	0.996**	0.672**	1	-3.81
LNINF	-0.104	-0.115	-0.222	-0.390	-0.161	-0.381	1

Correlation is significant at the 0.05 level (2 tailed)

The results of the pair-wise correlation shown Table 5.2, LNFDI, LNMS, LNOPEN are positively correlated with the dependent variable LNGDP. Positive coefficients indicate that increase in the value of one variable results in increases in the value of the other variable. LNFDI is highly correlated with LNRGDP (0.718) compared to other variables. The positive correlation of LNFDI and LNGDP is in line with previously stated theoretical underpinnings. Theory suggests that an increase in FDIs results in increases in economic growth because of infrastructure developments, job creations, training, skills developments and technological transfers that comes with the investors, (Emmanuel 2016; Mahembe 2016; Haider *et al.* 2021).

Negative coefficients represent cases whereby if there is an increase in one variable, the value of the other variable will decrease. Thus, negative relationships produce a downward slope. In this study, INF and GOVSIZE are negatively correlated with GDP. This confirms theoretical underpinnings that as inflation increases GDP decreases because the real value of money is reduced, that is, the consumer's purchasing power of money is reduced. Furthermore, exchange rate depreciation discourages the flow of FDI inflow, this transforms into low levels of economic growth. Increases in GOVSIZE does have a negative relationship with GDP. This is because if government expenditure is being wasted, an increase in the expenditure would have a negative impact on economic growth (Joshua 2019).

OPEN, EXR, MS, and GOVSIZE are positively correlated to FDI. This confirms theoretical suggestions, that openness of the host country can increase FDI (Dahir 2017; Saini and Singhania 2018; Asiamah, Ofori and Afful 2019; Jaiblai and Shenai 2019; Omoke and Opuala 2021). The correlation between FDI and exchange rate is a statistically positive significant linear relationship ($r=0.486$, $p < .001$). The magnitude of the relationship is approximately moderate ($0.3 < |r| < 0.5$).

FDI and INF are negatively correlated (-0.115). The negative correlation of the variables is in line with theoretical underpinnings which suggests that inflation heavily affects prices of goods and earnings for multinational companies (Kunofiwa 2018). It can be concluded from the study that the correlation is positive for most of the pairs, exhibiting a positive correlation whereas some are negative indicating a negative relationship.

5.3 Unit root test

There is a prerequisite that to run the ARDL cointegration and causality analyses unit root test should be performed first. The study employed the ADF test which checks whether the series data is nonstationary. In addition, Phillips–Perron was employed to cross check the test results obtained by ADF reaches similar conclusion. In performing the ADF test, the constant with and without trend were used.

Table 0.3: ADF and PP unit root test (at levels)

Variables	ADF		PP	
	Constant without trend	Constant with trend	Constant without trend	Constant with trend
LNFDI	-6.023	-5.925	-4.539	-4.296
LNEXR	-4.824	-4.997	-4.409	-4.575
LNGOVSIZE	-4.842	-4.850	-5.482	-5.617
LNOPEN	-5.102	-5.056	-2.565	-2.143
LNMS	-4.749	-4.676	-4.392	-4.328
LNINF	-5.872	-5.792	-7.559	-7.437
LNGDP	-3.674	-3.667	-2.665	-2.286

Note: asterisks ***, ** and * denotes the significance level at 1%, 5% and 10%, respectively

Table 5.3 shows FDI, exchange rate, market size, government size, trade openness and inflation in level form that consist of constant without trend and constant with trend. The results show that the variables are integrated at level form $I(0)$, therefore, accept H_0 and conclude that series has unit roots. The presence of a unit root indicates that the time series is non-stationary. This results in spurious correlation when used in econometric modelling and also non-stationary effect of a shock is permanent. When differentiated to see if stationary is achieved, the results are presented Table 5.4.

Table 0.4: ADF and PP unit root test at (at first difference)

Variables	ADF		PP	
	Constant without trend	Constant with trend	Constant without trend	Constant with trend
DLNFDI	-4.359***	-4.296***	-2.834***	-5.676***
DLNEXR	-6.393**	-6.254**	-2.194**	-2.318**
DLNGOVSIZE	-4.598***	-4.520***	-3.281***	-3.436**
DLNOPEN	-2.565**	-2.540*	-2.418***	-3.596**
DLNMS	-4.392**	-2.228**	-4.392*	-4.323**
DLNINF	-2.537**	-3.546**	-2.384***	-3.508**
DLNGDP	-1.532***	-2.539***	-4.284***	-4.649***

Note: asterisks ***, ** and * denotes the significance level at 1%, 5% and 10%, respectively

Table 5.4 shows FDI, exchange rate, market size, government size, trade openness and inflation in first difference form. At first differencing the ADF and PP test confirms stationarity of each variable. Thus, the data become stationary at first difference, which is desirable. Therefore, if the variables are integrated of order $I(1)$, ARDL model can be applied to the analysis.

To summarise, the test has shown that in level, ADF and PP accept H_0 (the presence of unit roots), whereas, in first difference the ADF and PP reject the null hypothesis. The above ADF and PP tests have shown that at first difference the variables are stationary. Both the ADF and PP rejects the null hypothesis of non-stationary. The study therefore concludes that the series is integrated of the same order. Having established stationarity, the next step was to perform cointegration using the ARDL.

5.4 ARDL co-integration results

After proven that the series data have unit roots, autoregressive distributed lag (ARDL) approach is employed. In order to analyse the short run and the long run dynamic interactions among the variables of interest, ARDL model was applied. The analysis of the ARDL bounds test approach to cointegration is shown in Table 5.5.

Table 0.5: ARDL bounds test results

Estimated ARDL models	lags	F-stat.	Significance level	Bounds critical value (Pesaran et al., 2001)		Decision
				$I(0)$	$I(1)$	
$F_{LN\text{GDP}}$ (LN\text{GDP}/LN\text{FDI}, LN\text{EXR})	(1,0,2)	9.5201	1% 5% 10%	4.385 3.219 2.711	5.165 4.378 3.800	cointegration
$F_{LN\text{FDI}}$ (LN\text{FDI}/LN\text{GOVSIZE}, LN\text{EXR}, LN\text{INF}, LN\text{MS}, LN\text{OPEN})	(1,2)	7.6821	1% 5% 10%	4.385 3.219 2.711	5.165 4.378 3.800	cointegration

The results in Table 5.5 shows that when LNGDP is the dependent variable, a long run relationship exist between the variables because the F-statistic (9.5201) is greater than the upper-bound critical value at 1% , 5% and 10% significance levels by (Pesaran, Shin and Smith 2001). This shows that a cointegrating relationship is found between GDP and FDI. This demonstrates that objective one outlined in chapter one is achieved.

In order to establish the relationship between FDI and its determinants, the calculated F-statistic (7.6821) is greater than the upper bounds critical values at 1%, 5% and 10% significance levels indicating that a cointegrating relationship is found between foreign direct investments, government expenditure, inflation, trade openness, exchange rate and market size. An implication of the Wald F statistic confirms the existence of a long run association between MS, FDI, GOVSIZE, EXR, INF and OPEN. The models fulfil the assumptions of autoregressive conditional heteroscedasticity (ARCH), serial correlation of models and functional forms. However, the findings of the current study does not support the previous research conducted by Gupta and Singh (2016). The inconsistency may bring out differences in the methodologies. Their research aimed to examine association between FDI and economic growth for BRICS (Brazil, Russia, India, China and South Africa) countries between the period 1992 to 2013 by employing panel data. Furthermore, among them, there were dissimilar characteristics relative to macroeconomic and country specific attributes (Gupta and Singh 2016).

The next stage of the ARDL test was to obtain the short and long run dynamics of the error correction estimates as discussed in equation 4.9.

5.4.1 Estimated long-run coefficients

When working with time series data most of the times it is advisable to follow the analysis of the long-run behaviour and ARDL approach does allow us to do. Having established cointegration above, estimate of the conditional ARDL long-run effects of FDI and exchange rate on economic growth in equations 4.9 can be estimated.

The results reported in table 5.6 shows that FDI has a positive impact on GDP. At 5% significance level, an increase in FDI by 1% results in 0.46% increase in GDP. This means that in this study FDI does have a significant impact on South Africa's economic growth.

The estimate of FDI in Table 5.6 is in line with research objective one which seeks to investigate the impact of FDIs on economic growth. At 5% significance level, reject the null hypothesis which implies that a positive long-run relationship exists between FDI, and economic growth as shown in Table 5.6. Thus, policy makers can formulate policies that attracts more FDIs in the country to promote economic growth. Increasing economic growth requires attention to be focused on to the fundamental determinants of foreign investments decisions and the underlying relevant microeconomic and macroeconomic outlooks. The results obtained are in line with the works of (Ridzuan, Ismail and Hamat 2017; Sunde 2017; Cañal-Fernández and Fernández 2018b; Ahmed and Ibrahim 2019; Makhoba and Zungu 2021) who all found that FDIs impacts positively on economic growth. However, the findings of this study are conflicting with Ahmed and Ibrahim (2019) who found that FDI impact negatively on France economic growth and Bilas (2020) also found that there is no relationship between GDP and FDI and that FDI does not impact economic growth. Furthermore, Phuyal and Sunuwar (2018); Chaudhury, Nanda and Tyagi (2020); Ingham, Read and Elkomy (2020) believed the effects of FDIs on economic growth depends on the sectoral composition.

Table 0.6: Estimated long run analysis for LNGDP

Dependent variable= LNGDP			
Variable	Coefficient	Std. Error	t-stat.
Constant	-0.562	0.316	-2.039***
LNFDI	0.464	0.245	2.160**
LNEXR`	-0.389	0.216	-2.030***
Diagnostic tests	Statistics		
J-B normality test	0.147654(0.65689)		
LM test	1.128067(0.3584)		
Arch test	0.213486(0.6832)		
Ramsey reset	0.422520(0.98430)		
CUSUM	Stable**		
CUSUMsq	Stable**		

Note (*), (**) and (***) show significance at 10%, 5% and 1% level

At 1% significance level, the coefficient of exchange rate is statistically significant indicating that if country's exchange rate depreciates by 1% in the long run, economic growth measured as GDP will decrease by approximately 0.39%. The null hypothesis is rejected implying that a negative long run relationship does exist between exchange rate and economic growth as shown in Table 5.6. Thus, depreciation of a country's local currency makes the economy more competitive. Theoretically, depreciation of the South Africa's rand would make exports relatively cheaper and would result in increases in demand for exports which can be extended to economic growth. Empirically, the demand and supply of exports and imports have proved inelastic thus, a depreciation of the South Africa's rand will impact the economy negatively. The results are in line with studies by, Emmanuel (2016) who found that exchange rate does not have a positive impact on economic growth. In contrast, Mwinlaaru and Ofori (2017) found that exchange does have a significant impact on Ghana's economic growth and Mohammed *et al.* (2018) conducted a study on twenty five countries and found that exchange rate impacts economic growth positively on the countries understudy.

Since the variables are cointegrated, the short-run dynamic parameters are estimated using the error correction model and the results presented in table 5.7. The short run

results are in line with the prior assumptions since they show that FDIs influence economic growth positively. In addition, the sign of the estimate of the ECT is negative and statistically significant at 1% significance level. This confirms the long run relationship between the variables established earlier. In this model, the coefficient of ECT_{t-1} is -0.825 and is highly significant implying that 83% of disequilibria from the previous year's shock adjust back to the long-run equilibrium in the current year. Finally, the models show no evidence of heteroscedasticity and misspecification. This indicates that the models are efficient and that their results can be relied upon.

Table 0.7: Estimated short run coefficients using the ARDL

Dependent variable= LNGDP			
Variable	Coefficient	Std. Error	t-stat.
Δ LNFDI	0.416	0.645	4.160***
Δ LNEXR`	-0.264	0.439	-4.365***
ECT (-1)	-0.825967	0.189684	-4.342***
Diagnostic tests	Statistics		
J-B normality test	0.476654(0.7842)		
LM test	0.188067(2.9584)		
Arch test	0.478592(0.3657)		
Ramsey reset	0.22684(1.62486)		
CUSUM	Stable**		
CUSUMsq	Stable**		

Note (*), (**) and (***) show significance at 10%, 5% and 1% level.

From the results presented in table 5.7, at 1% significance level, trade openness coefficient is statistically significant indicating that in the long run if South Africa increases trade openness by 1% economic growth measured as RGDP will decrease by 0.34%. According to economic theory, the country's openness to export attracts export oriented FDIs, whereas increases in trade barriers, for example tariffs, by the host country discourages FDI inflows. For South Africa, the results obtained suggests that trade openness policy adopted has on average been detrimental to the attraction of foreign investors. The results are in line with the Ridzuan, Ismail and

Hamat (2017); Ciobanu (2020) who also found a negative and statistically significant long-run relationship between trade openness and FDI. Dahir (2017) also found that trade openness has no effect on FDIs. The findings by (Malefane and Odhiambo 2019; Tang, Tregenna and Dikgang 2019) provided varied results. Thus, the long run results obtained in this study does not resolve the conflicting results in literature but they contribute to the controversy in the literature by aligning itself with the studies by (Gupta and Singh 2016; Rani and Kumar 2019; Duodu, Baidoo and Lau 2020; Nwadike, Johnmary and Alamba 2020).

Table 0.8: ARDL Estimated long run coefficients for LNFDI

Dependent variable= LNFDI			
Variable	Coefficient	Std. Error	t-stat.
Constant	-0.464	0.623501	-2.039092***
LNGOVSIZE	0.365***	0.436	0.899
LNINF	-0.267**	0.251	-2.212**
LNEXR`	-0.389	0.216	2.030***
LNMS	4.652***	0.125*	2.216***
LNOPEN	-0.342***	0.699	-0.137
Diagnostic tests	Statistics		
J-B normality test	0.268921(0.2984)		
Lm test	1.028067(0.3584)		
Arch test	0.1682056(0.2359)		
Ramsey reset	0.221520(0.72850)		
Cusum	Stable**		
Cusumsq	Stable**		

Note (*), (**) and (***) show significance at 10%, 5% and 1% level.

