Re-visiting the FDI-led Growth Hypothesis for South Africa: The Role of Industrialization and Urbanization

Udi Joshua

Submitted to the
Institute of Graduate Studies and Research
in partial fulfillment of the requirements for the degree of

Master of Science
in
Economics

Eastern Mediterranean University
January 2019
Gazimağusa, North Cyprus

Approval of the Institute of Graduate Studies and Research

———————————————————
Assoc. Prof. Dr. Ali Hakan Ulusoy
Acting Director

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Science in Economics.

———————————————————
Prof. Dr. Mehmet Balcılar
Chair, Department of Economics

We certify that we have read this thesis and that in our opinion it is fully adequate in scope and quality as a thesis for the degree of Master of Science in Economics.

———————————————————
Assoc. Prof. Dr. Hasan Güngör
Supervisor

Examining Committee
———————————————————

1. Assoc. Prof. Dr. Çağay Coşkuner   ———————————————————

2. Assoc. Prof. Dr. Hasan Güngör   ———————————————————

3. Asst. Prof. Dr. Demet Beton Kalmaz ———————————————————

ABSTRACT

This study aims at investigating the FDI-led growth hypothesis in the case of South Africa using time series data spanning from 1970 to 2017. The empirical rout begin with the unit root tests using the traditional ADF, PP, and the confirmatory KPSS unit root test as well as the Zivot-Andrew unit root test which accounts for a single structural break. The overall result revealed a mixed order of integration between the series. Given the above outcome, the study employed the dynamic ARDL bounds testing to cointegration which reveals long run equilibrium between the variables of interest. The revelation from the study further proves that FDI inflow asserts a significance positive impact on economic growth both in the short and long run. The dynamic Granger causality test indicates a one-way interaction running from FDI inflow to economic growth which aligns with FDI-led growth hypothesis. In-view of the findings, this study therefore recommends that the South Africa government should shift her attention first, to expanding the absorptive capacity of the South African economy above the standard threshold; this will help in converting FDI inflow to South Africa to its full capacity which will in turn drive economic growth proportionately. Also, the study suggests the formulation of mechanism or measures that will help attract a diversify FDI inflow to other sectors of the economy such as manufacturing, agriculture with the aim of achieving training and technology transfer in other to harness the spillover effect of FDI inflow on the economy as a whole.

Keywords: Foreign Direct Investment, Economic Growth, Industrialization, Urbanization

ÖZ

Bu çalışma, Güney Afrika 'da doğrudan yabancı yatırım (DYY) kaynaklı büyüme hipotezini 1970'den 2017'ye zaman serisi verilerini kullanarak incelemeyi amaçlamaktadır. Ampirik çalışmada, geleneksel ADF, PP ve doğrulayıcı KPSS birim kök testlerinin yanında tek bir yapısal kırılmayı dikkate alan Zivot-Andrew birim kök testi kullanılmıştır. Birim kök testlerinin genel sonucunda, serilerin durağanlık derecelerinin karışık olduğu ortaya çıkmıştır. Bu sonuç çerçevesinde, çalışmada ilgili değişkenler arasında uzun dönem ilişkisini araştırmak için dinamik Otoregresif Dağıtılmış Gecikme Modeli (ARDL) kullanılmıştır. Elde edilen bulgular, DYY' nin hem kısa hem de uzun dönemde ekonomik büyüme üzerine pozitif etkisi olduğunu göstermiştir. DYY kaynaklı büyüme hipotezi doğrultusunda, Dinamik Granger nedensellik testi sonucuna göre DYY girişinden ekonomik büyümeye tek yönlü Granger nedensellik ilişkisi bulunmuştur. Ampirik bulgulara göre, bu çalışma, Güney Afrika hükümetinin önce Güney Afrika ekonomisinin emici kapasitesini standart eşiğin üstünde genişletmeye odaklanmasını önermektedir. Bu, Güney Afrika'da DYY girişinin tam kapasiteye dönüştürülmesine yardımcı olacaktır ve bunun sonucunda ekonomik büyüme sağlanmış olacaktır. Ayrıca, bu çalışma, DYY akışının ekonominin bütününe yayılma etkisinden yararlanmak için eğitim ve teknoloji transferini sağlamak amacıyla üretim, tarım gibi ekonominin diğer sektörlerine çeşitlendirilmiş bir DYY girişini çekmeye yardımcı olacak mekanizma veya önlemlerin oluşturulmasını önermektedir.

Anahtar Kelimeler: Doğrudan Yabancı Yatırım, Ekonomik Büyüme, Sanayileşme, Kentleşme.

I dedicate this work to God Almighty my king

ACKNOWLEDGEMENT

TABLE OF CONTENTS

LIST OF TABLE

LIST OF FIGURE

LIST OF ABBREVIATION

ADF   Augmented Dickey Fuller

ARDL   Autoregressive Distributive Lag

KPSS   Kiatkowski Phillip Schmidt and Schin

PP   Phillip Perron

RGDP   Real Gross Domestic Product

Chapter 1

INTRODUCTION

1.1 Background to the Study

Interdependency among two or more nations of the world especially for economic purpose is indispensable and foreign direct investment (FDI, hereafter) is a part of this interdependency. Most recently, the global rate of increase in FDI is relatively sharper than the progress recorded in economic growth and international trade Mehrara et al., (2017). This means that the subject matter of FDI is a global concern. In most cases FDI flows from the developed to developing nations especially in the form of technology, know-how, managerial skills. On the other hand, FDI can also flow from one developed to another developed nation depending on the actual investment prospect (needs) of the recipient country.

However, it is critical to point out early here that FDI inflow is not an automatic stabilizer as perceived by some people. Its stabilizing ability can be trigger largely by the absorptive capacity of the host country. If the recipient economy is able to meet at least the minimum thresholds, then FDI inflow would naturally drive economic growth even more proportionately in some cases. It therefore follow that FDI inflow can foster the course of development, otherwise undue the course of economic growth, depending on the type of the investment and its economic gain, as the impact of FDI inflow on economic growth is considered to be country-specific in several cases. According to Pandya and Sisombat, (2017) a permanent gain obtained through

1

venture operating outside of the investor's nation is a pure product of FDI investment.

More importantly, despite the long standing argument for protecting infant industry against foreign competitors and the perceived negative impact of FDI inflow from some quotas, it is proved empirically that FDI inflow is a key driver of economic progress of the recipient country. Many studies have lent their support to this empirical fact. For instance, Gungor and Katirlioglu, (2010) submitted that ''FDI inflow is capable to produce a lot of positive spillover effect and contribute to the development of local companies via various channels''. Besides, the fact still remains that FDI inflow help in reducing the unemployment rate of the host country by absorbing part of its labour force.

According to Lee, (2013) FDI inflow promotes capital formation and the transfers of new technology into the recipient country which tally with the work of Flora and Agrawa, (2014) and Mehic et al., (2017). They assert that FDI inflow is expected to be advantageous especially to the developing economies due to it spillover effect in promoting productivity, research development and improvement in technology among others.

In contrast, FDI inflow is view as an agent of underdevelopment. For instance, in most of the developing economies particularly, FDI inflows take the form of technology infusion to help harness natural resources, constructions, infrastructure equipment; providing training for human capacity development as closely support by the work of Claassen et al., (2011) and Carike, (2012). They submit that the Chinese outward FDI into African continent is attracted by key factor such as agriculture

land, market size, and oil. The perception here is that most times, FDI inflow, in these areas, takes the form of monopoly with an inherent exploitative drive because of the advance and superiority of the foreign company's technology over the local ones. These foreign companies often end up in displacing the local firms and their workforce, thus, adding to the menace of unemployment rate in the host country.

Another perceived bad effect of FDI over the years is that FDI seems to promote capital flight either directly or indirectly, as larger part if not all of their raw materials used are purchase from their home country's suppliers; in some cases, they even ship their finished products back to their home country, especially the efficiency-oriented FDI that are strategically cited in a location to exploit cheap labour and other factors to enable them operate at the minimum possible cost as supported by the work of Shahbaz and Rahman, (2011). They assert that the FDI-induced growth hypothesis seems to be a mirage since profits and resource transfer by the foreign companies to their home countries promote a crowding out effect on the host economies.

Moreover, the foreign company normally hijacks the larger share of the local market by way of efficient advertisement, superior branding and packaging their product as well as higher quality of their products. Many at times particularly in Africa, the citizens always prefer foreign company products than those of their local counterparts. The resultant effect is that the local firms and their raw materials suppliers do suffer low patronage which in turn leads to significant reduction in productivity and low profit margin.

However, it is imperative to know that a peaceful investment atmosphere (which could be economic or political) of the host country, couple with ready market for the finish products, efficient human capital, improved financial market, stability of the nation currency are paramount in determining the level of FDI inflow and its resultant influence on economic growth aligning with the work of Fukao and Wei (2008). They submit that the market size and labour cost are the determining factors for the inflow of FDI.

In South Africa (SA, hereafter) particularly, not until 1995, the FDI inflow into the country had been insignificant. But from 1995 till date, the country has enjoyed a sharp increment; though with fluctuation at some points, but at an increasing rate, compares to the previous periods (see Figure 1). The fairly peaceful political atmosphere witnessed in SA after the advent of democracy in 1994, is not unconnected with the large inflow of FDI into the country. More often, the country has been leading in the amount of FDI inflow into the sub-Saharan region particularly, and second highest recipient in the continent. For instance, in 2011, the FDI inflow into the sub-region of sub-Sahara increase by 25%, for which SA achieved the larger share as compared to her peers in the region, according to the World Investment Report by the UN Conference on Trade and Development (UNCTAD, 2012). The report further indicates that there was a sharp increment in the inflow of FDI into the region amounting from US$29.5- billions in 2010 to $36.6-billions in 2011, below the peak of $37.3 billion achieved in 2008 shortly before the global financial crises that set in.

The inflow of FDI into SA soared from $1.23-billion in 2010 to $5.81-billion in 2011, making the country the second largest FDI destination on the continent in 2011

after Nigeria, which achieved $8.92-billion in FDI. The numerical figure in the report shows that SA takes the share of 13.6% of the continent's total FDI inflow in 2011, which equate 31.8% of her national GDP, higher than 9.9% in 1995. This shows that the trend of inflow of FDI into South Africa have been on the increase since 1995, and by implication should induce economic growth significantly.