From the results, the coefficient of government expenditure has positive impact on FDI. A 1% increase in GOVSIZE will lead to increases in FDI by 0.36%, all other things remaining the same. Thus, government spending significantly influences FDI inflows in the long run. The public expenditures encourage FDI inflows, which in turn promotes endogenous growth (for example, research and development, education and training). Hence, government spending should be directed towards productive economic

activities. The positive impact of GOVSIZE to FDI is consistent with the works of Othman *et al.* (2018).

Furthermore, market size coefficient is positive and statistically significant indicating a positive impact on FDIs. At 1% significance level an increase in market size by 1% would increase FDIs by approximately 4.7%. These result are consistent with studies by (Akpan and Eweke 2017; Asongu *et al.* 2018; Şıklar and Kocaman 2018; Shahbaz *et al.* 2021) who showed that an increase in the market size is associated with more FDI inflows because the firm would want to receive potentially higher returns on their capital. It implies that the improvement of foreign direct investment depends upon the consideration given to market size.

The long run results also revealed that inflation and trade openness have a negative impact on FDI. Inflation is statistically significant at 5% significance level. An increase in INF by 5% results in a decrease in FDI by 0.27% approximately and OPEN decreases by 0.34%. This negative relationship between INF and FDI in South Africa is consistent with previous studies by Kunofiwa (2018); Şıklar and Kocaman (2018) and (Asiamah, Ofori and Afful 2019). The negative sign of INF variable supports the theoretical conclusion that inflation impacts the country's economy negatively and a poor economy results in a decrease in FDI. Therefore, increases in inflation can cause FDIs to decrease in FDI, the data confirms this.

The long-run results indicate that any disequilibrium in the system because of a shock can be corrected in the long run by the error correction term. Hence, the error correction term that estimated the short-run adjustments to equilibrium is generated as follows.

$$ECM = LNFDI - (0.365LNGOVSIZE - 0.389LNEXR - 0.267INF + 4.652LNMS - 0.342LNOPEN) \quad (5.1)$$

5.4.2 Diagnostic and stability tests

The estimated ARDL diagnostic test results are presented in table 5.9. The results indicate that the estimated model passes the Langrangean multiplier test, heteroscedasticity test and Normality test.

Table 0.9: Diagnostic test result

S.no	Test statistics	LM version F	F-version
1.	Serial correlation (BG)	CHSQ (1) =2.793811(0.0946)	F
2.	Heteroscedasticity (White)	CHSQ (8) =2.833318(0.9444)	(1,13)=1.797447(0.2030)
3.	Normality (JB)	CHSQ =0.155924(0.9250)	F (8,14)=0.245866(0.9738)

Note (*), (**) and (***) show significance at 10%, 5% and 1% level

Serial correlation was checked using Breusch-Godfrey Serial Correlation LM Test. The null hypothesis assumed no serial correlation in the residuals and alternative hypothesis assumes the presence of serial correlation in the residuals. In this study, the null hypothesis is not rejected because the p-value (0.2030) is greater than 5% significance level. This shows the non-existence of autocorrelation. Therefore, all explanatory variables are constructed in the model and can be used for prediction. Heteroscedasticity was checked using Whites test and the null hypothesis is not rejected because the p-value (0.944) is greater than 5% significance level. Thus, we accept the null hypothesis and conclude that there is no evidence of heteroscedasticity. It can also be concluded that the errors are not changing over time.

The normality p-value (0.9250) is greater than 5% the critical values. This shows that there is no apparent non-linearity in the regression equation, and we conclude that the linear model is appropriate. In conclusion, ARDL model is free from any econometric problems like serial correlation, heteroscedasticity, and multicollinearity and the Jarque Bera tests proved the data are normal distribution and model is reliable and functional form is correct by the Ramsey test.

5.4.3 Stability tests

Pesaran (1997) suggests that the stability test for parameters using cumulative sum of recursive residuals (CUSUM) and cumulative sum of squares of recursive residuals (CUSUMSQ) plots be conducted after the model is estimated. The test is performed to eliminate any bias of the estimated model due to overwhelming parameters. In addition, in times series data, the stability test is important when then researcher is uncertain when structural changes might take place.

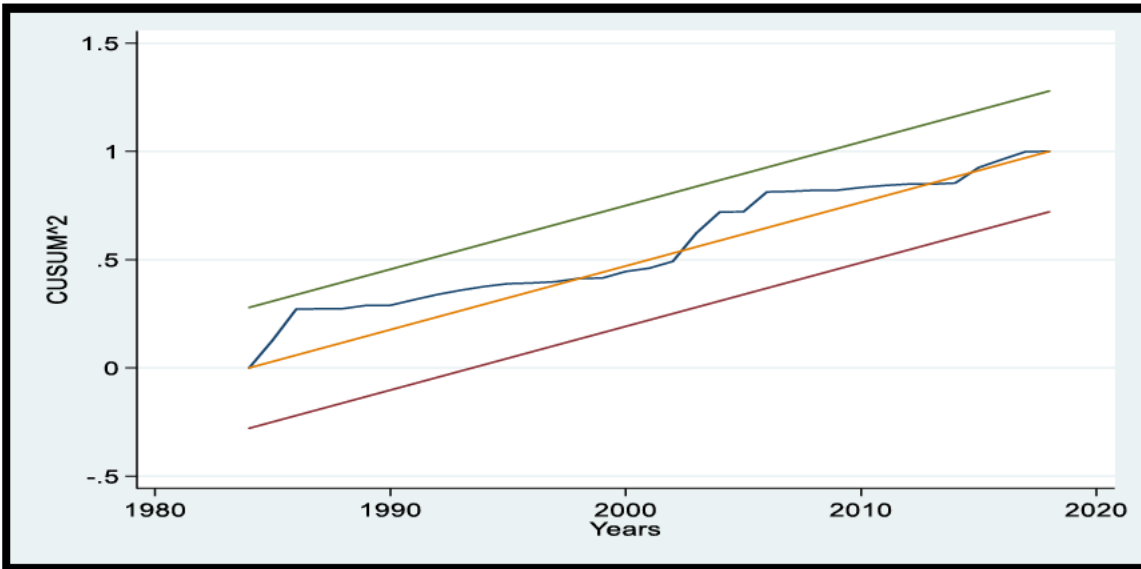
Figures 5.2 and 5.3 plot the results for both tests. The null hypothesis is that in every period the vector coefficient is the same and the alternative hypothesis the vector coefficient is different (Bahmani-Oskooee and Nasir, 2004). At 5% significance level, the CUSUM and CUSUMSQ statistics are plotted. Following Bahmani-Oskooee and Nasir, 2004), if the plot remains within the critical bound of 5% significance level, the null hypothesis is accepted implying that the coefficients are stable. The model is said to be stable if the plots do not cross the critical value

The CUSUM for the estimated ARDL model is depicted in figure 5.2. Since the plots of all coefficients falls within the critical bound of 5% significance level, the plot suggests the absence of instability. Thus, we can conclude that the estimated model coefficients are stable over the period of study. The estimated ARDL model CUSUMSQ plot is depicted in figure 5.3. At 5% significance level, the coefficients plots fall within the critical bounds indicating the absence of instability. Therefore, the estimated coefficient of the model is stable over the period of study. The model is therefore appropriate for decision-making and policy formulations in South Africa.



-----CUSUM-----5% Significance

Figure 0.2: Plot for CUSUM test



-----CUSUM of squares-----5% significance

Figure 0.3: Plot for CUSUMSQ SQ test

5.5 VECM results

The existence of cointegration between FDI and economic growth implies that someone can use a VECM. This enables the user to differentiate the short and long run effects of the variable and establish the effects of FDIs on South Africa economic growth. This enables policy makers to make informed decisions on what needs to be done based on the results obtained. The long run VECM results are discussed in section 5.5.1 and the short run in VECM results 5.5.2. Table 5.10 and Table 5.11 shows the Long run and Short run summary of results respectively.

5.5.1 Long-run terms

Table 5.10 summaries the long run parameters in the model.

Table 0.10: Long Run Cointegration Results

Variable	Coefficient	Standard error	t-statistic
Constant	6.22	-	-
LNGDP	1.00	-	-
LNFDI	0.748	0.0087	4.057
LNEXR	-0.197	0.169	-4.230

Equation 5.1 illustrates the long run impact of explanatory variables on.

$$LNGDP = 6.220 + 0.748LNFDI - 0.197LNEXR \quad (5.1)$$

The equation shows that in the long run, LNEXR impacts LNGDP negatively and LNFDI have a positive impact on LNGDP. The explanatory variables have absolute t-values greater than 2, this means that they are statistically significant in explaining LNGDP.

An increase in FDI results in an increase in GDP by 74.8%. This is compatible with theory. According to (Barro and Sala-I-Martin 1995; De Jager 2004), the spill-over effect in technology, production and capital causes FDI to increase economic growth.

A negative long run relationship exists between exchange rate and LNGDP. A 1% increase in exchange rate results in a decrease in GDP by 1.9%. The result is contradicting theory because the appreciation of exchange rates results in increases in GDP. The rationale is that a stronger currency translates local currency profits into large foreign currency profits.

5.5.2 Estimated short run coefficients

Following (Odhiambo 2009; Cañal-Fernández and Fernández 2018c), short-run dynamic parameters were obtained by estimating the error correction model associated with the long-run estimates. The short run estimates using the Schwartz Bayesian Criteria (SBC) employed for the ARDL estimation is presented in Table 5.11.

Table 0.10: Estimated short run coefficients for Δ LNGDP

Variable	Coefficient	Std. error	t-stat
Dependent variable ΔLNGDP			
Δ LNFDI	0.563	0.217	1.914*
Δ LNEXR	-0.243	0.731	4.238***
ECT (-1)	-0.751	0.18	-4.216***
R-squared	0.62		
F-statistic	3.42		
Durbin-Watson stat	2.35		

Table 5.11 shows the descriptive statistics. The adjusted R^2 is approximately 0.62 which explains that 62% of the variations in economic growth is explained by independent variables. Furthermore, Durbin Watson statistic of 2.35 shows the absence of autocorrelation in the residuals.

At 1% confidence level, the lagged error correction term ECT (- 1) is statistically significant, and it exhibits the expected negative sign (-0.75). This shows that approximately 75% of the disequilibrium caused by previous years' shocks converges back to the long run equilibrium in the current year.

The negative impact of exchange rate on economic growth is consistent with the long run results. A coefficient of -0.243 indicates that exchange rate is statistically significant at 1% significance level. This implies that a fall in exchange rate by 1% results decreases in economic growth by 0.24% in the short run. The results can be interpreted as follows: variations in the exchange rate affects the exporters negatively and economic growth by discouraging investors from undertaking trade and investments.

With a coefficient of (0.563) FDIs influence economic growth positively. The results suggest that an increase in FDI by 1% would lead to increases in economic growth at 5% significance level. The positive impact of FDI in South Africa indicates that the economy has benefited positively from spill over effects in the short run. This study is in line with the works of De Mello (1997) who indicated that FDI is an important source of capital hence they influence economic growth and complements domestic private investments.

Table 0.11: Estimated short run coefficients for ΔLNFDI

Variable	Coefficient	Std. error	t-stat
Dependent variable ΔLNFDI			
ΔLNEXR	0.0316***	0.053	2.169
$\Delta\text{LNGOVSIZE}$	0.0543**	0.0059	13.692
ΔLNMS	0.145***	0.065	3.813
ΔLNINF	-0.068**	0.0562	-2.436
ΔLNOPEN	-0.812***	0.086	-2.175
ECT (-1)	-0.557	0.004	-3.654

As shown in table 5.12, at 1% significance level, the lag effect of exchange rate on FDI is statistically significant. A 1% depreciation of the exchange rate results in increases in FDIs by 0.03%. The results mean that exchange rate depreciation promotes a country's international competitiveness, resulting in exports and foreign exchange supplies increases.

The lag effects of government expenditure on FDI in South Africa is statistically significant and positive. The GOVSIZE coefficient of (0.0543) means that a 1% increase in government expenditure results in FDI increases by 0.05%. The possible explanation of the results is that government spending has been directed towards productive sectors of the economy. Furthermore, at 1% significance level, trade openness is statistically significance indicating that a 1% increase in trade openness, FDI decrease by 0.8%. The results are consistent with the study of Ali and Abdullah (2018). Lastly, at 5% significance level the coefficient of lag of inflation (- 0.068), is statistically significant. This means that if inflation increases by 1%, FDI in South Africa will decrease by 0.07% in the short run.

5.5.2 Short-run and speed of adjustment

The results in table 5.13 show that the coefficient of RGDP (-0.362) indicating that the speed of adjustment is approximately 36.2%. The implication is that, if there is a deviation from equilibrium, only 36.2% is corrected in one year as the variable moves towards restoring equilibrium. Thus, there is no strong pressure on RGDP to restore the equilibrium whenever there is a disturbance. A negative t value of (- 1.256) indicates that the sped of adjustment is statistically significant. LNFDI has a positive effect on LNGDP in the short run. This means that increases in FDI by 1% would result in increases in LNGDP by 78.5%.

Table 0.12: Vector Error Correction Results

Variable	Coefficient	Std. Error	t-Statistic
LNGDP	-0.362	0.245	-1.256
LNFDI	0.785	0.734	-1.824
LNEXR	0.325	0.233	2.893

5.5.3 Diagnostic tests

The estimation of diagnostic tests on the model is very important because it validates the parameter evaluation of the outcomes. This arises because if a problem is reported in the residuals from the estimated model, it means the model will be inefficient and there will be bias in the estimated parameters. The fitness of the model was tested in three main ways.

Using White's test with no cross terms, the heteroscedasticity test was first performed. Secondly, the Jarque-Bera's normality test was performed. Lastly the Langrage multiplier (LM) test was performed to test for serial correlation. Table 5.14 depicts the diagnostic test results.

Table 0.13: Diagnostic test results

Test	Null Hypothesis	t-Statistic	Probability
White (Chi-sq.)	No conditional heteroscedasticity	298.568	0.182
Jarque-Bera	There is normal distribution	12.894	0.125
Langrage Multiplier (LM)	No Serial Correlation	25.854	0.689

Using White test with no cross terms the heteroscedasticity test statistic was 298.568 with a probability of 0.182. In this study, the null hypothesis of no heteroscedasticity is accepted implying that the model can be relied on since it has no misspecifications.

Thus, the null hypothesis is accepted and conclude that there is no evidence of heteroscedasticity.

The normality test was performed using the Jarque–Bera test and the chisquare distribution of the Jarque-Bera is 2d.f. If the t-tastic value is not equal to zero, the computed Jarque-Bera p-value will be sufficiently low, the hypothesis that residuals are normally distibuted is rejected. Following Gujarati (2004) if the test statistic p-value is close to zero, then the normality assumption is accepted. The above results shows that the Jarque-Bera has a statistic of 12.894 and probability of 0.125 indicating that at 5% significance level, we reject the null hypothesis. This implies that the residuals are not normally distributed. Folowing Harris (1995:83) “non-normality in the residuals is not a problem, this is because some variables are weakly exogenous.”

Serial correlation test had a Langrage Multiplier statistic of 25.854 and probability of 0.689. Thus, the null hypothesis of no serial correlation is accepted because of high probabality and then conclude that the model is free from any econometric problems like serial correlation, heteroscedasticity, and multicollinearity. Thus, compelling conclusions can be made and also policies can be formulated on the impact of FDIs on South Africa’s economic growth.

5.6 Variance decomposition and impulse response function

5.6.1 Impulse Response Function (IRF)

Figure 5.4 reports the responses of LNGDP to NFDI and its dependent variables. The IRF shows the dynamic response of LNGDP to a one- period standard deviation (S.D) shock to the innovations of the system and indicate the directions and persistence of the response to each of the shocks over a period of ten years.

Response to Cholesky One S.D Innovations

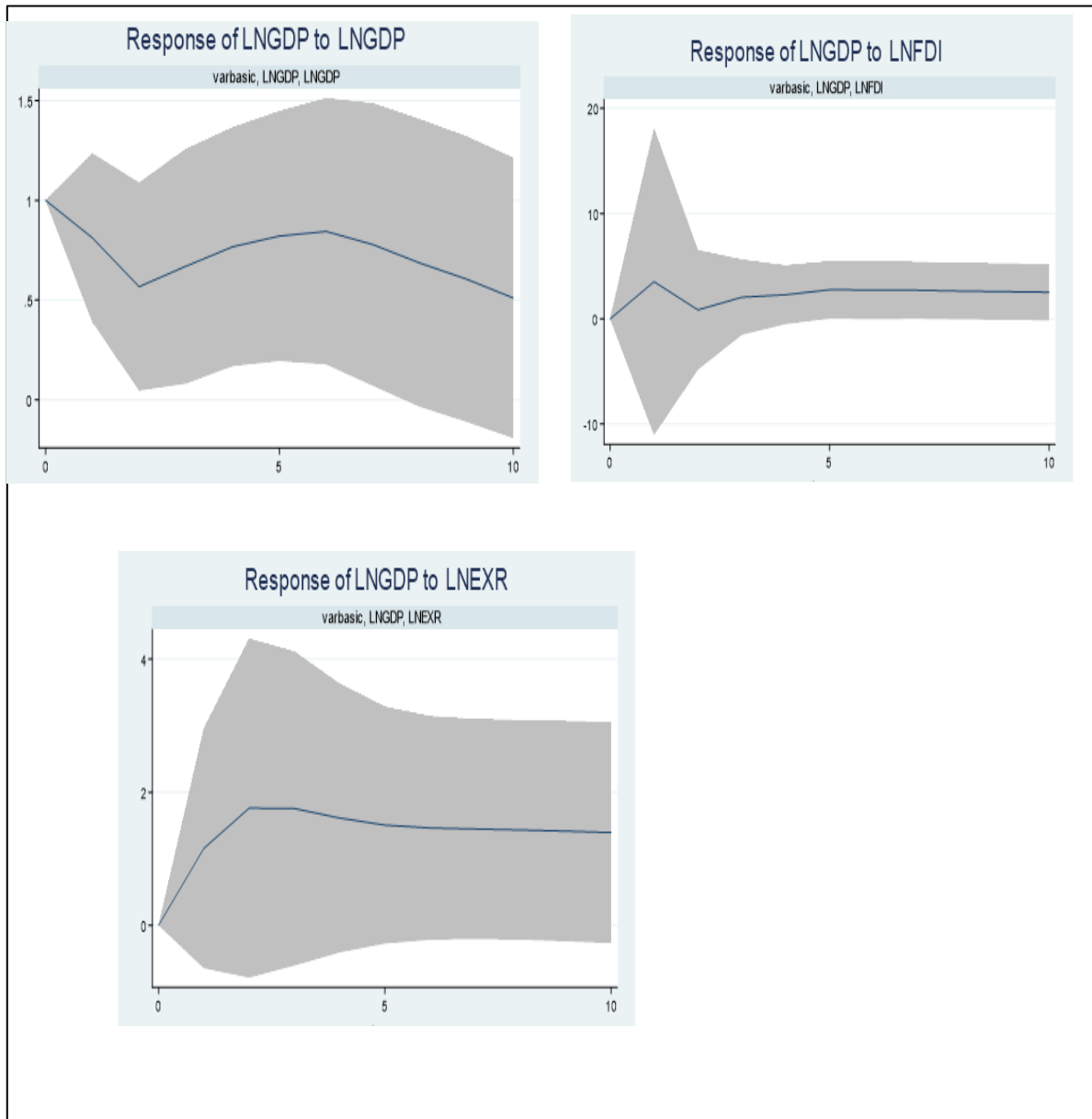


Figure 0.4: Impulse Response Results

The IRF graph above shows the impulse variable listed as second (LNGDP) and the response variable listed as third. The results above shows that a one period S.D shock on LNGDP produces a large positive impact on itself by approximately 2%. Response to LNGDP shows that at the earlier stage there is a decrease in LNGDP. From period

two LNGDP gradually increases up to period six. Beyond period six LNGDP declines below its steady state value and remains in the positive region.

A one S.D shock to LNFDI initially increases LNGDP. This positive response declines sharply from period one to period two. Beyond period five there is a gradual increase and it remains in the positive region. Thus, shocks to LNFDI have a positive impact on LNGDP.

A standard deviation shock to LNER, LNGDP will start increasing from period zero to period one, decline at period two and then increase gradually to period three. From period four there is a gradual decline in LNGDP. Between period five and six LNGDP is in a stable state from period seven upwards, LNGDP witnesses an upward trend. In the short run LNGDP will have a positive response to a shock in LNER and in the long run there is a negative response.

In conclusion, the results are consistent with economic theory because FDIs contribute to the development of the host country's economy by bringing in technology and improving relations with local companies that can assist in enhancing the growth of the economy.

5.6.2 Variance decomposition analysis

The analysis of variance decomposition shows the percentage of the unexpected variations in each variable that is produced by shocks from other variables. Furthermore, it also indicates the relative impact that a variable has on another variable. Table 5.15 shows the variance decomposition results. The results show the proportion of the forecast error variance on LNGDP explained by explanatory variables innovation and its own innovations.

Table 0.14: Variance decomposition results

Period	S.E	LNGDP	LNFDI	LNEXR
1	0.01345	100.0000	0.0000	0.00000
2	0.03362	81.63584	8.22145	0.48452
3	0.05281	80.22385	6.35348	2.34521
4	0.059861	76.89364	4.96354	4.75218
5	0.06987	73.85412	5.12874	4.32841
6	0.10845	71.78451	7.88712	4.28413
7	0.12841	68.8741	8.62841	3.91235
8	0.13845	66.89642	10.29471	3.3241
9	0.15874	60.27560	12.35413	3.21987
10	0.17842	58.56825	14.84521	2.9878

In order to determine the effects of the variables when they are allowed to affect LNGDP, the variance decomposition analysis covered a period of ten years. The periods were split into short run and long run. The short run period is from year one to four and long run from year five to year ten. In the short run, a 100% forecast variance on RGDP is explained by the variable itself. This means that LNFDI and LNEXR does not have any strong influence on RGDP. This means the variables have an exogenous impact. In year two influence from LNFDI and LNEXR is barely 4%, thus those two variables exhibit a strong exogeneity. That is, they have a weak influence in predicting LNGDP in the future. In the 5th year the forecast error variance, explains about 74% of its variation. The explanatory variables explain 26% of the error variance, EXCH about 4% and FDI 5%.

In year 10 LNGDP explains itself about 59% of its variation while the other variables explain the remaining 41%. The variance decomposition analysis results are compatible with economic theory. Shocks to the explanatory variables continues to explain a significant proportion of the variation in GDP. The analysis showed that GDP was mainly driven by shocks in FDI, while exchange rate did not explain much of the

variations. This is consistent with results from the IRF. Using the variance decomposition analysis, it can be seen that FDI is an important variable in explaining economic growth in South Africa during the period under study.

5.7 Interview results

In this section, the interview results on FDIs in South Africa is presented. The areas investigated include determinants of FDIs, factors impeding FDIs and the impact of FDI on economic growth. A total of ten participants were interviewed in this study.

5.7.1 Demographic information of the respondents

Background information on the respondents is provided in this section. The background information includes the respondents' age, gender, educational qualification, company, position and working experience. Table 5.16 shows the participants age.

Table 0.15: Age of the participants

Age in year	Number of respondents	Percent
18-25	0	0
26-35	3	30
36-45	5	50
46-55	2	20
56+	0	0
Total	10	100

Table 5.16 shows that the largest category of the respondents, five (50%), fell in the category 36-45. Three respondents (30%) fell in the category of 26 to 35 years, and two respondents (20%) were in the category of 46 to 55 years. The table above shows

that no participants in the age category of 18-25 and 56+ were interviewed. Table 5.17 shows the respondents according to their gender.

Table 0.16: Gender of the participants

Gender	Number of respondents	Percentage
Male	7	70%
Female	3	30%
Total	10	100

Research participants shows that 30% were females and 70% were males. Supporting this is the observation that throughout the data collection process, male respondents were more willing to provide the information related to this study than females were. Also due to the COVID-19 pandemic, lockdowns and restrictions male respondents were more flexible in participating in the interviews.

To gain some background information on educational level, the participants were asked to indicate their educational qualification they had obtained. The results are shown in table 5.18.

Table 0.17: Level of education

Level of education	Frequency	Percentage
Postgraduate	3	30
Bachelors Degree	6	60
Diploma	1	10
Certificate	0	0
Total	10	100%

Table 5.18 shows that in terms of education level, a Bachelors degree was the most common level of education (6 participants or 60%), followed by postgraduate (3 participants or 30%), and those who had completed diplomas (1 participant or 10%). This shows that all respondents had qualifications at various levels, and were suitable to answer the interview questions.

Research participants were categorised into five employment position demographics namely; Academic (2 or 20%), Investment Manager (3 or 30%), Finance Manager (2 or 20%) Strategy and Economists (2 or 20%), and Political Analyst (1 or 20%). The employment demographics in terms of positions held by respondents at the time of study are shown in figure 5.5

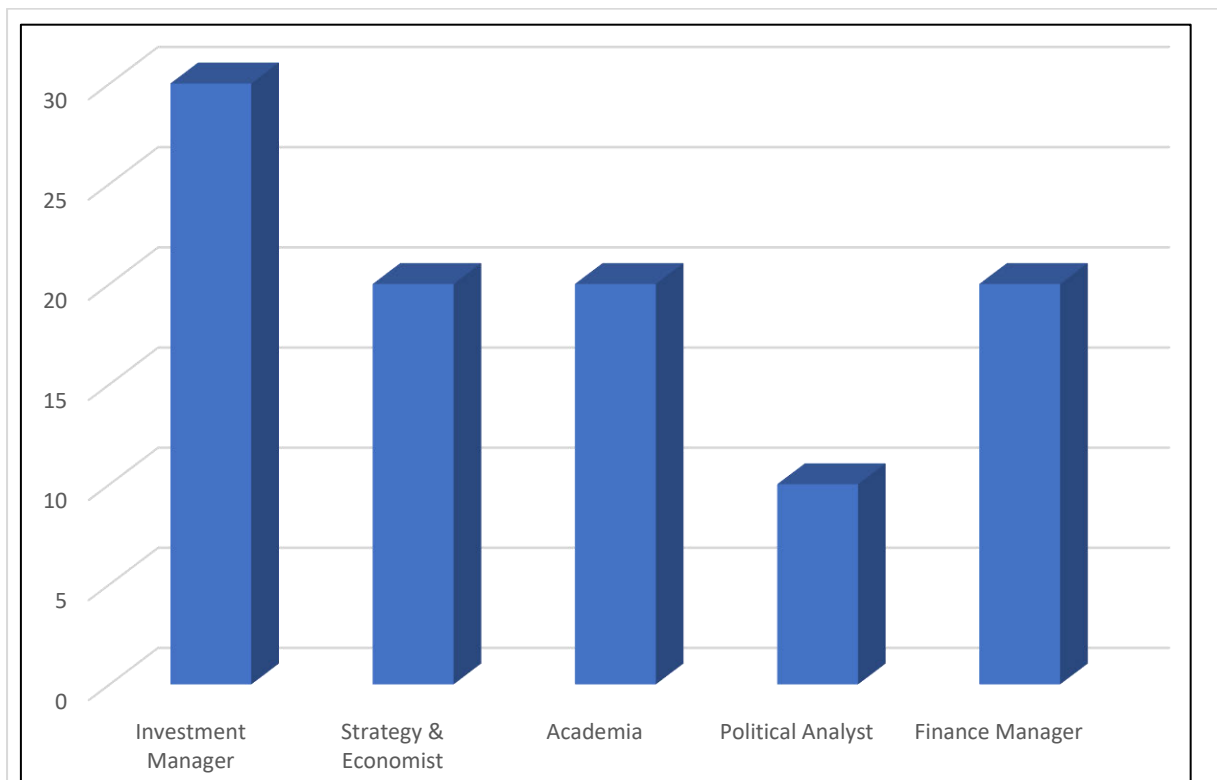


Figure 0.5: Respondent's employment positions

The composition of research participants above is varied which allowed the fusion of perceptions and ideas on foreign direct investments and economic growth. The crosspollination of feedback from various fields helped to eliminate bias in research feedback.