1.2 Statement of the Problem

The inflow of FDI to South Africa has been on the increase from 1995, according to World Investment Report by the UN Conference on Trade and Development (UNCTAD, 2012). This fact is further backed by the annual time series data extracted from the world development indicators (WDI, CD-ROM, 2018). According to the data, in 1995 FDI inflow to South Africa initially rose from US$0.268billions to US$0.803billions. Figure 1 below represents the inflow of FDI (% of RGDP) for SA from 1995-2017. Generally, the frequent fluctuations in the FDI inflow to South Africa is caused by either global crises such as fall in commodity price or financial/economic crises or internal crises such depreciation in South Africa Rand or otherwise.
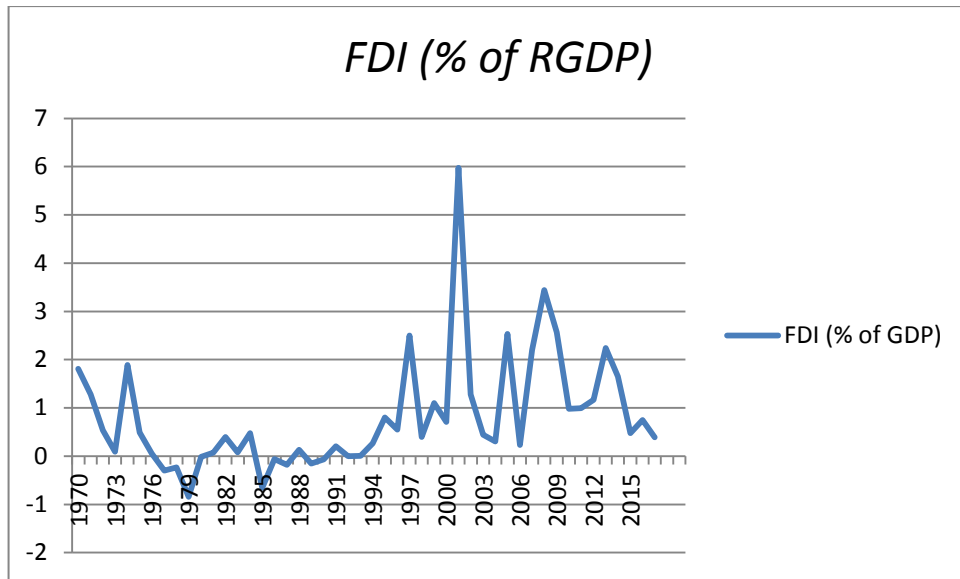
Figure 1: Trend of FDI Inflow into SA from 1970-2017

From the figure 1 above it can be observed that, the highest peak recorded in 2001 is connected with the sharp increase in international commodity price UNCTAD, (2012). Thus, between 2001 and 2002, FDI as a percentage of RGDP drop drastically from US$5.97billions to US$1.27billions respectively. This fall is linked to the depreciation of the South African Rand against the US Dollars (US$) by 37%; indicating a high risk atmosphere for investment, thus, scared away investors from the nation, which in turn led to capital flight. Ever since then, FDI inflow had not recovered from its lost highest peak recorded in 2001. Interestingly, the global commodities price boom experienced between 2006 and 2009 reactivated a significant inflow of FDI into SA beginning from 2006 (Wocke & Sing, 2013). The FDI inflow rises from US$0.23billions in 2006 to US$2.20billions in 2007.

Subsequently, FDI inflow into SA was significantly set in motion despite fluctuation at some points. However, in his panel study carried out on the countries in the Southern Africa region, Bezuidenhout, H. (2009) argues that commodity-specific form of FDI inflow could defile the absorptive capacity, thereby influencing

economic growth insignificantly or even negatively as the case may be. Therefore, since the FDI inflow to South Africa is also a commodity-specific one, the current study is motivated to investigate the validity of this claim particularly in the case of South Africa, considering the fact that there was an unprecedented increase of FDI inflow to SA as experienced from 2010 until now despite the short lived global recession witnessed in 2010 and 2011, which by implication should induce economic growth and therefore, the welfare of the citizens as dividend of economic growth through the multiplier effect.

However, it is pertinent to know that the rate of economic growth as proxies by RGDP still depicts a gloomy picture with a frequent fluctuation and had never achieve its desired peak as indicated in figure 2. The questions raising concern here are that, is it valid to assume that the unprecedented FDI inflow to SA did not promote economic growth proportionately? Or does the nation lack the absorptive capacity to covert the inflow of FDI into the desired growth as noted by Bezuidenhout, (2009) above? Therefore, this study seeks to address these two fundamental questions.

Furthermore, it is imperative to mention that the conditions of the local industries of the host country are sensitive in attracting FDI inflow as supported by the work of Nunnenkamp and Spatz, (2003). Singh and Jun, (1999) also submitted that manufacturing export (manufacturing industry) are responsible for the large inflow of FDI to the highest recipient regions of the world. Similarly, urban characteristics such as infrastructure development, the seat of government (decision making), and industry zone could act as agents of attracting FDI inflow as supported by the work of Guimaraes et al., (2000) and Nielsen et al., (2017). They argue that urban

agglomeration has a higher chance and/or potential to attract inflow of new investments packages. Again on these basis that the current study aim to examine the FDI- led growth hypothesis by controlling industrialization and urbanization as additional variables which makes it distinct in terms of scope in the case of South Africa to the best of author's knowledge (See Sunde, 2017; Khobai, et al., 2017, Tshepo, 2014). The expectation here is that the combination of FDI inflow, industrialization and urbanization in a linear econometric model should drive economic growth appropriately.

Therefore, the study aim to bridge the aforementioned claims by also using the most recent data extracted from World Bank data base to examine the short-long run interaction between FDI and economic growth in SA thus adding knowledge to the existing body of knowledge. Also, the current study seeks to examine the flow of causality between the variables under consideration. This study is not only timely but relevant especially for the case study given her economic dynamics, as empirical outcome can serves as blueprint for the rest of the countries in the sub-Saharan Africa as well as the continent and policy guide for government administrators who formulate and design policies.

1.3 Objective of the Study

The main concern of this study is to examining the impact of FDI on economic growth for South Africa, bearing in mind the following salient research questions:

1. Does the unprecedented increment of FDI inflow exhibit positive impact on economic growth?

2. Is the FDI-led growth hypothesis a reality or a mirage in the case of South Africa?

3. What is the causal link between economic growth, FDI, Trade Openness, industrialization and Urbanization?

4. Is there long run interaction between economic growth, FDI, Trade Openness, industrialization and Urbanization?

1.4 Organizational Structure

This research work is divided into six chapters. The first chapter comprises the introduction, background of the study, statement of the problem, the objectives of the study, and organizational structure. Chapter two covers the literature review. It provides the empirical review, theoretical and conceptual framework of the nexus between FDI inflow and economic growth.

Next is chapter three which entails the overview of the South Africa Economy and FDI inflow into the country. Chapter four mainly dwells on methodology which deals with the nature and method of data collection/analysis. The chapter five focuses on the presentation and analysis of the empirical findings, while chapter six consists of the summary, conclusion and the policy recommendation from the current study.

Chapter 2

LITERATURE REVIEW

2.1 Theoretical Framework

There are several theories underpinning FDI-led growth hypothesis, but prominent among them are the modernization and the dependency theories upon which this study stand.

Modernization theory assumes that growth process is endogenous and that human capital development and technological advancement play key role in achieving economic growth. Pradhan and Kumar, (2002) and Liu, (2005) point out that FDI flows in along with benefits such as human capital development, market opportunities and knowledge, beside capital and technology. Li and Borensztein et al., (1998) opine that the technological impact of FDI inflow drives economic growth in a larger proportion than domestic investment.

Dependency theory in contrast asserts that FDI inflow influence economic growth negatively due to the exploitative nature of the interaction between the developed nations with the developing economies. They aimed at keeping the developing nations stagnant to avoid what they presumed as competition. According to Chan and Clark, (1996) the creditor nations often overburden the recipient nations through unfriendly terms of loans which often results to debt overhang from the accumulation of the principals and the interest charged. The multinational companies (efficiency-

FDI) on the other hand, often take advantage of exploiting the cheap labor in the name of providing employment opportunities in quote. They also exploit the raw materials that are offered in the developing economies, thereby influencing the developing economies to depend on them perpetually. Adams S., (2009) asserts that FDI causes capital flight through the crowding out effect on domestic investment.

2.2 Conceptual Framework for FDI and Economic Growth

Foreign Direct Investment

According to Pandya and Sisombat, (2017) a permanent gain obtained from venture operating outside of the investor's economy is a direct product of FDI investment. Generally, foreign direct investment is categorized into inward and out word FDI, and/or Horizontal and Vertical FDI.

Inward and Outward FDI: According Matjekana, (2002) when a foreign resource is invested in domestic capital stock, it is refers to as inward FDI and vice versa. According to Herzer and Nunnenkam (2013) both inward and outward FDI stimulate income inequality negatively in the long run in Europe. Herzer (2008) study outward FDI and found that FDI is a positive influencer of economic growth in the case of US, while in the case of Germany the positive effect of FDI is only evident in the short run. Lee (2010)'s findings prove that outward FDI have a one way positive link with economic growth in the long run in the case of Japan. Alguacil et at., (2011), examines the inward FDI and conclude that the influence of FDI on economic growth is more pronounce in the developing economies than in the developed world.

Horizontal and Vertical FDI; Fedderke and Romm (2006) described horizontal FDI as a perfect characteristic of a multinational corporation (MNCs) that have their

headquarters locally based and have production subsidiaries both at home and abroad that produce the same goods. On the other hand, they define vertical FDI as investment in which MNCs apportion different stages of production by having their headquarters in their home country and production plants in different foreign countries. The study of Kinda (2013) shows that vertical FDI is prone to inefficient human capital and financial inadequacy than horizontal FDI, while horizontal FDI on the other hand suffers more in the face of inadequate infrastructure and weak institutions. Fukao and Wei (2008) submit that the inflow of FDI is determined by two major factors; market size which influences the horizontal FDI, while labor cost is responsible for the inflow of vertical FDI. Stancik (2007) study both vertical and horizontal spillover of FDI and found that the domestic firms are adversely affected by their foreign counterparts that are resident in their home country.

Economic growth is best described as an increase in the national productivity or gross domestic products. It can be viewed as when the production possibility curve of an economy shift, and is evident when the total output or real GDP of a country increases which either directly or indirectly dependent on the economic activities of other countries, particularly her trading partners. Abdouli and Hammami, (2015) argues that economic growth indicates an increase in the nation productivity which if equally distributed will lead to an improvement in the living standard of the citizens of a country. They further maintain that economic growth help drive employment rate and tax revenue in the same direction. Barro, (1996) submit that, given starting level of real per capita GDP, the rate of economic growth is influenced by fertility, lower government expenditure, favorable terms of trade, increase early schooling and life expectancy, better legal system and lower inflation. According to Haller, (2012) the size or quantitative increase in the GDP, GNI and national income (NI) measured

12

by change in per capital income are pointers of the level of economic growth of country.