The final background question focused on the sectoral distribution of the participants. Research participants came from manufacturing, retail, financial sector, government academia sectors. A total of 7 (30%) participants came from the financial sector, 1 participant (10%) manufacturing sector, 2 participants (20%) academia sector, government and retail sector. This combination created a good cocktail of views as respondent background sector had the potential to bring out biased research feedback. Table 5.19 below, shows sectorial distribution of the participants.

Table 0.18: Sectorial distribution of the participants

Sector	Frequency	Percentage
Manufacturing	1	10
Retail	2	20
Financial Sector	3	30
Academia	2	20
Government	2	20
Total	10	100

Key sectors related to the finance and investment strategies research were pooled together as shown above which helped diffuse monopoly of perceptions on the research questions and the diversity of opinions from various sectors increased the reliability placed on the research' findings.

In summary, in terms of background information, the majority of the participants were within the age range of 36-45 (50%). In terms of gender, they were mostly males (70%). With regard to education, the participants were well educated, with a considerable number of them having a Bachelors degree (60%), followed by others who had completed their Postgraduates (30%) and diplomas (10%). In terms of sectorial distribution most of the respondents were from the financial sector.

5.8 Determinants of foreign direct investments in South Africa

When asked for the determinants of FDIs, the following factors were considered as the main determinants as shown in table 5.20. The key determinants identified by the participants are infrastructure development, political stability inflation, natural resources, trade openness, exchange rate and market size.

Table 0.20: Determinants of FDIs

Determinants of FDI	Frequency	Percentage
infrastructure development	10	19
political stability	8	15
natural resources	4	8
Inflation	6	12
Exchange rate	8	15
market size	9	17
trade openness	7	14
Total	52	100

Determinants of foreign direct investments are visually represented in a cluster bar as shown in Figure 5.7 below.

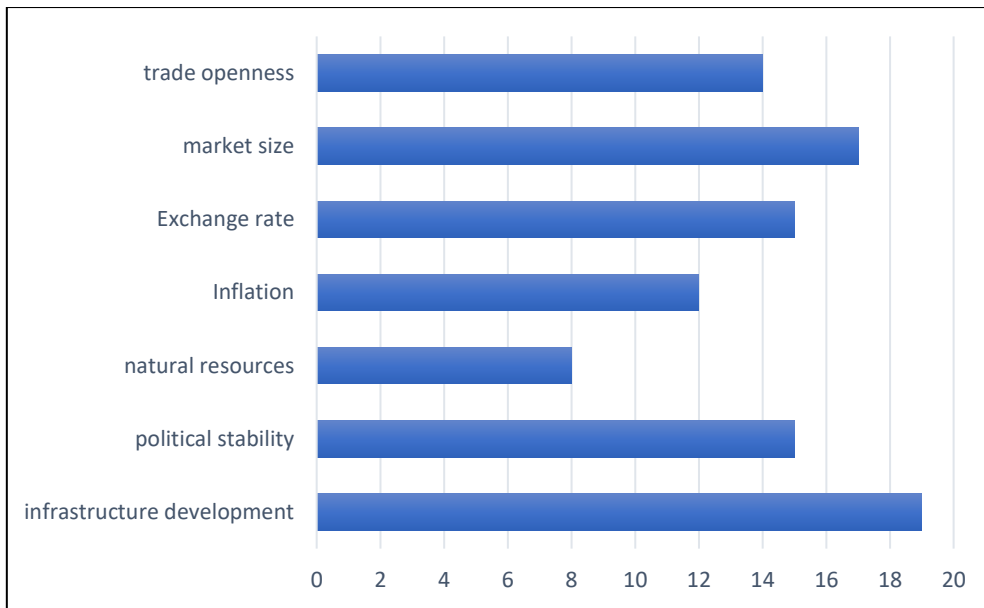


Figure 0.6: Determinants of FDIs

The above results reveal that there are different determinants that affect the flow of foreign direct investments within the economy. When foreign investors are considering foreign direct investments, the participants concurred that they consider a number of macro factors, with infrastructure development being the most contributing factor with a share of 19%. Market size and exchange rate contributed 17% and 15%. This was consistent with the empirical results obtained above and the literature reviewed in Chapter Two. Furthermore, the participants did indicate that trade openness is an important determinant of FDI contributing 14%. This was in line with theory economic theory, which states that the country’s openness to exports attracts the export, oriented FDI.

These factors also include policy decisions taken by the host country government because investors tend to worry of political and economic uncertainty. This is in agreement with Dahir (2017), who indicated that foreign investors also tend to be wary of any economic and political uncertainty. Recent political and economic uncertainty in South Africa has clouded the investor’s sentiment. Factors identified by the participants are discussed below in detail.

5.8.1 Factor one: infrastructure development

One of the most important determinants of FDI is good infrastructure. An economy with a developed infrastructure, for example, power supply, roads and telecommunications, tends to reduce transactional costs and facilitate business operations according to the participants. This is consistent with studies by Nguea (2021) and Nketiah-Amponsah and Sarpong (2019) who indicated that a good infrastructure attracts FDI and increases productivity of investments thereby stimulating the flow of FDIs.

The participants conceded that South Africa has modern and highly advanced telecommunications, energy provision infrastructure, transport and technology compared to other neighbouring African countries. However, the maintenance of existing facilities (which is lacking in South Africa) and expansion of new economic infrastructures are important components of an investment reform strategies. Therefore, the government has committed significant amount of resources to infrastructural development so as to attract more FDIs and improve the sustainability of investments projects. One of the participants noted that in addition to physical infrastructure, financial infrastructure is important in attracting FDI inflows. Literature has documented that financial market that are well developed enables the host country to tap the full benefits of FDIs.

5.8.2 Factor two: political stability

Political stability affects the economy and the participants viewed the factor as an important determinant. The participants highlighted that without a stable political environment, it is difficult to predict a sustainable long-term growth prospect which foreign investors critically depend on. Foreign investors are concerned with the host country political environment since political instability does affect the return on their investments. Also, they are more concerned about the safety of their investments rather than how the economy grows. Hence, political instability lessens the country's attractiveness as a location of FDI and is inversely related to FDI inflows.

Political events disrupt the functionality of the market by putting past investment at risk, for example, nationalisation which involves the takeover of private owned businesses by the government and expropriation of foreign owned assets. One of the participants highlighted that political instability creates unfavourable business climate which erodes foreign investors confidence in the investment climate. The resultant effect would be decreases in FDI flows within the host country. In conclusion, the participants conceded that political instability is an important determinant in attracting FDI as it ensures less expropriation risks. They suggest that, for South Africa to attract more foreign investments, the government would have to reduce the political risk.

5.8.3 Factor three: natural resources

Literature has showed that the availability of natural resources has been the critical factor in attracting foreign direct investments. The participants highlighted that in South Africa natural resources are positively related to FDI, and also an important determinant in attracting FDI. South Africa is particularly prominent as a host to FDI because of mining of high-value minerals where great potential for future FDI exists and the country has been able to attract most FDI.

5.8.4 Factor four: inflation

High levels of inflation are directly linked to escalating economic problems. The participants highlighted that high inflation rates cripple business and investors prefer economies that are financially stable and have less degree of uncertainty. Furthermore, high inflation results in decreases in FDI because if foreign investors are risk-averse, they will not risk their profits expected from investments being eroded by inflation. As long as there is uncertainty, foreign investors will demand a high price to cover their exposure to inflation risks, and this, in turn, will decrease the volume of investment.

Furthermore, they highlighted that unstable inflation negatively affects the investors long term plans as business costs tend to increase at an increasing rate. Investors tend to prefer economies that are financially stable and have less degree of uncertainty. Thus, monetary stability influences FDI inflows, therefore, to attract FDIs the stability of the inflation rate is important.

5.8.5 Factor five: exchange rate

The participants posit that exchange rate volatility may negatively affect and reduce FDIs because it contributes to uncertainty on the returning transaction plan from the investing countries. According to the participants appreciation of the importing country's currency value results in depreciation of the South African Rand and this would have a positive impact on exporting products that are locally produced in South Africa. If the investing company currency has a higher currency value, this enables foreign investors to invest in South Africa economy thereby increasing the flows of FDIs in the country. Also, if the investing company currency has a higher value, exporting products will become more expensive to South African buyers, thus FDIs in South Africa would be enthused to overcome this cost disadvantage.

5.8.6 Factor six: market size

The participants were in agreement that market size is an important determinant of FDIs in South Africa. Large domestic market size stimulates economies of scale, whereas growing indicators improves the prospects of the market. Therefore, economies with large markets attract more FDIs and countries that have sustained growth rates tend to receive more FDI inflows as compared to volatile economies.

The participants concurred that growth in the market size of the host country attracts more FDIs because the firm would want to receive potentially higher returns on their capital and ultimately receive high profits. Thus, growth of market size measured in GDP terms should be increased. Since the participants were in agreement that a

country's market size does impact the attraction of FDI inflows, it was concluded that consideration should be given to the growth of the economy.

5.8.7 Factor seven: trade openness

In order to increase FDI inflows, research participants were in agreement that openness of an economy is an important determinant to consider. The more the economy is open, the more it would attract FDIs since the country would be following appropriate trade and exchange rate regimes. In addition, the research participants noted that South Africa has good trade policies that allows free movements of goods and services. These findings shows that trade openness of a country encourage the inflow of FDIs. This was consistent with literature (Rani and Kumar 2019; Ciobanu 2020). It ws concluded that despite South Africa being open and having good trade policies, improvemnets are needed in the facilitation of new investments.

5.9 Factors impeding foreign direct investments

South Africa suffers from increasing social unrest (strikes and demonstrations) and structural issues in electricity supply. Also, the lack of clarity in structural and policy reforms has been a concern to foreign investors. Certain legal uncertainties tend to hamper investment potential by discouraging foreign investors regardless of the declaration of the Protection of Investment Act, which supports foreign investors legal guaranties.

According to the participants, South Africa is loosing its competitive edge in infrastructural development. Even though the country has developed sophisticated infrastructure years back, its competitive advantage is decreasing as other countries are continously improving. Also, the participants conceded that poor understanding of the South Africa's economy has put a restraint on foreign investors in making long term investment decisions. Although South Africa has attempted to separate itself from the rest of other African countries as an investment destination, this has been met with limited success. According to the participants, potential investors are unaware of the

diversification of the South Africa's economy and the expanding role played by the service sector in GDP contribution. Therefore, South Africa needs to market its commercial sector, identify its targeted opportunities and facilitate the investment process.

Furthermore, the participants conceded that foreign investments are hampered by violence and criminal activities. South Africa is struggling to counter the negative effects, criminal activities like looting, fraud extortion and theft that affect business operations directly because they tend to increase costs that are going to be incurred by the company. They highlighted that, for example, a company has to increase their security measures, property insurance costs or incur medical expenses for employees injured during these criminal activities. FDI inflows require long term commitments, thus the negative economic perspective about South Africa could deter potential investors.

A summary of the participants judgement on the factors impeding foreign direct investments are shown in Figure 5.8. The key factors impeding foreign direct investments indicated by the participants are poor infrastructure, crime, social unrest, inflation, slow growth, lack of high-skilled labour force, corruption and lack of political stability. Most participants concurred that political stability, infrastructure, crime and social unrest are the main factors impeding foreign direct investments in South Africa.

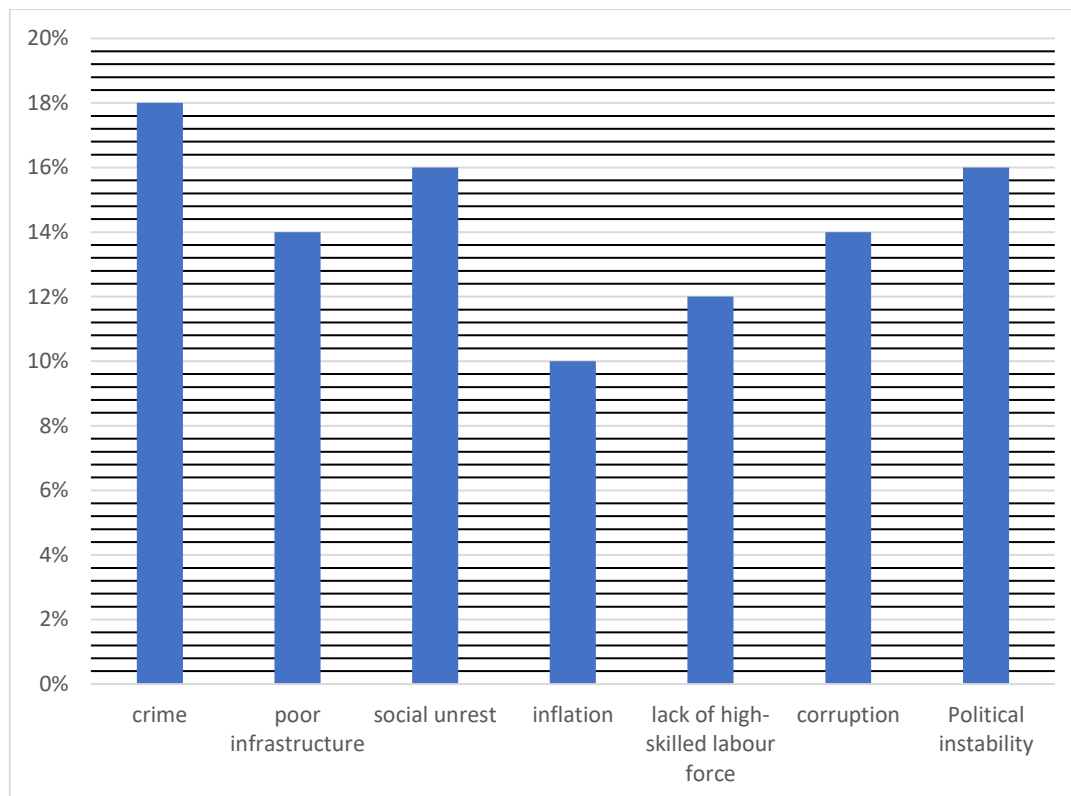


Figure 0.7: Factors impeding FDI in South Africa

5.10 Impact of social unrest and COVID-19 on FDI

Social unrest and the COVID-19 epidemic disrupted South Africa's economy significantly. The social unrest discouraged visitors, interrupted public transportation, and prevented shops, bars and restaurants, and personal service providers such as barber shops and beauty parlours from operating normally. The COVID-19 epidemic mandated periods of work at-home, quarantines, social distancing, and banning of large gatherings, which also resulted in a significant reduction of economic activities. Moreover, they both contributed to the lowering of the expectations about the future prospects of the economy, which in turn reduced the motivation for both private investment and consumption in South Africa.

The participants concurred that social unrest, as demonstrated by strikes and service delivery protest affect foreign direct investments negatively. Economists have slammed looting and vandalism as an investment deterrent for South Africa. One of the participants noted that the social unrest and violent riots that took place in Gauteng

and KwaZulu-Natal in July 2021, affected Massmart. Massmart has a total of 343 stores in South Africa and a total of forty-one stores and two distribution centres were looted. One distribution centre in Queen Nandi drive near Durban North was burnt down. This affected its ability to service the stock need of its stores.

Following the wide scale vandalism and looting that took place in July 2021 in KwaZulu-Natal, Toyota South Africa Motors (TSAM) has raised concerns over the business environment. According to one of the participant, the manufacturing operations in Prospecton Plant in Durban was forced to halt operations from 12 July 2021. The company implemented a six-day shut down. One of the participant noted that the closure of TSAM manufacturing operations “jeopardises the company’s future sustainability as it embarked on a recovery mission following the raging Covid-19 pandemic”. Furthermore, “export volumes into Europe have started increasing as their economy recovers. The loss of production over the social unrest week means that TSAM will more than likely lose some of its business to one of our global Toyota affiliates because our European customers will not wait for their orders,” said the participant. The social unrest also caused disruption of the important N3 highway between Durban and Johannesburg and this resulted in TSAM being unable to deliver vehicles to customers in Gauteng. Hence, these riots have significantly impacted Toyota’s plans to invest further in South Africa.

In addition, a participant (economists) warns that prolonged insecurity could threaten the country’s investment climate and cause further economic disruptions. Traditionally seen as a safe-haven for foreign investors, the escalation of violence and ransacking of businesses have caught many off guard. “This has clearly changed now and there is serious concern amongst FDI investors over the rapid deterioration in the situation on the ground” says the economist.

The coronavirus (COVID-19) pandemic impacted negatively the flow of FDIs across the world. The participants mentioned that COVID 19 had immediate effects on FDIs and the effects were expected to last long. Due to limited capacity to manage the crisis, developing countries like South Africa were negatively impacted. “Despite recovery efforts, a return to pre-pandemic levels of inward FDI is unlikely in the coming years,”

said the economist analyst. “The road to FDI recovery will be difficult, owing to slow economic growth affecting market-seeking FDI, the constraints of the pandemic limiting fast diversification, economic sanctions and geopolitical instability in parts of the region,” he cautioned.

5.11 Changes in the economy that would attract more foreign investors

In pursuit of objective three which sought to establish how foreign direct investments can be made a valuable tool in enhancing economic growth of South Africa, the participants were asked to comment on important changes in the economy that would attract more foreign direct investors, below are some of the changes that were suggested.

Open markets: This is whereby there are little barriers to trade allowing the inflow of FDIs. Also, the country should have a flexible labour market, implement policies that ease doing business and protection of intellectual property rights.

Investment Promotion Agency (IPA): Setting up an IPA would act as a link between foreign investors and the domestic economy. Successful IPAs in the host domestic economy could play a role of a facilitator by providing better infrastructure, accessibility to skilled workforce that are much needed in attracting FDIs.

Financial incentives. South Africa should provide foreign investors tax breaks, loans to invest in insurance in an effort to promote more investments within the country.

Administrative processes and regulatory environment. South Africa government should simplify the process of establishing businesses and production processes within the country. Reduction of bureaucracy and regulatory environments, tends to make the economy more attractive to foreign investors.

Invest in education and skills development: South Africa should improve the labour force through education trainings skills development. Most foreign investors prefer educated and skilled workforce.

5.12 Impact of foreign direct investments on economic growth

The aim of the study was to examine the effect of foreign direct investments on South Africa economic growth. Having established the relationship through empirical analysis above, the researcher wanted to check if the empirical results were consistent with the interviews. The participants conceded that FDI does influence economic growth. A summary of the participants comments is provided below.

According to the investment manager, South Africa has an open investment climate and foreign investments has played an important role in developing the economy. The country has undertaken substantial economic reforms to attract foreign investors. The participants conceded that FDIs are considered as an engine for economic growth. For example, FDIs bring in new knowledge, human capital development and technological developments. The attributes gained by training and sharing experiences would increase the overall level of education and human capital development in South Africa. The results suggest that a country with FDIs benefits greatly by developing its human resources whilst maintaining ownership. thus, it can conclude that the empirical results were consistent with the interview results. Both methodologies were in favour FDIs being a key driver of the economy.

Besides the positive effects that FDIs bring in the economy, there are cases where investments aimed for South Africa might harm the economy and decrease the economic growth rate according to research participants. The continual inflow of FDIs might results in domestic companies loose their market share. This is known as “market stealing” when local companies are not so productive compared to the foreign companies. When a company that has less market productivity leaves the market, industry is going to benefit due to productivity increases. However, when a productive company leave the market, in such cases FDI inflows are considered harmful to the the South African economy. This is because the negative impact by FDI weakens the competitive position of local producers resulting in structural unemployment.

5.13 Challenges prohibiting South Africa's economic growth

In Africa, South Africa is considered as the most diversified and industrialized economy. However, the economy is experiencing slow and inconsistency growth, low investor confidence and rigid labour markets. Research participants highlighted that there are a number of challenges inhibiting South Africa economic growth. Key socioeconomic challenges include crime, high unemployment rates, social inequality, high rates of poverty, periodic anti-immigrant violence, labour unrest, and protests over public service delivery and corruption. These challenges are illustrated in Figure 5.9. A total of 31% cited unemployment as a real challenge confronting South Africa especially in the public sector, while 28% said poverty is another slow poison destroying South Africa economy and 25% highlighted inequality as a challenge that impact the economy.

The challenges highlighted above have been worsened by sustained low levels of investments and growth. The economist highlighted that the country continues to face challenges of high unemployment rates which has been increasing continuously. Following the weeklong of July 2021 social unrest and the adverse impact this had on economic activity and physical infrastructure, employees in the affected provinces lost their jobs, this contributed to loss of employment opportunities both formal and informal. Furthermore, various sectors of the economy have experienced redundancy effects. The inequality is expected to widen and poverty to deepen. One of the participant highlighted that “the current epidemiological scenarios and projected scenario impact on critical economic variables, the livelihood of the people and the low base from which to build the economy paint a picture that will require radically different measures to mitigate against the impact of the crisis.” Given the extent of the devastation, the economic response required should match or even exceed the scale of the disruption caused. Table 5.21 shows challenges prohibiting South Africa economic growth.

Table 0.19: Challenges prohibiting South Africa economic growth

Challenges	frequency	percentage
Inequality	8	25
Unemployment	10	31
Poverty	9	28
Corruption	5	16
Total	32	100

The pie chart below, Figure 5.9, generalises these challenges affecting the growth agenda of the South African economy. The main challenge prohibiting South Africa economic growth highlighted by the participant is unemployment followed by poverty with a share of (28%). These results suggest that the government should focus on aligning of policies that promote economic growth so as to alleviate unemployment and poverty.

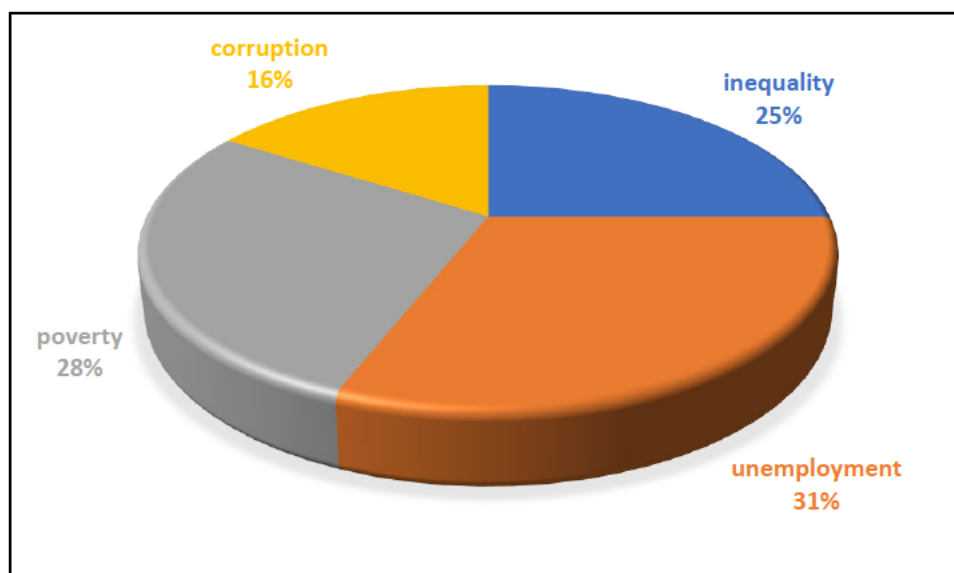


Figure 0.8: Challenges prohibiting South Africa's economic growth

5.14 Policy implications to increase foreign direct investments inflows

A major contribution of this study was policy implications that would create environment to attract more FDIs in South Africa. To answer research objective four which sought to suggest policy options that can be implemented to increase both FDIs and economic growth, it is important to note that the attraction of FDIs alone is not enough for sustainable economic growth and poverty reduction. The government should implement holistic policies which seeks to reduce the extreme levels of poverty, creation of sustainable jobs and equitable distribution of income. Thus, the attraction of FDIs should not only be seen as an end in itself but also be seen as a means of addressing socio-economic problems facing South Africa.

Given the research findings, it may be suggested that the government should attract FDIs into sectors favoured by foreign investors as this would promote economic growth. In other sectors, the government can indirectly increase the flow of FDIs by creating good macroeconomic environment, developing infrastructures and minimizing the trade barriers. This would result in increases in local production, exports and efficiency within the country. In the same manner, the South African Reserve Bank can be directed towards pursuing a loose monetary policy that enhance capitalisation of the economy and ultimately FDIs. This is significant because one of the major determinants of FDIs is market size. Other strategies that can be implemented to increase FDIs include upskilling the workers through education and training, reducing crime rates and stabilisation of the economy which would result in stabilisation of the volatile exchange rate.

The study has established that the financial sector attracts more FDIs and it is regarded as the major recipient of foreign investments in South Africa. This suggests the possibility of shift in FDI motives from natural resource seeking to efficiency seeking. This has been confirmed by the increased role of the service sector in attracting FDIs. Evidence in support of this supposition is shown by the increase in mergers and acquisitions as opposed to green-field investment. Thus, FDI policy for the financial and services sectors should be targeted towards efficiency seeking FDIs

and government should encourage more FDI injections to accelerate foreign direct investment driven economic growth.

The government should also consider implementing policies that maintain political stability and minimize the adjustments of strategies by foreign investors every time a new political dispensation take place. This would mean that election cycles should not interfere unnecessarily on the running of companies owned by foreign investors and also on the attraction of new investors.

5.15 Conclusion

The chapter presented an overview of the estimated results and empirical findings. The researcher performed the descriptive statistics first for all the variables in the data series. This enables an analysis of whether the observed frequencies were within the anticipated range. Kernel density and pair-wise correlation matrix were performed to determine the exact relationship between the seven variables used in the study. The study ascertained that the correlation is positive for most of the pairs, exhibiting a positive correlation. The next step was to perform unit root test which is a prerequisite before running the ARDL cointegration since time series data was used. Having established stationarity on the time series, the next step was to perform cointegration using the ARDL. To analyse the short run dynamic interactions and the long run relationship among the variables of interest, FDI, exchange rate and economic growth, ARDL model was applied as a general vector autoregressive. The results showed that when economic growth is the dependent variable, a long run relationship exist between the variables. A cointegrating relationship was found between GDP and FDI achieving research objective one outlined in Chapter One.