2.3 Empirical Literature Review

The debate on FDI-led growth nexus is a long standing one. There have been mixed revelations from the previous studies as to whether FDI-led growth model is a reality or a delusion. Some studies lend their support to the FDI-led growth hypothesis, while others questioned the potency of the said hypothesis.

In an attempt to support the FDI-led growth argument, the work of Gungor and Katircioglu (2010) speaks volume. Their study reveals that FDI inflow and financial development interact positively and mutually with economic growth in Turkey. To them FDI inflow and an improving financial development will help drive economic growth in the same direction. The work of Borensztein et al., (1998) revealed that the impact of FDI inflow on the host economy is positive but not automatic. They conclude that the self-absorptive capacity of the host country is responsible to trigger the efficacy of FDI inflow which will in turn promote economic growth.

Again the study of Gungor, et al., (2014) findings backs the FDI-led growth model. Their findings, indicates that in the long run the determinants of Turkey's economic growth are FDI and financial development. Conclusively, the study submits that FDI and financial development exert positive influence on economic growth in a significant way. Gungor and Rigim (2017) investigate the linkage between FDI inflow, domestic investment, and economic growth in the case of Nigeria, and found a result that confirms the FDI-led growth hypothesis. Their findings confirm the

potency of FDI inflow in stimulating economic growth in Nigeria, as the one way causality runs from FDI inflow to economic growth.

Sunde, (2017) investigates the relationship between FDI inflow, export and economic growth, a causality analysis for South Africa. The result shows a long run relationship between economic growth, FDI inflow and export, and that both FDI inflow and export are influencers of economic growth. The study further revealed that there exist a one way causal interaction between economic growth and FDI inflow, as well as between FDI inflow and export, both running from FDI inflow, and a feedback link between economic growth and export. Tshepo, (2014) submitted that the long term relationship that exists between economic growth, FDI, and employment in South Africa was a concrete one, and that economic growth and employment are induced by FDI, thus, a unidirectional link which run from FDI inflow to each of economic growth and employment.

The findings of Nistor, (2014) confirmed the link between FDI inflow and economic growth in Romania, and that the inflow of FDI to Romania induces economic growth in a positive direction. Abbes et al., (2015), examine the relationship between FDI inflow and economic growth in 65 countries using co-integration and panel granger causality test in panel data. The overall result shows that FDI inflow is an active agent in determining the economic advancement in the countries under investigation; and that only FDI inflow causes economic growth.

After a thorough review of the previous empirical studies on the subject matter at hand from 1994 up to 2012, Almfraji and Almsafir, (2014) found an overall result indicating that FDI is a key factor in determining economic growth, with a few cases

submitting that the impact of FDI inflow on growth is either negative or uncertain. However, the study further revealed that efficient human capital, a well improved financial market, and trade openness regime are essential factors that needed to be put in place in order to set the FDI-led growth on motion.

Omr and Kahoulib, (2013) carry out a study using a panel data for 65 countries which was classified into three level of income; namely high, middle and low income level. For the high income level, the findings indicate that economic growth and FDI inflow causes each other in a two way direction. For the middle income countries, the study discovered that economic growth drives energy consumption and vice versa, the same is applicable to economic growth and FDI inflows, while a one way causal effect exists between FDI inflow and energy consumption. The case of the low income level revealed that economic growth and FDI inflows cause a mutual interaction, while only economic growth drives energy consumption, as does energy consumption to FDI inflows. In general, the findings confirmed the FDI-led growth hypothesis. Adams, (2009) findings shows a positive and significant interaction between domestic investment and economic growth in both of the OLS and fixed effect estimation, whereas FDI inflow is positively significant only in the OLS estimation. Findings further show that FDI inflow exerts negative influence on domestic investment in the short run, but turned out to be positive over a long period.

The study of Srinivasan et al., (2011) found that mutual causality between FDI inflow and Economic growth in the long run for the SAARC countries, with the exception of India, where growth drives FDI inflow towards one way. The study of Lee, (2013) found that FDI inflow is a key influence of economic growth in G20

nations validating the work of Shahbaz and Rahman, (2013), Herzer (2008), Kumar, (2002) and Liu, (2005) and Li and Borensztein et al., (1998).

The study of Abdouli and Hammami, (2017) shows a country-specific influence of FDI-induced growth within the MENA countries. Their findings reveal a positive interaction between FDI inflow and economic growth in the region with the exception of Egypt and Lebanon which reveals negative relationship. Flora and Agrawa (2014) submit that FDI inflow and economic growth drive one another mutually. Pandya and Sisombat, (2017) findings reveal that FDI inflow spur economic growth in Australia, closely supported by the wok of Mehic et al., (2013). The work of Claassen et al., (2011) and Carike, (2012) reveal a feedback interaction between FDI inflow and economic growth, implying that FDI and economic growth exhibit mutual influence on each other.

On the other hand some studies have lent their critics against the FDI-led growth hypothesis. For instance, Bezuidenhout,(2009) findings show that FDI influence on economic growth seems to be a fallacy in the case of southern Africa region. Stancik (2007) study both vertical and horizontal spillover of FDI and found that the domestic firms are adversely affected by their foreign counterparts that are resident in their home country affirming the work of Adams S., (2009) and Clark, (1996).

The study of Goh et al., (2017) found an overall result which revealed that FDI inflow and export does not in any way induce economic growth in the Asian economies under investigation in the long run. The study further reveals that only in the short run that both FDI and export stimulate economic growth in most of the

economies, like Hong Kong and Japan. While the likes of China and Thailand economies, export promotion is a key component of economic growth.

The work of Mah, (2010) revealed that FDI does not in any way exerts impact on the growth rate of China. Instead, he found a one way link which run from economic growth to FDI. The findings of Khobai et al., (2017) reveal that the positive impact of FDI on growth is uncertain and inconsistent.

Chapter 3

AN OVERVIEW OF SOUTH AFRICAN ECONOMY

South Africa is a heterogeneous country that consists of a mixture of white minority and black majority co-existing together. Over the years, the trends of unhealthy events such as political struggle, racism, crime rate and the quest especially for the emancipation of black community who seems to be marginalized have cause more than havoc on the nation economy.

In addition, the international sanction place on the nation between 1960s and the beginning of 1990s virtually disconnected her from the rest of the world. Thus, investors were scared away which plough the nation into capital flight. This further cripples the drive to achieve economic growth.   However, despite the frequent political disturbances, South Africa is ranked the largest emerging economy in the continent housing about 75% of the biggest African companies. In addition, South Africa is known as a leader in stock exchange in the continent as well as 20th top in the world at large. Natural resources contribute the larger share to the South African economy particularly the four major exports (coal, gold, iron ore, platinum) which remains the key driver of the economic growth till date.

The South African economic growth process was stimulated significantly after the discovery of natural resources such as Diamond and Gold in 1887 and 1886 respectively. The country grew richer in natural resources as more natural resources

like antinomy, copper, coal, iron ore, uranium, natural gas etc were later discovered in a significant quantities.

More importantly, in 1994, after the advent of democracy, the economic growth of SA shows an upward trending, though interrupted during the financial crises that looms the nation in a later period. However, some of the noticeable factors militating against the path of economic growth of South Africa are unemployment, poverty, inequality which lead to increase in crime rate, illiteracy etc. The gap of these factors further widened when the policy of apartheid was instituted in 1984 to the disadvantage of the majority blacks thereby, placing SA among the top countries of the world that are confronted with these menace. Poor electricity supply, high rate of inflation couple with structural constraints such as insufficient skill, frequent industrial action by workers, and global financial crises at some points which has direct impact on the nation exports, volatility of the national currency, and general economic instability promote the slow pace in the rate of growth over the years. For instance, between 2001 and 2002, the SA Rand depreciated against the US$ by 37% which scared away investors, thereby leading to capital flight. Consequently, the GDP growth rate equally drops drastically in the preceding year from 3% in 2002 to 1.9% in 2003.

Interestingly, the global commodity price boom experienced from 2006 (Wocke & Sing, 2013) attracted more investors to SA, thus the economy picks up again significantly. The GDP started rising from 2005 which recorded 4.9% and rose to 5% and 5.1% in 2006 and 2007 respectively.

In recent years, particularly from 2011, the GDP growth rate keeps falling continuously and never rises again till date. The global fall in the general price of commodity in 2015 affect SA four major exports of coal, platinum, iron ore and gold which in turn cause a short fall in the revenue base of the nation. This could be one of the major factors responsible for the slowdown in the GDP rate of growth. Similarly, the short fall in the country revenue base between 2015 and 2016 could be the stimulant behind the government decision to borrow more, thereby increasing the total budget deficit with expectant to rise to 4.3% in 2017. Inversely, the recent rise in the export price towards the end of 2016 into 2017 causes the national currency (Rand) to appreciate during the same period, indicating a promising future for the nation. In the most recent year 2017, the GDP growth rates were estimated at 0.7%, while unemployment stood roughly at 27% of the workforce.