The ARDL cointegration results showed that FDIs have a positive impact on GDP. Thus, policy makers could formulate policies that attracts more FDIs in the country to promote economic growth. The result obtained are in line with some of the empirical studies reviewed who all found that FDI results in increased economic growth. The study examined the determinants of FDIs and the following variables government expenditure and market size had positive impact, whereas, inflation, exchange rate

and trade openness had no significant influence on FDIs. The estimated ARDL diagnostic test was also performed, and the results indicates that the ARDL model was free from any econometric problems like serial correlation, heteroscedasticity, and multicollinearity and the Jarque Bera tests proved the data are normal distribution and model is reliable and functional form is correct by the Ramsey test.

To differentiate the short and long run effects of the variable and establish the effects of FDIs on South Africa economic growth, VECM was performed. This enables policy makers to make informed decisions on what needs to be done based on the results obtained. The results showed that increases in FDIs would result in increases in economic growth. Thus, the positive impact of FDIs in South Africa indicates that the economy has benefited positively from the spill over effects. Empirical analysis ended with the impulse response and variance decomposition test. The results showed that in the short run and long run. LNGDP will have a positive response to a shock in LNFDI. In the short run, shock to exchange rate would have a positive impact to LNGDP and in the long run there is a negative response. The next step was the analysis of primary data collected through interviews.

The interview results were presented and the areas investigated included determinants of FDIs, factors impeding FDIs and the impact of FDIs on economic growth. The participants identified the following: market size, inflation, exchange rates, availability of natural resources, infrastructure, openness of the economy and availability of good infrastructure as the main determinants of FDI in South Africa. Other determinants were also identified which include political and economic stability, human capital costs and skills, international treaties and guarantees. Furthermore, the study analysed the impact of social unrest and COVID-19 on FDIs. Most participants conceded that they impact negatively the flow of FDIs.

Lastly, the participants identified the following factors which impede FDIs in South Africa: poor infrastructure, crime, social unrest, inflation, slow growth, lack of skilled workforce, rigid in the labour market and competitive market entry. In order to overcome these impediments, the participants highlighted important changes to the economy that would attract more foreign direct investors. Lastly, the participants

conceded that FDIs are considered as the engine for economic growth and development as they bring in new technology, human capital development and technological development. In summary, the empirical results are consistent with the interview results both methodologies were in favour of FDIs being a key driver in the economy. The next chapter discusses conclusion and policy recommendations.

CHAPTER SIX: CONCLUSIONS AND POLICY RECOMMENDATIONS

6.1 Introduction

This chapter concludes the study and suggests recommendations that could be useful for future study on foreign direct investments and economic growth. The chapter is organised as follows, a summary of each chapter is provided in the first section, followed by major finding arising from different estimations that were employed in the study. The next section three, discusses the recommendations and policy implications of the study. Lastly, section four presents a discussion on the limitation of the study and areas of further research.

6.2 Summary of the study and findings

During the apartheid era, South Africa experienced a decline in economic growth and investments. This was because of economic sanctions and political isolations from the rest of the world. The economy improved radically when the country transitioned to democracy being reasonably robust and stable throughout the democratic era. Whilst global growth was increasing, South African economy was experiencing slow and inconsistent growth. Factors attributing to low economic growth rates include labour unrest, insufficient energy supplies, decrease in demand from the country's trading partners, and external forces from the international economy. Economic growth is a powerful instrument for poverty reduction and improvements in the quality of life. One of the most important determinants of economic growth is Foreign Direct Investments (FDI). In order to grow their economies, many countries around the world have formulated and implemented policies that stimulate FDI inflows.

The aim of the study was to examine the effect of foreign direct investment on economic growth and to establish how FDIs can be made a valuable tool in enhancing South Africa's economic growth. In doing so, evidence of the study was provided in Chapter Two. The study reviewed two classes of theories, which are economic growth

theories and FDI theories. Economic growth theories reviewed in the study are the neoclassical growth theory and the endogenous growth theory. The neoclassical theory has shown that FDIs results in economic growth of the host country through increases in the efficiency of investments and technological developments. The theory suggested that economic growth improves as a result to greater share of gross domestic product allocated to investments. The endogenous growth theory challenged the neoclassical theory. The model leaves an open possibility that increase in human capital could results in sustained growth rates. The theory postulates that human capital development contributes to output growth. The theories were relevant in this study because they considered technology endogenously determined.

FDI theories reviewed in the study include Eclectic theory, the Industrial Organisation theory, and the Product Life Cycle. The main insight from these theories is that foreign investors are investing abroad because of location advantages, country specific advantages, ownership advantages and internationalisation. Location advantage entails a firm's decision to invest abroad is based upon factors in the foreign country, for example, land and labour are very important in establishing MNE locations. A country's specific advantages looks at the availability of raw materials, political and performance of the economy. Internalization advantages are benefits that a company enjoys when they exploit internally that ownership advantage.

Literature on the determinants of FDIs is very rich and several studies have been carried out assessing the key determinants of a given location. However, there is no agreement as some researchers did not find any statistically significant determinant. Literature identified the most common determinants of FDI as labour cost, labour productivity, infrastructure, trade openness, tax, market size, and exchange rate. Some of the determinants found to be important to a country may not be applicable to other countries. Similarly, determinants also differ across regions of the globe. The determinants discussed in the study were of great importance in determining the levels of FDIs that a country receives.

Empirical evidence on the relationship between FDI and economic growth is inconclusive, though there is a general belief that FDIs lead to economic growth of the host country. The empirical literature found weak support of an exogenous positive

effect. Literature indicated that a host country might be limited by the local conditions, that is, absorptive capacities for them to be able to take advantage of FDI externalities. Therefore, the host country should ensure that they have skilled workforce, human capital resources, good infrastructure, and financial systems for them to enjoy the benefits of FDIs. In addition, literature has shown that benefits of FDIs does not occur automatically and equally across countries, rather the benefits tend to vary from one country to the other and it is difficult to separate and measure them. Therefore, the government of the host country must play a leading role in attracting FDIs and managing for them to achieve their development goals.

Chapter Three provides an overview of South Africa's economic growth and FDIs inflows. The first part of the chapter analysed South Africa's trends in economic growth since attaining democracy in 1994. The chapter also gave an overview of the major factors behind South Africa's economic growth performance as suggested in the literature. The key macroeconomic elements that are considerably linked to South Africa's economic growth include real-exchange rate, human capital development, international trade, inflation and accumulation of physical capital. To gain more insight into the relative performance of the South African economy over the years, it was imperative to compare South Africa to other leading African countries. South Africa compares relatively well with the leading African economies. The South Africa economy boasts a relatively higher GDP per capita compared to other African countries. However, the country faces serious challenges from inequality, poverty, and high levels of unemployment as the key challenges.

Furthermore, the chapter highlighted and discussed some of the key macroeconomic policies the South African government has formulated and implemented to promote economic growth. The major macroeconomic policies implemented are the RDP, GEAR, AsgiSA, JIPSA, and NGP. These policies were instrumental in transforming the South Africa's economy. The second part of the chapter presented South Africa FDI inflows trends and how they relate to economic growth. The researcher observed that FDI inflows have not been consistent in post-apartheid South Africa. The volatility in FDI was as a result of commodity price changes sensitivity since South Africa FDIs are mainly export oriented. Since the end of apartheid, the country has embarked on extensive economic reforms that attracts more foreign investors within the country.

With a vast number of multinationals, Europe was identified as the main investor in South Africa. Sectoral analysis on FDI flows in South Africa showed that the largest recipient of FDI is the service industry through the financial sector. In nutshell, South Africa compares relatively well to other leading African countries in terms of FDI inflows.

Chapter Four discussed the methodology and the estimation techniques used in investigating the impact of foreign direct investments on South Africa's economic growth. The first section of the chapter discussed the method used to analyse secondary data. This involves the collection and analysis of data obtained from various databases and testing the relationships of the variables using regression analysis. The variables employed in the study include real gross domestic product, foreign direct investments, real exchange rate, trade openness, government size, market size and inflation. One of the conditions of time series data is that before running causality, stationarity must be tested on the variables to avoid spurious regression thus, a discussion of unit roots followed. The ADF and PP tests were employed in the study because they are considered as the most suitable tests for a short time series. The study applied the ARDL model to examine the causality between the FDI and economic growth. The ARDL model involves testing whether a long run relationship exists in the variables and it has various advantages over other cointegration method since it does not require all the variable's under study to be integrated of the same order. To ensure validity of the data, diagnostic tests of serial correlation, normality tests and heteroscedasticity were performed. The Vector Error Correction Model (VECM) was employed to test the short run and long run relationship. The model assists in investigating the short run dynamics and long run causality. The section ends with a discussion of impulse response function and variance decomposition which were analysed to evaluate the inter-relationship between the variables under study and the short run dynamics.

The second section presented the qualitative approach used to collect and analyse information on FDI and growth from key personnel and macroeconomic experts. The key experts were interviewed to validate the results and discussed the current South African economic environment regarding to FDI. Discussion of sampling design, measuring instrument and data preparation and analysis was also presented. To

ensure validity and reliability of research findings, triangulation was used which involves the use of multiple datasets to address the research objectives. Confidentiality and anonymity were also preserved in this study using a consent form which assured the participants that all the information disclosed in this research were to be solely used for academic research objectives. Summing up, the contents discussed in this chapter provided a basis for the actual estimations to the study, as portrayed in the preceding chapter five.

Chapter Five presents an overview of the estimated results and empirical findings. These results are discussed in detail in the sections below.

6.2.1 Major findings arising from the estimation of the ARDL cointegration approach

The conditional ARDL long-run effects of FDI and exchange rate on economic growth were estimated and the results indicated that FDI has a positive impact on GDP. This means that in this study FDI has a significant impact on South Africa economic growth. The estimate of FDI is in line with research objective one which seeks to investigate the impact of foreign direct investments on economic growth. The result obtained are in line with the works of (Ridzuan, Ismail and Hamat 2017; Sunde 2017; Cañal-Fernández and Fernández 2018b; Ahmed and Ibrahim 2019; Makhoba and Zungu 2021) who all found that FDIs does impact positively on economic growth. This study therefore, support the hypothesis that FDI has a significant impact on South Africa's economic growth Thus, policy makers can formulate policies that attracts more FDIs in the country to promote economic growth. Increasing economic growth requires attention to be focused on to the fundamental determinants of foreign investments decisions and the underlying relevant microeconomic and macroeconomic outlooks.

South Africa has not realised the presumed benefits of FDI because most FDIs into the country are capital intensive and they have been directed towards service sectors that have been established already and some to new manufacturing sectors. While investments in export-oriented manufacturing sector has been very low. Most foreign

investors tend to locate part of their value-added chain abroad in export-oriented manufacturing for them to increase their economic operations and profitability. This is the type of investment that the GEAR programme has hoped to attract as part of its industrialization strategy. Hence, FDIs that have been directed in South Africa might have limited or even a negative effect on economic growth because of weak linkages and spillover effects. In this case, the absorptive capacity will only have a limited role to play.

The study established a negative relationship between exchange rate and economic growth. Possible explanation for these results is that, South Africa's free-floating currency is constantly evolving in relation to factors like economic performance, political unrest and outlier events (for example COVID 19). These underpinnings would result in exchange rate volatility of the rand or even depreciation of the rand. There is so much risk attached to exchange rate volatility which affects the exporters negatively by discouraging cross boarder trading. Firms are discouraged to enter into the export markets because they do not want to risk their expected profits. The results are in line with studies by Akpan and Eweke (2017) and Mwinlaaru and Ofori (2017). Also, depreciation of the rand would hamper the growth of the economy. Theoretically, depreciation of the rand would make exports relatively cheaper and would result in increases in demand for exports which can be extended to economic growth. Empirically the demand and supply of exports and imports have proved inelastic and therefore, a depreciation in effect hinders growth. Thus, the South Reserve Bank should come-up with policies that will help to stabilise the South African Rand exchange rate vis-à-vis the major currencies of the world. This will boost the investors' confidence in the economy.

6.2.2 Major findings arising from the estimation of determinants of FDIs

In order to determine the determinants of FDI, a negative and statistically significant long-run relationship between trade openness and FDI was established. The results obtained suggest that the trade openness policy adopted in South Africa has on the average been detrimental to the attraction of foreign investors. Government expenditure has positive impact on FDI. The results showed that government

expenditure positively and significantly influences the flow of FDIs in South Africa. Thus, government spending promotes FDI inflows, which in turn promotes endogenous growth (for example, research and development, education and training). Hence, government spending should be directed towards productive economic activities to ensure continuous inflow of FDIs within the country.

Furthermore, the relationship between FDI and market size was significant, signalling a positive influence on economic growth. The results showed that an increase in the market size results to increases in FDI inflows because the firm would want to receive potentially higher returns on their capital. It implies that improvement of foreign direct investment depends upon the consideration given to market size, suggesting that market size is an important determinant of FDI inflows. The results suggest that policies that promote a fast-growing economy should be implemented in order to attract more foreign investors within the country.

The long run results also revealed that inflation is statistically significant and has a negative impact on foreign direct investments. The negative sign of INF variable supports the theoretical conclusion that inflation affects the country's economy negatively and a poor economy results in a decrease in FDI. Therefore, increases in inflation can cause FDIs to decrease, data confirms this. To keep inflation rate in check, South Africa introduced inflation targeting in the year 2000 and the South African Reserve Bank is tasked with keeping CPI between 3%-6%. While the key trading partners are around the 3%-mark, South Africa tends to ride higher at 6% and currently as of June 2022 the inflation rate is 7.4,% and is driven by the supply side. Thus, the South African Reserve Bank objective should be directed towards working the CPI down so that the economy would be financially stable and have less degree of uncertainty. Since investors tend to prefer economies that are financially stable and have less degree of uncertainty.