Table 1: SA Major Economic Indicators

Major Indicators	2015	2016	2017	2018 (e)	2019 (e)
GDP (Constant Price, annual % change)	1.3	0.3	0.7	1.1	1.6
GDP (billions USD)	317.57	294.90	344.06	261.16	374.26
GDP per capital (USD)	5,800	5,302	6,089(e)	6,292	6,418
Total government Bal. as % of GDP	-3.9	-3.6	-3.4 (e)	-3-4	-3.4
Consolidated public Debt as % of GDP	49.3	51.7	53.0	55.6	57.1

Inflation Rate %	4.6	6.3	5	5.3	5.5
Unemployment Rate as % of the workforce	25.4	26.7	28	28.3	28.5
Current Account as % of GDP	-4.4	-3.3	-2.9	-3.3	-3.6

Source: Author Computation, 2018 Note: (e) Represents Estimated Values

Table 1 above depicts the SA major economic indicators and their performance over the recent years from 2015 forward. A glance at the table revealed that the rate of unemployment as percentage of workforce recorded 28% placing SA as the 17th top in the world and 8th in Africa. The total government balance as percentage of GDP is always showing negative, implying that the government have been spending more than its revenue generated over the years, thus, the shortfall is always been financed by borrowing resulting to an increase in the debt stock of the country.
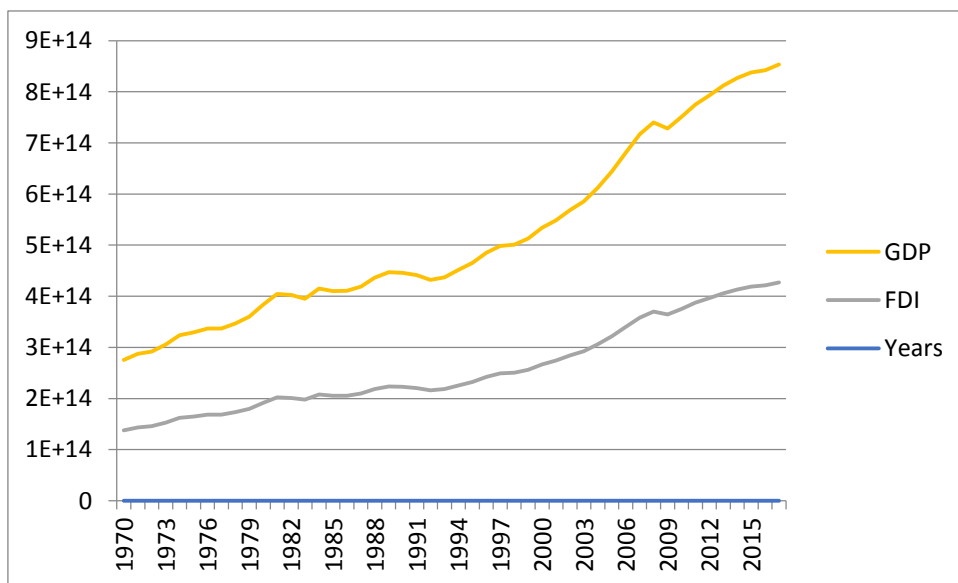
Figure 2: Trends of FDI and RGDP in SA from 1970-201

3.1 FDI inflow to South Africa

South Africa is the gateway to the amount of FDI inflow into the sub-Saharan region particularly, and the second highest recipient in the continent. For instance, South Africa takes the biggest share of the 25% of the FDI inflow into the sub-region in 2011, according to the World Investment Report by the UN Conference on Trade and Development (UNCTAD, 2012). The report, further indicate that in 2008, the sub-region recorded FDI inflow at a peak of $37.3 billion which preceded the global financial crises.

Despite the fall from the peak recorded earlier, the region still achieved another sharp increment in the inflow of FDI into the region amounting from US$29.5- billions in 2010 to $36.6-billions in 2011. The inflow of FDI into SA particularly, soared from $1.23-billion in 2010 to $5.81-billion in 2011, making the country the second largest FDI destination on the continent in 2011 after Nigeria, which achieved $8.92-billion in FDI. In 2011, 13.6% share of the total FDI inflow into the continent goes to South Africa equivalent to the 31.8% of her national GDP comparatively larger than 9.9% recorded in 1995.

Summarily, most of the South Africa FDI stocks flow from the following countries; 87% from UK countries, 6% from Germany, Asia contributes 2.3%, while 4% flows from the developing countries generally, (UNCTAD, 2013). However, Bezuidenhout, H. (2009) reports that commodity-specific form of FDI inflow as with the case of Southern Africa region could defile the absorptive capacity, thereby influencing economic growth insignificantly or even negatively as the case may be.

Chapter 4

METHODOLOGY AND DATA

4.1 Data Source

This study leverages on annual time series data ranging from 1970- 2017 for econometrics analysis to validate the objectives of the study. Data used are extracted from the World Bank development indicators (WDI, CD-ROM, 2018). The variables of interest includes RGDP as a proxy for economic growth (constant 2010, US$), foreign direct investment (FDI) as net inflow (% of RGDP), trade openness (TO) represent Trade as percentage of RGDP, industrialization (INDTR) represent industry; including constructions, value added (constant 2010 US$), and urbanization (URB) represent urban population as percentage of the total population. In order to obtain growth effect, the study further transformed all series into natural logarithm form.

4.2 Stationary Tests

Time series data are always subjected to stationarity test because most of the times, they are nonstationary in nature (Gujarati, 2009). The empirical route follows first to carry out stationarity tests to ascertain the maximum order of integration of the series in an attempt to avoid spurious regression. This study therefore employs the widely known ADF, PP, and a confirmatory test of KPSS for stationarity tests. For the sake of precision, the study went further to apply the Zivot-Andrew test which account for a single structural break to determine the stationarity of the series in view.

Augmented Dickey-Fuller (ADF) Test

The Augmented Dickey-Fuller test as developed by Dickey and Fuller (1981) is the modified version of the traditional dickey-Fuller test which account for the shortcoming of the later. One of the advantages of the ADF over DF model is that it consider the tendency of correlation in the error term, thus making adjustment for unit root test in a situation where e_t is not the white noise. Secondly, higher order auto regressive process is captured by the ADF test, (Greene, 2003).

ADF Equation:

$$\Delta Z_t = \alpha_1 + \alpha_2 t + \lambda Z_{t-1} + \sum_{i=1}^{n} \beta_i \Delta Z_{t-i} + e_t \tag{1}$$

With,

$$\beta_i = -\sum_{k=i+1}^{s} \lambda k \quad \text{and} \quad \lambda = \left(\sum_{i=1}^{s} \lambda_i \right) - 1$$

Where e_t signifies pure white noise disturbance term and $\Delta Z_{t-1} = (Z_{t-1} - Z_{t-2})$, t is the time and α stands for the intercept.

We decide the empirical number of lagged difference in an attempt to control the problem of serial correlation and to obtain an unbias estimate of λ. The general model of ADF can be tested with trend and drift, or only trend and also with neither trend nor intercept (none). The null hypothesis in ADF test is H_0: $\lambda = 0$ indicating that the series has unit root, and the alternative hypothesis H_1: $\lambda < 0$ implying that series is stationary.

Phillips-Perron Test (PP)

This technique; a none parametric method was developed by Phillip (1987) and Perron (1988) for testing stationarity of variables capture in econometric model as an alternative to ADF. It help in controlling higher order correlation in a series, and to ascertain the process of generating PACF and a simple first order of autoregressive model, AR (1). It uses the general newey-west method in calculating the residual variance.

The equation is stated below:

$$\omega_n = \frac{1}{T} \sum_{s=n+1}^{T} \ell_t \ell_{t-s} \qquad n = 0 \ldots\ldots p = n^{\text{th}} \text{ auto covariance of residuals}$$

$$\omega_0 = \left[(T-N)/T\right]s^2 \qquad where \qquad s^2 = \frac{\sum_{t=1}^{T} \ell_t^2}{T-N}$$

$$\varphi = \omega_0 + 2 \sum_{P=i+1}^{n} \left(1 - \frac{P}{n+1}\right)\omega_P \tag{2}$$

Where n represents the restricted lag form for estimating the PP test statistic and ω_P is the correlation coefficient of changes in residuals. Both ADF and PP are employed to determine whether the variables of interest exhibit random walk or pure walk in order to avoid spurious regression which is a serious problem in econometric modeling. The variable of interest is classified to be stationary if the null hypothesis which indicates non-stationarity is rejected at level; otherwise the variable will be subjected to the first differencing form which is expected to be stable. In unit root test, any variable that is not stationary at first difference cannot be included in the model.

Kwiatkowski Phillips Schmidt and Shin's Test

The KPSS as developed by Kwiatkowski et al., (1992) is widely known as a confirmatory test was employed to validate the results of ADF and PP test. The KPSS hypothesis tests are the direct inverse of ADF and PP, where the null hypothesis (H_0) states that the series is stationary, while the alternative hypothesis (H_1) states non stationarity. The stationarity of the series is tested using the Lagrange multiplier (LM) statistic as stated below:

$$Z_t = \rho t + r_t + \eta_t;$$

Where t = (1, 2),....,t which represents observed series of Z_t. r_t depicts the random walk that was computed by "$r_{t-1} + v_t$" . To accept the null hypothesis, the error term variance of the random walk σ_v^2 is expected to be (0) zero (Kwiatkowski et al. 1992). Therefore, LM estimate is obtained as follows:

$$LM = \frac{\sum_{t=1}^{T} S_t^2}{\sigma_\mu^2} \qquad (3)$$

The partial sum of the residual process is depicted by S, given below

$$S_t = \sum_{i=1}^{t} e_t$$

The KPSS unit root test can be estimated with trend and intercept model or only trend model. In the same light PP unit root tests and ADF unit root test is given below:

$$Z_t = \beta_0 + \varepsilon t + P\sum_{i=1}^{n} \xi_i + \eta_t \qquad (4)$$

Zivot-Andrew Test

Zivot- Andrews (ZA) unit root test accounts for a single structural break, and it comprises of three models as stated below:

$$\text{Model A}: \Delta Z_t = \beta_1 + \phi Z_{t-1} + \varphi DU_t + \sum_{i=0}^{n} \gamma_i \Delta Z_{t-i} + \mu_t \tag{5}$$

$$\text{Model B}: \Delta Z_t = \beta_2 t + \phi Z_{t-1} + \varphi DU_t + \sum_{i=0}^{n} \gamma_i \Delta Z_{t-i} + \mu_t \tag{6}$$

$$\text{Model C}: \Delta Z_t = \beta_1 + \beta_2 t + \phi Z_{t-1} + \varphi DU_t + \sum_{i=0}^{n} \gamma_i \Delta Z_{t-i} + \mu_t \tag{7}$$

It follow empirically that the dummy variable DU_t shows the shift that occurs at each point where the break happens either at (intercept, trend or both intercept and trend). The null hypothesis here is such that $H0: \phi > 0$ against the alternative stationarity $H1: \phi < 0$ that is, rejection of H_0 implies stationarity while failure to reject H_0 means the alternative.

4.3 ARDL Bounds Testing

Generally, most macroeconomic series are not stationary at their level form because they tend to trend up or/and down at different seasons relative to economic events, hence the need to carry out cointegration test to determine the long run relationship between the variables of interest. Therefore, the ARDL bounds tests are used for two purposes; as an alternative for OLS method and for cointegration testing simultaneously.