6.2.3 Major findings arising from the estimation of the VECM

In the long run, exchange rate and foreign direct investments are statistically significant. Foreign direct have a positive impact on economic growth, an increase in FDI results in an increase in GDP. This is compatible with theory because of the spill-over effect in technology, production and capital which causes FDI to increase economic growth. A negative long run relationship exists between exchange rate and LNGDP. An increase in exchange rate by 1% would lead to decreases in economic growth by 1.9%. in the short run, at 1% confidence level, the lagged error correction term ECT (- 1) is statistically significant, and it exhibits the expected negative sign (- 0.75). This shows that approximately 75% of the disequilibrium caused by previous years' shocks converges back to the long run equilibrium in the current year. Bahmani cited in Mwinlaaru and Ofori (2017) indicated that when establishing cointegration the error correction term is the most efficient way. Thus, the study detects that the variables in the model reveal evidence of reasonable response to equilibrium when there is a shock in the short-run.

The negative impact of exchange rate on economic growth is consistent with the long run results. A coefficient of -0.243 indicates that exchange rate is statistically significant at 1% significance level. This implies that a fall in exchange rate in the short run results in decreases in economic growth. The results imply that variations in the exchange rate affects the exporters negatively and economic growth by discouraging investors from undertaking trade and investments. In developing countries, fluctuations in the exchange rate can result in adjustment costs on the economy as resources keep shifting between tradable and non-tradable sectors. This might result in resources being shifted to the non-tradable sectors if investors stay in exports markets due to high exchange rate variability.

With a coefficient of (0.563) FDIs influence economic growth positively. The results suggest that an increase in FDI would lead to increases in economic growth at 5% significance level. The positive impact of FDI in South Africa indicates that the economy has benefited positively from spill over effects in the short run. This study is in line with the works of De Mello (1997) who indicated that FDI are an important

source of capital hence they influence economic growth and complements domestic private investments. Their study also noted that FDI creates employment opportunities and increase factor productivity through technological developments that assists increase in productive levels of local firms and transfer of knowledge and skills.

The vector error correction model results on the short-run and speed of adjustment shows that the coefficient of RGDP (-0.362) indicating that the speed of adjustment is approximately 36.2%. The implication is that, if there is a deviation from equilibrium, only 36.2% is corrected in one year as the variable moves towards restoring equilibrium. Thus, there is no strong pressure on RGDP to restore the equilibrium whenever there is a disturbance. A negative t value of (- 1.256) indicates that the speed of adjustment is statistically significant. Foreign direct investments have a positive effect on economic growth in the short run. This implies that the exogenous component of FDI exerts a reliable and positive impact on economic growth.

Using White test, the null hypothesis of no heteroscedasticity is accepted implying that the model can be relied on since it has no misspecifications. Normality tests using the Jarque–Bera test were performed. If the t-tastic value is not equal to zero, the computed Jarque-Bera p-value will be sufficiently low, the hypothesis that residuals are normally distributed is rejected. The results of the t-statistic p-value is close to zero, hence we accept the normality assumption. The Normality tests indicated that residuals were not normally distributed. Serial correlation test had a Langrage Multiplier statistic of 25.854 and probability of 0.689. Thus, the null hypothesis of no serial correlation is accepted because of high probability. In this study, it is concluded that the model is free from any econometric problems like serial correlation, heteroscedasticity, and multicollinearity. Thus, compelling conclusions can be made and policies can be formulated on the impact of FDIs on South Africa economic growth.

The IRF results showed that shocks to LNFDI have a positive impact to LNGDP in the short and long run. A standard deviation shock to foreign direct investments initially increases economic growth, declines sharply from period one to period two. Beyond period five there is a gradual increase and it remains in the positive region. Thus, shocks to foreign direct investments have a positive impact to economic growth both

in the short run and long run. A standard deviation shock to exchange rate, economic growth will start increasing from period zero to period one, decline at period two and then increase gradually to period three. From period four there is a gradual decline in economic growth and it reaches a stable state of decline from period seven upwards. Thus, in the short run economic growth will have a positive response to a shock in exchange rate and in the long run there is a negative response. The results are consistent with economic theory because FDIs contribute to the development of the host country economy by bringing in technology and improving relations with local companies that can assist in enhancing the growth of the economy.

The variance decomposition analysis results are compatible with economic theory. Shocks to the explanatory variables continued to explain a significant proportion of the variation in GDP. The analysis has shown that GDP was mainly driven by shocks in FDI, while exchange rate did not explain much of the variations. This is consistent with results from the IRF. Using the variance decomposition analysis it can be seen that FDI is an important variable in explaining economic growth in South Africa during the period under study.

6.2.4 Major findings arising from the interviews

When asked for the determinants of FDIs, the participants identified infrastructure development, political stability inflation, natural resources, trade openness, exchange rate and market size as the key determinants. When foreign investors are considering foreign direct investments, the participants concurred that they consider a number of macro factors, with infrastructure development and market size being the main contribution factors. This was consistent with the empirical results and the literature reviewed in Chapter Two. The participants conceded that South Africa has modern and highly advanced telecommunications, energy provision infrastructure, transport and technology compared to other neighbouring African countries. However, the maintenance of existing facilities (which is lacking in South Africa) and expansion of new economic infrastructures are important components of an investment reform strategies. In addition, large domestic market size stimulates economies of scale, whereas growing indicators improves the prospects of the market. Since the

participants were in agreement that a country's market size impacts the attraction of FDI inflows, it was concluded that consideration should be given to the growth of the economy. These factors also include policy decisions taken by the host country government because investors tend to worry of political and economic uncertainty. Recent political and economic uncertainty in South Africa has clouded investor sentiment.

The factors identified by the participants that impede FDIs in South Africa ,these include poor infrastructure, crime, social unrest, inflation, slow growth, lack of high-skilled labour force, corruption and lack of political stability. Most participants concurred that political stability, infrastructure, crime and social unrest are the main factors impeding foreign direct investments in South Africa. Furthermore, social unrest and the COVID-19 epidemic disrupted the South African economy significantly. The participants concurred that social unrest, as demonstrated by strikes and service delivery protests does affect foreign direct investments negatively. The COVID-19 epidemic mandated periods of work at-home, quarantines, social distancing, and banning of large gatherings, which also resulted in a significant reduction of economic activities. The pandemic impacted negatively the flow of FDIs across the world. The participants mentioned that COVID 19 had immediate effects on FDIs and the effects were expected to last long. Due to limited capacity to manage the crisis, developing countries like South Africa were negatively impacted.

In order to overcome some of the factors identified above, the participants highlighted important changes to the economy that would attract more foreign direct investors. Some of these changes include open markets, setting up an investment promotion agency, financial incentives, administrative processes and regulatory environment. The participants highlighted that South Africa should improve the labour force through education, trainings skills development. Most foreign investors prefer educated and skilled workforce. Furthermore, South African government should seek to reassure businesses that the local operating conditions are stable and transparent.

Having established the relationship through empirical analysis above, the researcher wanted to check if the empirical results were consistent with the interviews. The

participants did concede that FDI influences economic growth. According to the participants, South Africa has an open investment climate and foreign investments have played an important role in developing the economy. The country has undertaken substantial economic reforms to attract foreign investors. In addition, FDIs are considered as an engine for economic growth. For example, FDIs bring in new knowledge, human capital development and technological developments. The attributes gained by training and sharing experiences would increase the overall level of education and human capital development in South Africa. The participants suggest that a country with FDIs benefits greatly by developing its human resources whilst maintaining ownership. Thus, it can be concluded that the empirical results were consistent with the interview results. Both methodologies were in favour of FDIs being the key driver of the economy.

6.3 Recommendations and policy implications

Given the study findings, the researcher recommends that the South African government should strive to attract FDIs through sectors that are most linked by foreign investors since FDIs promote economic growth. This can be achieved by offering incentives to foreign investors who brings investments in the country. The government can attract FDIs in other sectors that are not favoured by foreign investors through the creation of good macroeconomic environment conditions, infrastructural developments and removal of trade barriers that impacts negatively on foreign investors. The latter will result in increases in exports of good produced locally, promote competition within which would lead to efficiency within the economy. Similarly, the South African Reserve Bank can be directed towards pursuing a loose monetary policy that promotes economic capital which boosts exports, economic growth and eventually FDIs. This is significant because the economy size is an important determinant of FDIs. Other strategies that can be implemented to increase FDIs include training and empowering of local employees with skills, implement measures that reduce high crime rates and stabilisation of the economy which tend to stabilise the volatile exchange rate.

The research established that sectorial FDI does influence economic growth; hence, FDI should be channeled to economic sectors that influence the economic growth greatly. The financial sector has been identified as the major recipient of FDIs in South Africa. This suggests the possibility of a shift in FDI motives from natural resource seeking to efficiency seeking FDI. This has been confirmed by the increases in the role played by the service sector in the attraction of more FDIs. Evidence in support of this presumption is shown by increases in mergers and acquisitions as opposed to green-field investment. Thus, FDI policies for the financial and services sectors should be targeted towards efficiency seeking FDI and government and policy makers should encourage more FDI injection to accelerate FDI driven economic growth. Furthermore, to promote diversity and increase FDI inflows, foreign investments should be directed to other sectors of the economy.

The policy implication of this study is important to policy makers, governance structures within the country and political actors. The study findings highlight the need to have governance structures that are proper and working efficiently in an attempt to attract more FDI inflows. Creating conducive environment for attracting FDI enables the country to improve economic development through the creation of markets for local raw materials, employment opportunities, infrastructure developments and the transferring of knowledge and skills to the key sectors of the economy. Furthermore, the government should implement policies that are tailored towards maintaining political stability to minimize several adjustments by foreign investors whenever there is a new political dispensation. For example, this would mean that during election periods there would not be unnecessary interference on the running of manufacturing companies by foreign investors as well as the attraction of new investors. Good governance enables simple tax regimes to be put in place at all levels of government eliminating delays in setting up foreign companies and largely eradicate corruption and bribery.

Foreign direct investment, as already pointed earlier, has an important role to play in the economy in terms of employment creation, and export expansion thus making it very essential in the economy. It is with this premise that the policy recommendation arose based on the study findings. Economic openness in the form of free market is vital. Economic policies allowing free investment and trade are key determinants of

FDI inflows. This means little directive regulation, particularly no control on currency exchange or on imports and exports. In this case, it is recommended that the government should adopt policies supporting international trade and try to remove tariff barriers on imported inputs. Domestic investment proves to have a very high explanatory power; this stresses the importance of adoption of policies that will stimulate domestic investment and improve infrastructure in South Africa. In fact, much resource has been channelled to loss making and inefficient parastatal at the expense of the right infrastructural investment required supplementing FDI, which have been under funded. This includes energy, water, transport and communication sectors which are crucial for economic growth. This has made foreign investors to invest in areas, which are not good enough to spearhead economic growth.

Furthermore, the study recommends that the government should consider implementing policies that maintain political stability and minimize the adjustments of strategies by foreign investors every time a new political dispensation takes place. This would mean that election cycles would not interfere unnecessarily on the running of companies owned by foreign investors and also the attraction of new investors. Good governance will enable fairly simple tax regimes to be put in place at all levels of government eliminating delays in setting up foreign companies and to some extent eradicate bribery and corruption which are high costs for investors.

Finally, the attraction of FDIs should be directed towards sources that are involved in the creation of jobs and uplifting of the South African economy. It is important for government to eradicate corruption within its departments and create environments that tends to promote or favour foreign investments. Thus, this study suggests that South Africa's capacity to grow and create employment opportunities depends on the country's performance to enhance GDP and the attraction of FDIs. However, the attraction of FDIs should not be seen as an end in itself, it should also be seen as a means of addressing socio-economic problems facing South Africa. The policy makers should have holistic policies in place that include equitable distribution of income, creation of sustainable jobs and reduction of poverty in South Africa.

6.4 Limitations of the study and areas of further research

This study delimited itself to the impact of FDIs on economic growth and FDI determinants. A study can be carried out to analyse how technological infrastructure development, monetary and fiscal policy and large debt burdens determines the attraction and growth of FDIs. Further research can be conducted using the study variables as the independent variables with governance systems both political and corporate as intervening variable to determine the effect this would have on growth of FDI inflows in South Africa. Further research can also be on the impact of market size, trade openness and governance on the growth of FDIs in other sectors like financial markets, tourism and mining.

Another implication of the study is the need to conduct sectoral studies. There has been conflicts and different views regarding determinants of FDIs on the host country, therefore, case studies and sectoral studies are recommended as an alternative method in analysing the determinants of FDIs.

Total FDI inflows were used to compute the model in this study. This phenomenon does not clearly differentiate the sectoral contribution to economic growth. This have an implication when implementing policies that are meant to attract FDIs that South Africa needs. In addition, the use of quarterly data would be more fitting in analysing the impact of FDIs on economic growth because data variables are computed at quarterly intervals and the data is more frequent. Nonetheless, annual data was used in this study to accommodate the unavailability of quarterly series data.

Future quantitative studies could further explore the role of foreign capital as a key determinant of FDI. It could be that the attraction of foreign investors within a country is because of developed infrastructure. This implies that the host country has reputable communication networks, legal services, transport and other public supported services. Companies commonly use these services thus; the presence of foreign investors could be a signal that such services are well established and they present opportunities for FDIS.

Furthermore, future research could consider using different periods rather than the period covered by this study. This study and other past research have considered the impact of FDI and its determinants throughout a certain period. However, it is possible that the direction of some variables will change from positive to negative or vice-versa later on.