There are several methods for cointegration test such as the Engle-Granger (1987) techniques which is accepted to be inferior to Johansen test. However, the dynamic ARDL bounds testing approach to cointegration is generally accepted to be more superior and/or advantageous to the traditional methods. Empirically, when all variables are in mutual order of integration they are classified as either I(1) or I(0), while different order of cointegration represent I(1)/I(0). ARDL bounds testing are relatively more suitable for analysis in any of the cases described above because of

its flexibility and dynamic nature. It helps to determine whether or not the variables of interest converge in the long run indicating the elimination of the short run disequilibrium. The following ARDL model is then adopted to estimate equation (10).

$$\ln RGDP_t = \beta_0 + \beta_1 \ln GDP_{t-1} + \beta_2 \ln FDI_{t-1} + \beta_3 \ln TO_{t-1} + \beta_4 \ln INDTR_{t-1} + \beta_5 \ln URB_{t-1}$$
$$+ \sum_{i=1}^{n} Q_1 \Delta \ln GDP_{t-1} + \sum_{i=1}^{n} Q_2 \Delta \ln FDI_{t-1} + \sum_{i=1}^{n} Q_3 \Delta \ln TO_{t-1} + \sum_{i=1}^{n} Q_4 \Delta \ln INDTR_{t-1} + \sum_{i=1}^{n} Q_5 \Delta \ln URB_{t-1} + ECM_{t-1} + \varepsilon_t$$

(8)

Where Δ is the difference operator, and ε_t is the serially independent random error with a mean zero, ECM_{t-1} is the first lag of the residual obtained from the long run equation.

In conclusion, this study applied the F-test approach to examine a single long-term relationship in equation (8) as proposed by pesaran et al. (2001), where the null hypothesis is represented by $H_0: \varphi_1 = \varphi_2 = \ldots = \varphi_{n+2} = 0$, while the alternative hypothesis is represented by $H_1: \varphi_1 \neq \varphi_2 \neq \ldots \neq \varphi_{n+2} \neq 0$.

Model Specification and variables

The analysis of the Nexus between FDI inflow and economic growth is carried out with four regressors which include FDI inflow, Trade openness, industrialization and urbanization. These variables explain the change in the RGDP as the dependent variable. The data for the variables are obtained from the World Bank development indicators spanning from 1970 to 2017. The function that expresses the interaction between the dependent and the independent variables is stated below:

RGDP = f(FDI, TO, INDTR, URB) (9)

The dynamic form of the model is given as follow:

28

$$LnRGDP = \beta_0 + \beta_1 LnFDI + \beta_2 LnTO + \beta_3 LnINDTR + \beta_4 LnURB + \mu_t \qquad (10)$$

Where;

LNRGDP = Natural Log of Gross Domestic product

LNFDI = Natural Log of Foreign Direct Investment

LNTO = Natural Log of Trade Openness

LNINDTR = Natural Log of industrialization

LNURB = Natural Log of Urbanization

μ_t = Error term

β_i = parameter to be estimated.

Chapter 5

ANALYSIS OF EMPIRICAL RESULTS

This chapter represents the findings of the study. The study carries out the following tests; unit root tests, ARDL bounds test, and Granger Causality test. In other to know the order of integration among the variables of interest, the study employed the traditional Dickey-Fuller (ADF) and Phillip-person (PP). The confirmatory test of KPSS was applied to validate the ADF and PP test, while the Zivot-Andrew (1992) unit root test which account for a single structural break was carried out all in an attempt for precision. For cointegration analysis ARDL bounds test was employed. The short-long run analysis was achieved via the ARDL approach while Pairwise Granger test was carried out to determine the flow of the direction of causality.
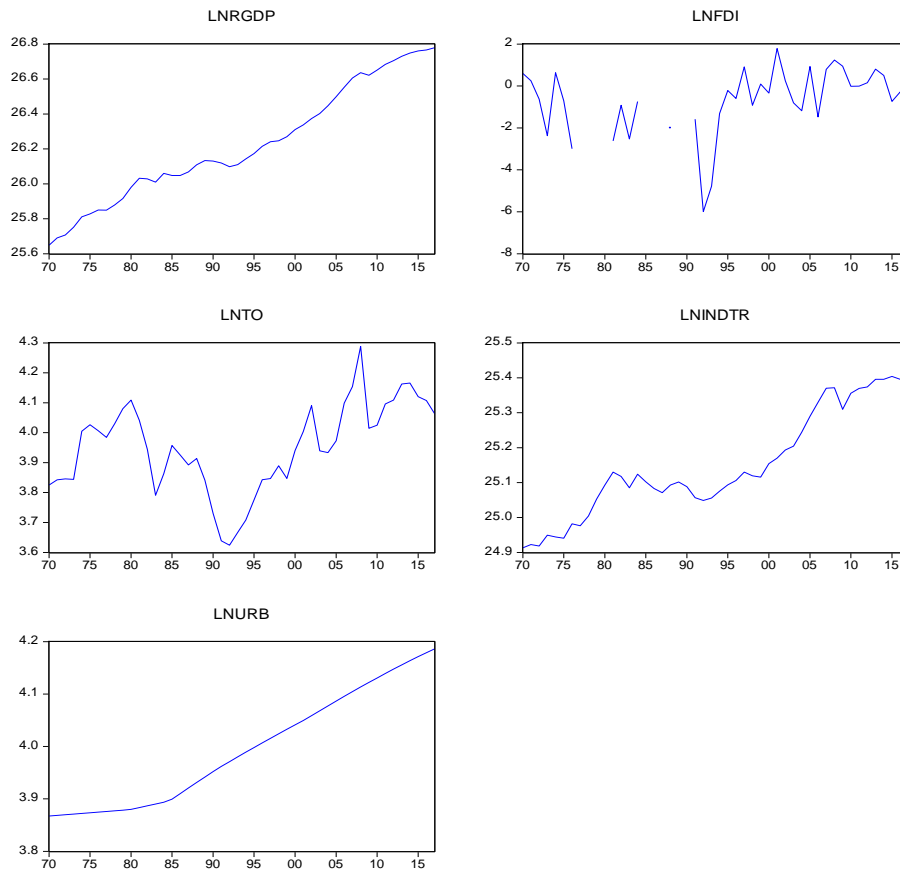
Figure 3: Visual of Series under Investigation

Table 2: Summary Statistics

	RGDP	FDI	TO	INDTR	URB
Mean	2.59E+11	0.813	52.525	8.47E+10	54.667
Median	2.25E+11	0.462	51.975	8.04E+10	53.763
Maximum	4.27E+11	5.979	72.865	1.08E+11	65.782
Minimum	1.38E+11	-0.841	37.487	6.60E+10	47.809
Std. Dev.	8.75E+10	1.200	7.719	1.32E+10	5.960
Skewness	0.601589	2.014	0.127	0.541645	0.388
Kurtosis	2.082926	8.567	2.708	2.029468	1.752
Jarque-Bera	4.577325	94.419	0.301	4.230902	4.317
Probability	0.101402	0.000	0.860	0.120579	0.116
Sum	1.24E+13	39.003	2521.213	4.06E+12	2624.028
Sum Sq. Dev.	3.60E+23	67.721	2800.889	8.23E+21	1669.547
Observations	48	48	48	48	48

RGDP; Gross Domestic Product, LNFID; Foreign Direct Investment, TO; Trade Openness, INDTR; Industrialization, URB; Urbanization

Table 2 above presents the summary statistics with over 48 observations, showing that Urbanization had a higher average compared to other series; while the variables exhibits dispersion from their means as observed by the standard deviation except for

31

FDI. All the variables under consideration were positively skewed. The Jargue-Bera revealed through its probability value that the null hypothesis cannot be rejected except for the foreign direct investment; implying that series are normally distributed except foreign direct investment

Table 3: Correlation Coefficient Matrix Analysis

Observations	LNRGDP	LNFDI	LNTO	LNINDTR	LNURB
LNRGDP	1.000				
t-stat	-----				
P-value	-----				
No. obs	39				
LNFDI	0.341	1.000			
t-stat	2.205	-----			
P-value	0.034	-----			
No. obs	39	39			
LNTO	0.624	0.547	1.000		
t-stat	4.853	3.971	-----		
P-value	0.000	0.000	-----		
No. obs	39	39	39		
LNINDTR	0.981	0.352	0.697	1.000	
t-stat	30.606	2.291	5.908	-----	
P-value	0.000	0.028	0.000	-----	
No. obs	39	39	39	39	
LNURB	0.978	0.375	0.574	0.935	1.000
t-stat	28.194	2.459	4.265	16.057	-----
P-value	0.000	0.019	0.000	0.000	-----
No. obs	39	39	39	39	39

LNRGDP; log of Gross Domestic Product, LNFID; log of Foreign Direct Investment, LNTO; log of Trade Openness, LNINDTR; log of industrialization, LNURB; log of Urbanization

The Pearson coefficient correlation (see Table 3) indicates the interaction between the variables of interest. The matrix shows that there is positive and significance links between the entire variables under investigation, and that the strongest correlation links industrialization and economic growth, while the weakest correlation connects foreign direct investment and economic growth. However, there

is the need to make further empirical investigation as correlation analysis is not sufficient.

Table 4: ADF,PP and KPSS Tests of Unit Root

Statistics (Level)	LNRGDP	LNFDI	LNTO	LNINDTR	LNURB
τ_T (ADF)	-1.954	-3.870**	-2.037	-1.557	-3.752***
τ_μ (ADF)	-0.325	-3.579**	-1.890	-0.350	-0.219
τ (ADF)	3.423	-3.285***	0.363	2.964	1.994
τ_T (PP)	-1.642	-3.753**	-2.020	-1.762	-3.449
τ_μ (PP)	-0.489	-3.482**	-1.858	-0.398	2.192
τ (PP)	7.633	-3.071***	0.490	2.801	6.362
τ_T (KPSS)	0.144*	0.146*	0.157**	0.132*	0.193**
τ_μ (KPSS)	0.891***	0.436*	0.314	0.819***	0.888***
Statistics (First Difference)	LNRGDP	LNFDI	LNTO	LNINDTR	LNURB
τ_T (ADF)	-4.708***	-8.061***	-6.090***	-5.859***	-0.854
τ_μ (ADF)	-4.764***	-8.178***	-6.162***	-5.922***	-1.882
τ (ADF)	-2.974***	-8.305***	-6.212***	-5.176***	-0.171
τ_T (PP)	-4.529***	-8.424***	-6.218***	-5.863***	-0.854
τ_μ (PP)	-4.592***	-8.577***	-6.324***	-5.925***	-1.663
τ (PP)	-2.827***	-8.688***	-6.316***	-5.234***	0.048
τ_T (KPSS)	0.148**	0.267***	0.100	0.084	0.187**
τ_μ (KPSS)	0.140	0.219	0.099	0.093	0.546**

Note: LNRGDP represents Log of real gross domestic product; LNFDI represents log of net foreign direct investment inflow; LNTO represents log of Trade Openness; LNINDTR represent log of industrialization; URB represent log of urban population. All of the series are at their natural logarithms. τ_T represents the most general model with a drift and trend; τ_μ is the model with a drift and without trend; τ is the most restricted model without a drift and trend. When using PP test, numbers in brackets represent Newey-West Bandwith (as determined by Bartlett-Kernel). Both in ADF and PP tests, unit root tests were performed from the most general to the least specific model by eliminating trend and intercept across the models. *, ** and *** denote rejection of the null hypothesis at the 1 percent, 5 percent and 10 percent levels respectively. Tests for unit roots have been carried out in E-VIEWS 9.0.