Lastly, various studies on FDI revolve around the analysis of factors that affect it. Whereas the South African government have appreciated and adopted various macroeconomic reforms to promote foreign direct investment, little have been done to assess the effect and significance of these promotional programmes as a tool for attracting foreign investment flows. This area is therefore ripe for further research.

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APPENDIX A: ETHICAL CLEARANCE LETTER



MANAGEMENT SCIENCES: FACULTY RESEARCH ETHICS COMMITTEE (FREC)

8 November 2018

Student No: 21649368

FREC No: /18FREC

Dear Ms M Chibvongodze

DPHIL MANAGEMENT SCIENCES (BUSINESS ADMINISTRATION)

TITLE: FOREIGN DIRECT INVESTMENT AS A SOLUTION TO SOUTH AFRICA'S ECONOMIC GROWTH

Please be advised that the FREC Committee has reviewed your proposal and the following decision was made: **Ethical Level 2**

Date of FRC Approval: 10 October 2018

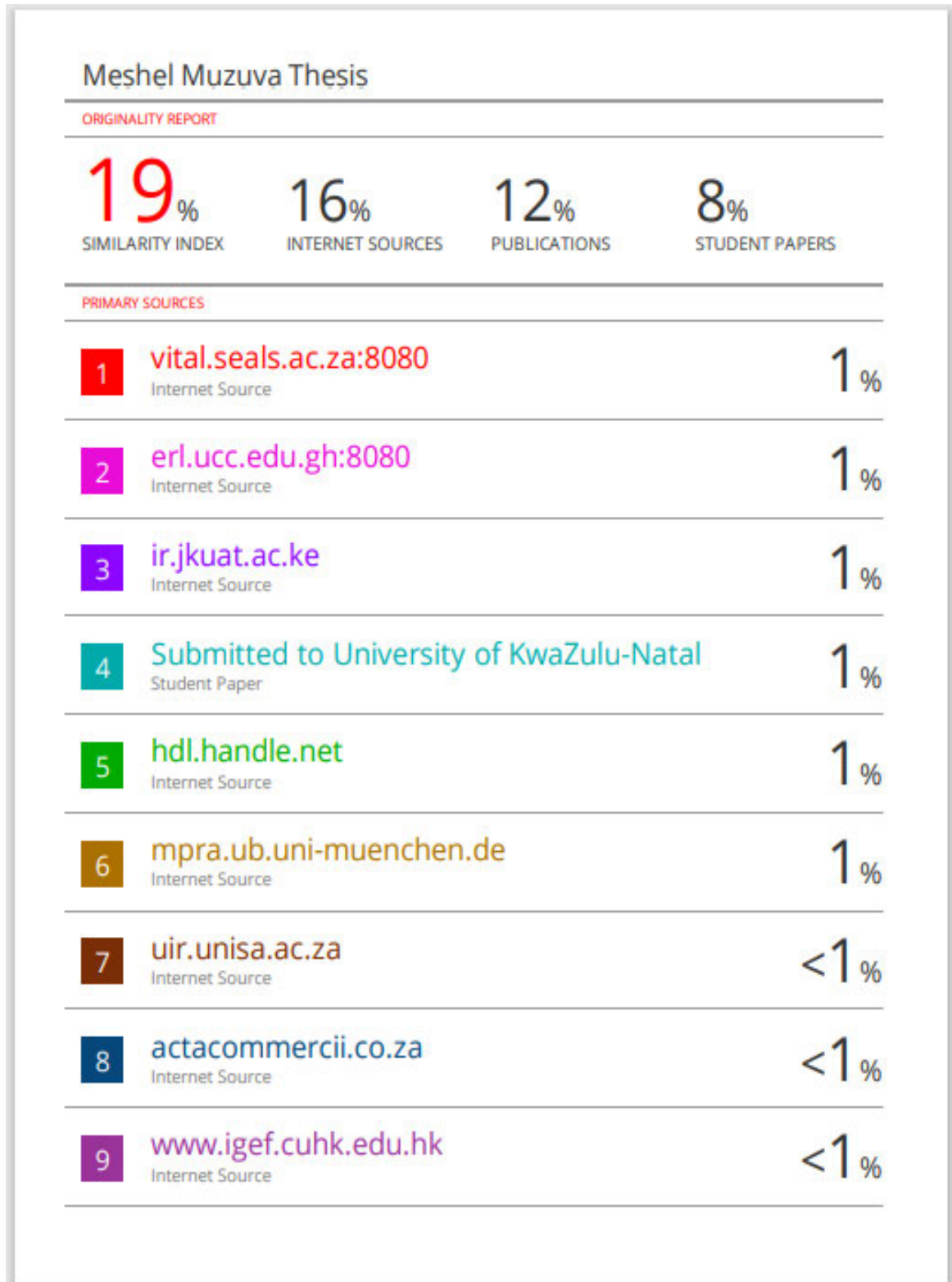
Approval has been granted for a period of two years, after which you are required to apply for safety monitoring and annual recertification. Please use the form located at the Faculty. This form must be submitted to the FREC at least 3 months before the ethics approval for the study expires.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the FREC according to the FREC SOP's. Please note that ANY amendments in the approved proposal require the approval of the FREC as outlined in the FREC SOP's.

Yours Sincerely

Prof JP Govender
Deputy Chairperson: FREC

APPENDIX B: TURN IT REPORT



APPENDIX C: EDITOR'S CERTIFICATE

WLSS0581-21003/02/0008


UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG

Certificate of Competence

DVC (Academic)
Wits Language School

This is to certify that
Rookmoney Maleni Thakur
from 06 September 2021 to 12 November 2021
has met the minimum requirements for competence in
Copy-editing and Proofreading
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Wits Language School
Johannesburg



 Wits Language School
Date of Issue: 06 December 2021

Registrar

Scanned with CamScanner

APPENDIX D: LETTER OF PERMISSION TO CONDUCT STUDY



Premier

Department:

Office of the Premier

PROVINCE OF KWAZULU-NATAL

DIRECTORATE:

Private Bag X9037, PIETERMARITZBURG, 3200 IGR
3rd floor, Moses Mabhida Building, Langalibalele Street, PIETERMARITZBURG,
3201

Letter of permission from Office of the Premier

25 November 2020

To whom it may concern

On behalf of the Office of the Premier, I am writing to formally indicate awareness of the research proposed by Mrs Meshel Muzuva, a student at Durban University of Technology. We are aware that Mrs Meshel Muzuva intends to conduct her research by administering her questionnaire.

I give Mrs M Muzuva permission to conduct her research in our company. If you have any questions or queries, please feel free to contact my office.

Yours Sincerely

Ms N Ndlovu

Senior Manager

Office of the Premier

Tel: 033 341 4829

Fax: 0862602826

Email: ntombifuthi@kznpremier.gov.za



Development Centre
South Africa

Ground & 4th Floors, Wembley Square 2
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3 December 2019

Authorisation letter

This letter serves as an authorisation letter for Mrs. Meshel Muzuva to conduct a research at Amazon.

The authorisation is for the following topic: **Foreign Direct Investments as a Solution to South Africa's Economic Growth.**

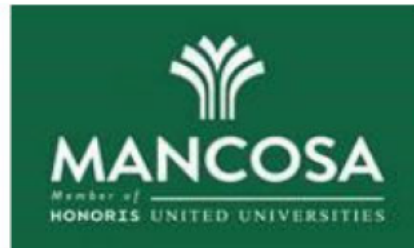
Please ensure that the information that will be provided to you will be treated with confidentiality and will not be used for any other purposes except for only this research.

All the best for your research.

Yours faithful,

Evelyn Escalante

Amazon Development Centre (South Africa) (Pty) Ltd
Registration number 2004/034463/07
Directors: J.A.G. Greenfield, A.M. Raichlin, M.H. Hoffman (US), K.H. Zumwalt (US)



26 Samora Machel
Durban
4001
South Africa
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12 April 2021

Dear Ms. Muzuva

RE: REQUEST FOR RESEARCH PERMISSION

This serves to inform you that MANCOSA is granting you authorization to conduct interviews with our senior economics academic in respect to your PHD research titled **“Foreign Direct Investments as a Solution to South Africa’s Economic Growth”**. This authorisation is granted on the understanding that the ethical standards of research will be adhered to you in this regard.

Yours Sincerely

Prof Kiveshni Naidoo
Director: Programme Management
MANCOSA

APPENDIX E: LETTER OF INFORMATION



Title of the Research Study: Foreign Direct Investments as a Solution to South Africa's Economic Growth.

Principal Researcher: Meshel Muzuva

Supervisor: Professor Balkaran

Co-Supervisor: Professor Rawjee

Brief Introduction and Purpose of the Study: You are invited to participate in a research study being conducted for a dissertation at Durban University Technology (DUT), South Africa. The purpose of this quantitative study is to understand why increased FDI has not led to increases in South Africa GDP.

Outline of the Procedures: You will be asked to complete the questionnaire drawn by the principal researcher (Meshel Muzuva) regarding the effects of FDI on the economic growth in developing countries especially South Africa. A total of five working days will be given to complete the questionnaire and you are expected to answer the questions with utmost honesty.

Risks or Discomforts to the Participant: There will be no potential risk or discomfort associated with this study. However, you may withdraw at any time or choose not to answer any question that may make you feel uncomfortable in answering.

Benefits: There will be no direct benefits of participating in this research. The results will provide scientific interest that may eventually have benefits for the citizens of South Africa and foreign investors and to the researcher it would be a publication of the research paper.

Reason/s why the Participant May Be Withdrawn from the Study: The participant may be withdrawn from the study if they are ill or non-compliant. However, there will be no adverse consequences for the participant should they choose to withdraw.

Remuneration: The participants will not receive any monetary or other types of remuneration.

Costs of the Study: The participant is not expected to cover any costs towards the study

Confidentiality: Confidentiality will be ensured in this study. The research will not disclose your personal information and the data collected will be used for the purpose of this research only.

Persons to Contact in the Event of Any Problems or Queries: Please contact the researcher (Meshel Muzuva on 083 3100 678), my supervisor (Professor Balkaran 031 373 5130) or the Institutional Research Ethics administrator on 031 373 2900. Complaints can be reported to the DVC: TIP, Prof F. Otieno on 031 373 2382 or dvctip@dut.ac.za.

General:

Potential participants must be assured that participation is voluntary and the approximate number of participants to be included should be disclosed. A copy of the information letter should be issued to participants. The information letter and consent form must be translated and provided in the primary spoken language of the research population e.g., isiZulu.

APPENDIX F: CONSENT FORM



Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, Meshel Muzuva, about the nature, conduct, benefits, and risks of this study
- I have also received, read, and understood the written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Full Name of Participant

Date

Signature/Right Thumbprint

I, Meshel Muzuva herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Meshel Muzuva

04/10/2021

Full Name of Researcher

Date

Signature

APPENDIX G: PARTICIPANTS LETTER OF INFORMATION



Faculty of Management Sciences
Department of Entrepreneurial Studies and Management
Date 04 October 2021

Dear Participant

Ref: Questionnaire for a Doctorate Research

I am writing to request permission to conduct a survey on one of the investment managers of your organization. I am a PhD student at the Durban University of Technology (DUT) and my thesis is entitled: **Foreign Direct Investments as a Solution to South Africa's Economic Growth.**

Kindly note that participation is voluntary, and the participant is free to withdraw at any time. I can guarantee that information collected will be used for academic purposes only and there are no risks associated with participation. Furthermore, all responses will be kept anonymous.

Participants will be provided with an informed consent form before completing the questionnaire. Please contact me at the email address below if you consent to this request. Should you have any questions or concerns regarding this letter or my research, please contact me, Meshel Muzuva. In addition, you may also contact my supervisor Professor Balkaran.

Yours faithfully

Meshel Muzuva

083 3100 678

Student

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Professor Balkaran

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Supervisor

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APPENDIX H: INTERVIEW QUESTIONS



There has been increasing inflows in foreign direct investment in South Africa. However, the country has not reciprocated with substantial increases in real Gross Domestic Product. Therefore, it is important to explore the main drivers of economic growth and establish whether foreign direct investment can be the solution for economic growth in South Africa. This questionnaire seeks collect information in practitioner opinions and views on the link between foreign direct investment and economic growth in South Africa.

The interview has two sections. Section A collects some general personal details of each practitioner. Section B collects information on practitioner knowledge and opinions on the link between foreign direct investment and economic growth. Kindly answer the questions below to the best of your knowledge.

Section A: Personal Details

1. What is your gender (*Tick the appropriate box* $\sqrt{\quad}$):

Male

Female

2. Age: Up to 25 26 – 35 36 – 45 46-55

56-65 66+

3. Educational qualification: Certificate Diploma Degree

Postgraduate

4. Name of company:

5. Position:

6. Number of years in this company:

Section B: General Questions

1. In your view what factors are the most important drivers for foreign direct investments in South Africa?

2. In your own opinion, what factors are impeding foreign direct investments in South Africa?

3. What impact, if any would social unrest, as demonstrated by strikes and service delivery protests have on foreign direct investment opportunities?

4. What are the effects of COVID-19 lockdown on foreign direct investments?

5. What are the three most important changes in the economy or in government policies that would attract more foreign investors? (rank as 1, 2, or 3 with 1 as the most important factor and provide explanation)
(1) _____
(2) _____
(3) _____

6. How does the presence of foreign investors in any developing country such as South Africa affect the economic growth of the country?

7. How can foreign direct investment be a valuable tool in enhancing South Africa economic growth?

8. In your own opinion, what are the challenges prohibiting South Africa economic growth?

9. What should the South African government do to promote economic growth?

Thank you for participating in this questionnaire