Table 5: ZA (1992), Tests for Unit Root under a Single Structural Break

	Statistics (Level)			Statistics (First Difference)			Summary
	ZA_I	ZA_T	ZA_B	ZA_I	ZA_T	ZA_B	
LNRGDP	-3.574	-2.965	-3.736	-5.482[***]	-4.829[***]	-5.489[**]	
Time Break	2004	1994	1990	1994	2008	1994	I (1)
Lag length	1	1	1	1	1	1	
LNFDI	-5.001[**]	-5.109[***]	-4.898[*]	-6.417	-6.496	-7.341	I (0)
Time Break	1995	2002	1994	1977	1988	1998	
Lag Length	1	2	1	1	1	1	
LNTO	-3.384	-3.299	-3.559	-7.091[***]	-6.671[***]	-7.049[***]	I(1)
Time Break	1982	1992	1989	1993	1983	1993	
Length	1	1	1	1	1	1	
LNINDTR	-3.062	-2.299	-3.134	-6.520[***]	-5.946[***]	-6.788[***]	I(1)
Time Break	1985	1993	1985	1982	1987	1982	
Lag Length	1	1	1	1	1	1	
LNURB	-6.644[***]	-5.399[***]	-5.23[**]	-6.496[***]	-4.039	-8.061[***]	
							I(0)
Time Break	1986	1983	1982	1985	1989	1985	
Lag Length	1	1	1	1	1	1	

Note: LNRGDP represent log of real gross domestic product, LNFDI represent log of foreign direct investment, LNTO represent log of Trade Openness, LNINDTR represent log of industrialization, LNURB represent log of urban population. ZAI represents the model with a break in the intercept; ZAT is the model with a break in trend; ZAB is the model with a break in both the trend and intercept. * indicates significance at the 1 per cent level. ** indicates significant at the 5 percent level. *** represent significant at the 10 percent level.

Table 4 indicates the results of ADF, PP and KPSS unit root tests, which revealed a mix order of integration among the variables considered. For instance, ADF test shows that at level, only FDI and URB are stationary at 10% level of significance. PP revealed same for only FDI, while the KPSS confirmatory test reveals that none of the variables are stationary at level. The findings of ADF and PP further revealed that given 1% significance level, series are stationary at first difference except for URB, while KPSS indicates that at first difference only TO and INDTR became stationary at different critical values. Given this discrepancy in the result of the unit root tests carried out above, the need to investigate the unit root test proper to account for possible structural break by adopting the Zivot-Andrew (1992). Table 5 reports the

Zivot-Andrew unit root test which confirms the mix order of integration of the series under single structural break.

The findings shows that only FDI and URB are stationary at level, while RGDP, TO and INDTR are stationary at first difference confirming the mixed order of integration as revealed by the ADF, PP and KPSS unit root tests respectively. Given the above results, the study employed ARDL bounds testing approach as the most suitable and flexible test to investigate the long-run interaction between the variables in view.

Table 6: ARDL Result RGDP = f(FDI,TO,INDTR,URB)

Variables	Coefficient	SE	t-statistic	P-Value
Short run				
LNFDI	0.0032^{*}	0.0017	1.8904	0.0691
LNTO	0.0573^{**}	0.0241	2.3836	0.0242
LNINDTR	0.6108^{***}	0.0718	8.5016	0.0000
LNURB	0.0039	0.1225	0.0322	0.9746
D1994	-0.0111	0.0114	-0.9766	0.3371
D2008	0.0027	0.0059	0.4577	0.6507
ECT	-0.4554^{***}	0.0964	-4.7219	0.0001
Long run				
LNFDI	0.0069^{*}	0.0038	1.8594	0.0735
LNTO	0.1261^{***}	0.0439	2.8731	0.0077
LNINDTR	0.7349^{***}	0.1317	5.5822	0.0000
LNURB	0.0087	0.2689	0.0322	0.9746
D1994	-0.0244	0.0233	-1.0490	0.3031
D2008	0.0059	0.0126	0.4723	0.6404

ARDL; Autoregressive distribution lag model, ECT; Error correction term, SE; standard error, LNGDP; log of Gross Domestic Product, LNFID; log of Foreign Direct Investment, LNTO; log of Trade Openness, LNINDTR; log of industrialization, LNURB; log of Urbanization

Table 7: ARDL Bounds Test

Test Stat.	Value	K
F-stat.	4.0410	4

Critical Value Bounds

Significance	I(0) Bounds	I(1) Bounds
10%	2.68	3.53
5%	3.05	3.97

2.5%	3.4	4.36
1%	3.81	4.49

Source: Author compilation, 2018

Table 6 represents the long and short run analysis between the variables under consideration which revealed the short-long run relationship between the variables of interest. The ECT widely known as speed of adjustment is 45% and statistically significance at 1% level of significance accounting for the speed of adjustment of the RGDP towards the path of equilibrium on a yearly basis, through the contributions of FDI, TO, INDTR and URB. The negative value of ECT shows that FDI, TO, INDTR and URB will converge in the long run to RGDP.

This study found that the impact of FDI on economic growth both in the short and long run is positive and statistically significance and the magnitude of the impact account for about 0.0032% and 0.0069% change in growth both in the short and long run. Trade openness on the other hand exerts greater magnitude of positive impact on economic growth and is statistically significant both in the short and long run. In the short and long run, about 0.057% and 0.1261% change in growth is accountable by 1% change in trade openness respectively. This may be partly connected to trade liberation policy in the country, and/or favorable environment to contract new terms of trade with the developed world as South Africa is commonly known to be the most commercialized and emerging economy in the continent as well as a home for natural resources in commercial quantity like coper and iron ore as there major exports.

This study proves that 1% expansion in industrialization causes positive contribution of about 0.6108% and 0.7349% to the growth process of South Africa economy, and

is statistically significant at 1% degree of freedom both in the short and long run, validating the annual report of the world development bank indicators. The report depicts that South Africa industrial output is ranked second largest in the African shore after Egypt, closely followed by Nigeria, as well as the 38th top country in the world. This study shows a positive but insignificant impact of urbanization on economic growth, indicating that a 1% expansion of cities in South Africa stimulate growth process by 0.039% and 0.0087% Proportions both in the short and long run, thus, invalidating the work of Hossain (2011). Furthermore, this study also prove that the structural break recorded in 1994 brought about by the advent of democracy as indicated in Zivot-Andrew unit root test exert negative but insignificance impact on economic growth, accounting for about 0.0111% and 0.0244% reduction in the growth process both in the short and long run respectively. This, confirm the clamorous transition to democracy in the nation in 1994 which unfolds the trends of unhealthy events such as political struggle among the ruling classes, racism, and the quest especially for the total emancipation of black community who seems to have been marginalized for too long, thus resulted to slowing down the economic growth process of the country.

Finally, although the structural break of 2008 might imply the global financial crises of the same year, the effect on the developing nations such as South Africa, was not substantial. Therefore, it was over shadow by the global commodity price boom of the same year (2008) since most of the developing economies trade on commodities. Thus, the commodity price boom exerts insignificance but positive influence on the economic growth by about 0.0027% and 0.0059% magnitude both in the short and long run.

Table 7 above depicts the bounds test which determines whether or not there exist a long run relationship between the dependent variable and the regressors. We reject the null hypothesis since the f-statistic is greater than the upper bounds I(1) at 10% and 5% levels of significances and conclude that there is a long run cointegration between the variables in view.

Table 8: Diagnostic Tests

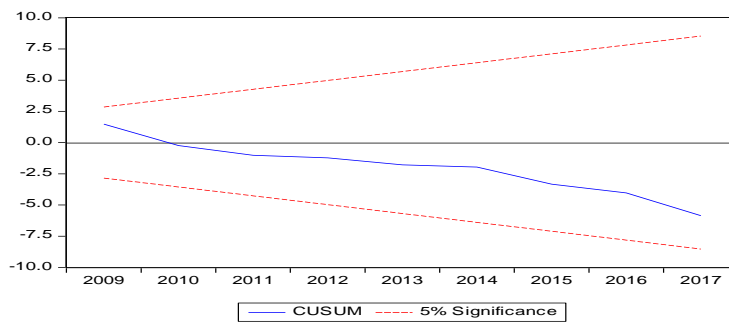| Tests	F-statistic	Prob. Value
χ^2 NORMAL	1.193	0.551
χ^2 SERIAL	0.002	0.969
χ^2 WHITE	1.102	0.399
χ^2 RAMSEY	2.106	0.160

Source: Author computation 2018.

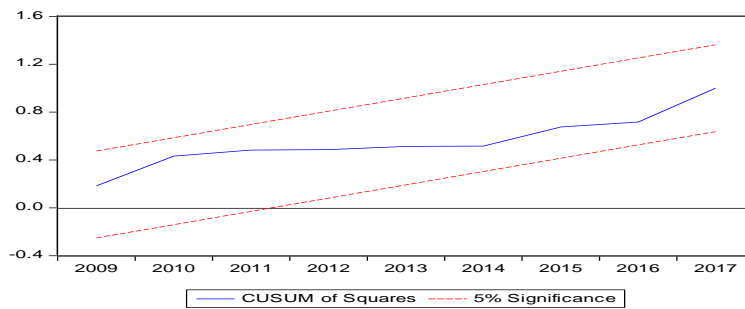Figure 4: Plot of Cumulative sum of Recursive Residuals

Figure 5: Plot of Cumulative Sum of Squares of Recursive Residual

More interestingly, the empirical model was diagnosed at 5% level of significance and found to be pure as presented in Table 8 above. The major diagnostic tests

indicate that the error terms of short run model are normally distributed, and no cases of serial correlation and heteroscedasticity. On the other hand, the Ramsey reset test proves that the dynamic forms of the short run models are well specified. Furthermore, the CUSUM and CUSUM of square (CUSUMsq) statistic tests were carried out as present in figure 3 and 4 above. The result reveals that the plots of CUSUM and CUSUMsq statistics are properly fitted into the critical bounds.

Table 9: Granger Causality Test

Null hypothesis	F-statistic	Causality	Prob.
FDI does not Granger cause RGDP	4.856	FDI→ RGDP	0.018
RGDP does not Granger cause FDI	0.786		0.602
TO does not Granger cause RGDP	0.628	RGDP→TO	0.707
RGDP does not Granger cause TO	2.098		0.084
INDTR does not Granger cause RGDP	1.051	RGDP≠INDTR	0.414
RGDP does not Granger cause INDTR	1.442		0.233
URB does not Granger cause RGDP	2.038	RGDP↔URB	0.092
RGDP does not Granger cause URB	3.480		0.010
TO does not Granger cause FDI	0.493	FDI ≠ TO	0.799
FDI does not Granger cause TO	1.352		0.328
INDTR does not Granger cause FDI	0.313	FDI→INDTR	0.915
FDI does not Granger cause INDTR	3.601		0.042
URB does not Granger cause FDI	9.435	URB→FDI	0.002
FDI does not Granger cause URB	1.071		0.444
INDTR does not Granger cause TO	2.363	INDTR→TO	0.056
TO does not Granger cause INDTR	1.345		0.269
URB does not Granger cause TO	2.242	URB→TO	0.067
TO does not Granger cause URB	1.306		0.286
URB does not Granger cause INDTR	2.686	INDTR↔URB	0.034
INDTR does not Granger cause URB	2.396		0.053

Source: Author compilation. GDP; Gross Domestic Product, FID; Foreign Direct Investment, TO; Trade Openness, INDTR; industrialization, URB; Urbanization

From the Granger test depicted in Table 9 above, the following results were found: a one way link running from FDI to economic growth confirming the FDI-driven growth hypothesis for the case of South Africa validating the work of Tshepo,

(2014), but slightly different from the study of Keho (2015) both in the case of South Africa. Keho found a mutual interaction between FDI and economic growth.

 Similarly, the current study found a unidirectional causal relationship running from economic growth to trade openness, which implies that South Africa should focus on growing their domestic economy in other to draw global attention, aligning with the work of Cuadros et al., (2004) who found a similar result in the case of Brazil, but opposites in the case of Argentina, thus, conclude that the interaction between economic growth and trade openness is country-specific, contrary to the study of Ekanayake et al., (2003) and Frimpong Oteng-Abayie, (2006). They submit that trade liberalization is an important promoter of economic growth. The result of the work of Belloumi, (2014) was entirely different. He found that the causal interaction between economic growth and trade openness is uncertain in the case of Tunisia.

This study found a unidirectional causal flow running from foreign direct investment to industrialization. The implication is that the spillovers effect of FDI inflow would transform local industries to maturity in the case of South Africa validating the work of Markusen and Venables, (1999) which revealed that FDI has the capacity to drive local companies above the level of infancy where they could compete favorably with their foreign counterparts in the long term. In a closely related study, Kumar, (2017) submitted that FDI inflow promotes import substitution policy through industrial development. This, study also found a unidirectional causality running from urbanization to foreign direct investment which tally with our a-prior expectation; proving that the contemporary emerging of urban centers in South Africa will enhance the attraction of FDI inflow, conflicting with the work of Sahu (2013). Sahu

discovered that industrialization and technology advancement brought about by FDI explained the massive emerging of cities in China.

Also, a unidirectional link running from industrialization to trade openness was found in this study. The study of Shafaeddin (2006) however provide two opposing view. He argued that the impact of trade openness on industrialization is country-specific; noting that trade openness doesn't stimulate industrialization in the developing economies whose industries are still at infant stage, but does for the industrialized economies. Dodzin and Vamvakidi (2004) view the infant industry protection claim as a fallacy, submitting that trade openness will help the developing countries to reinforce the achievement of their industrialization goal.

Furthermore, a one way link from urbanization to trade openness was revealed which means that the emerging of urban centers promotes the interaction between South Africa and the world market, closely linked with the finding of Al-mulali and Ozturk (2015) which shows a bidirectional interaction between urbanization and trade openness. The result of another study carried by Hossain (2011) is conflicting. Hossain found a one way interaction running from trade openness to urbanization.

This study also revealed bidirectional causality between industrialization and urbanization, meaning that industrialization is a stimulant of the emerging of modern cities in the case of South Africa while the weaves of urbanization also drive industrialization, contradicting the work of Al-mulali and Ozturk (2015) which revealed a unidirectional link running from urbanization to industrialization.

Similarly, this study revealed a bidirectional link between economic growth and urbanization; implying that economic growth and urbanization exhibit mutual influence on each other in the case of South Africa, different from the work of Hossain (2011). Hossain found unidirectional link running from urbanization to economic growth. This study proves that there exist an uncertain causal link between foreign direct investment and trade openness; meaning that FDI inflow and trade openness does not in any way interact to promote each other in the case of South Africa, thus, invalidating the findings of Nair-Reichert and Weinhold (2001). They submitted that trade openness enhances future performance of FDI in both the developed and the developing economies.

Finally, the current study shows unaccountable causality between economic growth and industrialization, implying that economic growth and industrialization exhibit a diverging influence on each other for the case of South Africa, thus, contradicting our expectation and the result from the study carried out by Chen (2010). Chen found that economic growth explain the change that occurred in the hotel industry in the case of Taiwan. The disparity in results with the current study may be attributed majorly to the methodologies employed, the scope of the study and the frequency of the data used.

Chapter 6

CONCLUSION AND RECOMMENDATION

This study mainly explores the relationship between FDI inflow and economic growth to ascertain whether or not the FDI-led growth hypothesis is a reality in the case of South Africa by controlling for industrialization and urbanization as additional variables in the econometric model for the first time in the case of south Africa considering the fact that the two variables could play significant role in attracting FDI into the host country thus combining forces with FDI inflow should promote economic growth as supported by the work of Nunnenkamp and Spatz (2003) and Guimaraes et al., (2000).

Furthermore, though, the subject matter has been widely debated by scholars across the globe, conclusion is yet to be drew as the findings from the previous studies provide mixed revelations, which is applicable to the case of South Africa. Almfraji and Almsafir (2014) attempted to review the empirical literatures of the previous studies from 1994 to 2012 and found that most of the studies lent their supports for the FDI-led growth hypothesis. In the recent years notably from 2010, there was unprecedented inflow of FDI into South Africa, without a commiserate promotion of economic growth which by implication should improve the standard of living in the country. It is also on these bases that this study was motivated to examine the subject matter in the case of South Africa using the most recent data available.

Therefore, the study applied the widely known unit root tests like the ADF, PP tests to ascertain the level of stationarity of the series inview. KPSS was employed to confirm the precision of the outcome from ADF and PP, and the Zivot- Andrew test which account for single structural break was also used all in an attempt for vivid analysis. The findings from ADF shows that only FDI and urbanization were stationary at their level form, while economic growth, trade openness and industrialization became stationary at first difference form, revealing a case of mixed order of integration. PP test shows that the only variable with stationarity at level is FDI, while the rest of the series are stationary at first difference. The confirmatory KPSS test on the other hand proves that none of the variables' stationarity was established at level, but all became integrated at first difference. Finally, the Zivot-Andrew test confirmed the mixed order of integration as revealed by the ADF and PP. The autoregressive distributed lag model named ARDL bounds test was used to determine the rate of economic growth as a function of foreign direct investment, trade openness, industrialization, and urbanization. The result confirms the existence of cointegration between variables of interest, implying that in the long run all the regressors will spur economic growth.

The pairwise Granger test was adopted to investigate the flow of causal interaction. The result found a unidirectional causality running from foreign direct investment to economic growth, and the cointegration test founds that the impact of FDI inflow on economic growth is statistically significant both in the short and long run, thus, confirming the FDI-led growth hypothesis for the case of South. It follows empirically that the contemporaneous term of FDI inflow and its past realization is a stimulant of economic growth in South Africa; this aligns with the work of Tshepo (2014) and Sunde (2017) for South Africa, and Gungor and Ringim (2017) in the

case of Nigeria. In contrast, the result invalidating the work of Bezuidenhout, H. (2009) who argues that commodity-specific form of FDI inflow as with the case of Southern Africa region could defile the absorptive capacity, thereby influencing economic growth insignificantly or even negatively as stated earlier on in this study. This study further revealed a bidirectional linking between economic growth and urbanization; implying that economic growth and urbanization exhibit mutual influence on each other in the case of South Africa. Finally, though the causality test revealed a diverging relationship between economic growth and industrialization, the study further reveal through cointegration test that industrialization exhibits the strongest and significant impact on economic growth both in the short and long run, implying that industrialization is a vital tool that stimulates economic growth for the case of South Africa. This study reveals a one way feedback running from urbanization to FDI inflow. On the other hand, the findings reveal a unidirectional flow running from FDI inflow to industrialization.

Base on the empirical evidence of FDI-led growth hypothesis in case of South Africa, this study submits that FDI inflow with specific short and long term prospects are certainly healthy for the South Africa economy. However, since the inflow of FDI into South Africa has not yielded her full potential in practical term as expected, it follows logically that the inflow of FDI to South Africa is not an automatic stabilizer. Thus, in other to trigger the efficacy of FDI and to harness its full potential and spillover effect on growth process, attention should first, be shifted to expanding the absorptive capacity of the South African economy above the standard threshold. This will help in converting FDI inflow to South Africa to its full capacity which will in turn drive economic growth proportionately. Also, the study suggest the formulation of mechanism or measures that will help attract a diversify FDI

inflow to other sectors of the economy such as manufacturing, agriculture, etc. with the aim of achieving training and technology transfer in order to harness the spillover effect of FDI inflow on the economy as whole.

Furthermore, since this findings reveal that FDI inflow promotes the course of industrialization, this study further opines that infant industry protection policies is not relevant in the case of South Africa, instead the government should encourage the inflow of FDI especially the industrial base FDI in order to help transform the local infant industry into the stage that they can stand on their own. This could be achieved by designing and implementing policies such as creating industrial specific zones, free license for operation, tax exemption.

The findings also reveal the relevance of industrialization in stimulating economic growth in South Africa, thus, suggests that the government should strongly pursue industrialization policies such as import substitution and self-reliance, subsidizing exports industries, government could as well get involve directly by establishing public industries with the aim to enhancing industrialization pace.

Finally, the study discovered that urbanization play a significant role in promoting both economic growth as well as FDI inflow, thereby, recommends that the government should focus on pursuing practical fiscal policies for smart urban growth such as; systematic planning for least-cost transport with modern bus lanes for easy transportation to convey human and commodities to their most needed areas, quality public services such as education, providing diverse housing options that are affordable to the citizens, construction of modern drainage system to avoid flooding

etc. These will in turn help to improving the quality of lives thereby further transcending to economic growth.

REFERENCES

Abbes, S. M., Mostéfa, B., Seghir, G., & Zakarya, G. Y. (2015). Causal interactions between FDI, and economic growth: evidence from dynamic panel co-integration. *Procedia Economics and Finance*, *23*, 276-290.

Abdouli, M., & Hammami, S. (2017). The impact of FDI inflows and environmental quality on economic growth: an empirical study for the mena countries. *Journal of the Knowledge Economy*, *8*(1), 254-278.

Adams, S. (2009). Foreign direct investment, domestic investment, and economic growth in Sub-Saharan Africa. Journal of policy modeling, 31(6), 939-949.

Alguacil, M., Cuadros, A., & Orts, V. (2011). Inward FDI and growth: The role of macroeconomic and institutional environment. *Journal of Policy Modeling*, *33*(3), 481-496.

Almfraji, M. A., & Almsafir, M. K. (2014). Foreign direct investment and economic growth literature review from 1994 to 2012. Procedia-Social and Behavioral Sciences, 129, 206-213.

Al-Mulali, U., & Ozturk, I. (2015). The effect of energy consumption, urbanization, trade openness, industrial output, and the political stability on the environmental degradation in the MENA (Middle East and North African) region. *Energy*, *84*, 382-389.

Barro, R. J. (1996). *Determinants of economic growth: a cross-country empirical study* (No. w5698). National Bureau of Economic Research.

Belloumi, M. (2014). The relationship between trade, FDI and economic growth in Tunisia: An application of the autoregressive distributed lag model. Economic systems, 38(2), 269-287.

Bezuidenhout, H. (2009). A regional perspective on aid and FDI in Southern Africa. *International Advances in Economic Research*, *15*(3), 310-321.

Borensztein, E., De Gregorio, J., & Lee, J. W. (1998). How does foreign direct investment affect economic growth? 1. *Journal of international Economics*, *45*(1), 115-135.

Carike, C., Elsabé, L., & Henri, B. (2012). Chinese foreign direct investment in Africa: Making sense of a new economic reality. *African Journal of Business Management*, *6*(47), 11583-11597.

Chen, M. H. (2010). The economy, tourism growth and corporate performance in the Taiwanese hotel industry. Tourism Management, 31(5), 665-675.

Claassen, C., Loots, E., & Bezuidenhout, H. (2011). Chinese foreign direct investment in Africa. *Economic Research Southern Africa Working Paper*, *261*.

Clark, C., & Chan, S. (1996). MNCs and developmentalism: Domestic structures as an explanation for East Asian dynamism. In *Foreign Direct Investment in a Changing Global Political Economy* (pp. 84-103). Palgrave Macmillan, London.

Cuadros, A., Orts, V., & Alguacil, M. (2004). Openness and growth: Re-examining foreign direct investment, trade and output linkages in Latin America. Journal of Development Studies, 40(4), 167-192.

Dodzin, S., & Vamvakidis, A. (2004). Trade and industrialization in developing economies. Journal of Development Economics, 75(1), 319-328.

Ekanayake, E. M., Vogel, R., & Veeramacheneni, B. (2003). Openness and economic growth: Empirical evidence on the relationship Between output, inward FDI, and trade. Journal of Business Strategies, 20(1), 59.

Fedderke, J. W., & Romm, A. T. (2006). Growth impact and determinants of foreign direct investment into South Africa, 1956–2003. *Economic Modelling*, *23*(5), 738-760.

Flora, P., & Agrawal, G. (2014). Foreign direct investment (FDI) and economic growth relationship among highest FDI recipient Asian economies: A panel data analysis. *International Business Management*, *8*(2), 126-132.

Frimpong, J. M., & Oteng-Abayie, E. F. (2006). Bounds testing approach: an examination of foreign direct investment, trade, and growth relationships.

Fukao, K., & Wei, Y. (2008). How do the location determinants of vertical FDI and horizontal FDI differ?.

Goh, S. K., Sam, C. Y., & McNown, R. (2017). Re-examining foreign direct investment, exports, and economic growth in asian economies using a bootstrap ARDL test for cointegration. Journal of Asian Economics, 51, 12-22.

Guimaraes, P., Figueiredo, O., & Woodward, D. (2000). Agglomeration and the location of foreign direct investment in Portugal. *Journal of Urban Economics*, *47*(1), 115-135.

Gungor, H., & Katircioglu, S. T. (2010). Financial development, FDI and real income growth in Turkey: an empirical investigation from the bounds tests and causality analysis. Actual Problems of Economics, 11(114), 215-225.

Güngör, H., & Ringim, S. H. (2017). Linkage between foreign direct investment, domestic investment and economic growth: Evidence from Nigeria. International Journal of Economics and Financial Issues, 7(3), 97-104.

Güngör, H., Katircioglu, S., & Mercan, M. (2014). Revisiting the nexus between financial development, FDI, and growth: New evidence from second generation econometric procedures in the Turkish context. Acta Oeconomica, 64(1), 73-89.

Haller, A. P. (2012). Concepts of economic growth and development challenges of crisis and of knowledge. Economy Transdisciplinarity Cognition, 15(1), 66.

Herzer, D. (2008). The long-run relationship between outward FDI and domestic output: evidence from panel data. *Economics Letters*, *100*(1), 146-149.

Herzer, D., & Nunnenkamp, P. (2013). Inward and outward FDI and income inequality: evidence from Europe. *Review of world economics*, *149*(2), 395-422.

Herzer, D., Klasen, S., & Nowak-Lehmann, D. (2006). In search of FDI-led growth in developing countries (No. 150). Discussion papers//Ibero America Institute for Economic Research.

Hossain, M. S. (2011). Panel estimation for CO2 emissions, energy consumption, economic growth, trade openness and urbanization of newly industrialized countries. Energy Policy, 39(11), 6991-6999.

Keho, Y. (2015). Foreign Direct Investment, Exports and Economic Growth: Some African Evidence. *Journal of Applied Economics & Business Research*, *5*(4).

Khobai, H., Hamman, N., Mkhombo, T., Mhaka, S., Mavikela, N., & Phiri, A. (2017). The FDI-growth nexus in South Africa: A re-examination using quantile regression approach.

Kinda, T. (2013). Beyond natural resources: horizontal and vertical FDI diversification in Sub-Saharan Africa. *Applied Economics*, *45*(25), 3587-3598.

Kumar, G. (2017). Foreign Direct Investment and Indian Economy. Journal of Commerce, Economics & Management, 1(1), 10-15.

Kumar, N., & Pradhan, J. P. (2002). FDI, externalities and economic growth in developing countries: Some empirical explorations and implications for WTO negotiations on investment. *RIS Discussion Paper*, (27).

Lee, C. G. (2010). Outward foreign direct investment and economic growth: Evidence from Japan. *Global Economic Review*, *39*(3), 317-326.

Lee, J. W. (2013). The contribution of foreign direct investment to clean energy use, carbon emissions and economic growth. *Energy Policy*, *55*, 483-489.

Mah, J. S. (2010). Foreign direct investment inflows and economic growth of China. Journal of Policy Modeling, 32(1), 155-158.

Mahembe, E. E., & Odhiambo, N. M. (2016). Does foreign direct investment cause economic growth? A dynamic panel data analysis for SADC countries. International Journal of Emerging Markets, 11(3), 316-332.

Markusen, J. R., & Venables, A. J. (1999). Foreign direct investment as a catalyst for industrial development. European economic review, 43(2), 335-356.

Mehic, E., Silajdzic, S., & Babic-Hodovic, V. (2013). The impact of FDI on economic growth: Some evidence from southeast Europe. *Emerging Markets Finance and Trade*, *49*(sup1), 5-20.

Mehrara, M., Haghnejad, A., Dehnavi, J., & Meybodi, F. J. (2014). Dynamic causal relationships among GDP, exports, and foreign direct investment (FDI) in the developing countries. International Letters of Social and Humanistic Sciences, 14, 1-19.

Nair-Reichert, U., & Weinhold, D. (2001). Causality tests for cross-country panels: a New look at FDI and economic growth in developing countries. Oxford bulletin of economics and statistics, 63(2), 153-171.

Nielsen, B. B., Asmussen, C. G., & Weatherall, C. D. (2017). The location choice of foreign direct investments: Empirical evidence and methodological challenges. *Journal of World Business*, *52*(1), 62-82.

Nistor, P. (2014). FDI and economic growth, the case of Romania. *Procedia Economics and Finance*, *15*, 577-582.

Nunnenkamp, P., & Spatz, J. (2003). Foreign direct investment and economic growth in developing countries: how relevant are host-country and industry characteristics?.

Nwaogu, U. G., & Ryan, M. J. (2015). FDI, foreign aid, remittance and economic growth in developing countries. *Review of Development Economics*, *19*(1), 100-115.

Omri and Kahoulib, (2013). Causal relationships between energy consumption, foreign direct investment and economic growth: Fresh evidence from dynamic simultaneous-equations models, 67(2014) 913-922.

Pandya, V., & Sisombat, S. (2017). Impacts of Foreign Direct Investment on Economic Growth: Empirical Evidence from Australian Economy. International Journal of Economics and Finance, 9(5), 121.

Sahu, K. K. (2013). Does Urbanisation Promote Foreign Direct Investment? Lessons and Evidences from China and India. International Journal of Arts and Commerce, 2(3), 17-26.

Shafaeddin, M. (2006). 0 Does Trade Openness Favour or Hinder Industrialization and Development?.

Shahbaz, M., & Rahman, M. M. (2012). The dynamic of financial development, imports, foreign direct investment and economic growth: cointegration and causality analysis in Pakistan. *Global Business Review*, *13*(2), 201-219.

Shehu, E., & Turan, G. (2014). Impact of FDI and free trade in economic growth: case of Albania.

Singh, H., & Jun, K. W. (1999). *Some new evidence on determinants of foreign direct investment in developing countries*. The World Bank.

Srinivasan, P., Kalaivani, M., & Ibrahim, P. (2011). An empirical investigation of foreign direct investment and economic growth in SAARC nations. Journal of Asia Business Studies, 5(2), 232-248.

Stancık, J. (2007). Horizontal and vertical FDI spillovers: Recent evidence from the Czech Republic. *CERGE-EI Working Paper*, *340*.

Sunde, T. (2017). Foreign direct investment, exports and economic growth: ADRL and causality analysis for South Africa. Research in International Business and Finance, 41, 434-444.

Tshepo, M. (2014). The impact of foreign direct investment on economic growth and employment in South Africa: A time series analysis. Mediterranean Journal of Social Sciences, 5(25), 18.

Wöcke, A., & Sing, L. (2013). Columbia FDI Profiles.