



NEAR EAST UNIVERSITY
INSTITUTE OF GRADUATE STUDIES
DEPARTMENT OF BANKING AND FINANCE

**THE IMPACT OF FOREIGN DIRECT INVESTMENT AND
STOCK MARKET DEVELOPMENT ON ECONOMIC
GROWTH IN SOUTH AFRICA (1975-2020)**

MSc. THESIS

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JANUARY, 2023

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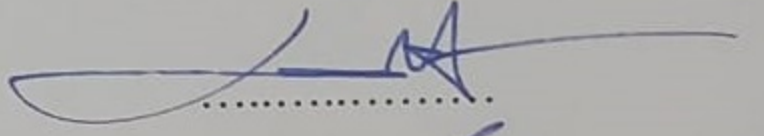
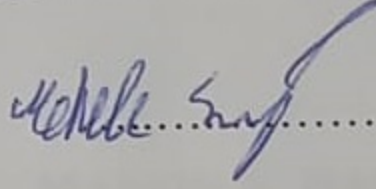

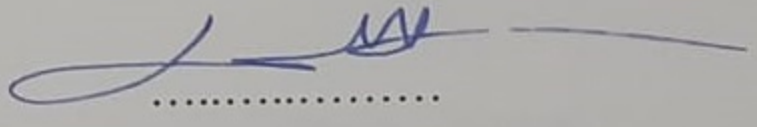
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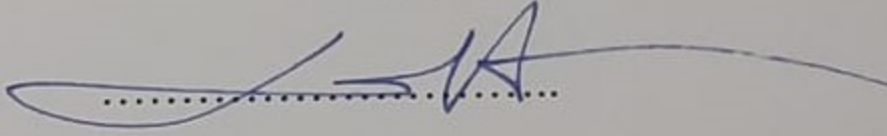
Approval

We officially confirm that we have read **MARON K. DAKU**'s thesis titled: "**THE IMPACT OF FOREIGN DIRECT INVESTMENT AND STOCK MARKET DEVELOPMENT ON ECONOMIC GROWTH IN SOUTH AFRIC (1975-2020)**" and that, in our collective opinion, it is fully adequate, in scope and quality, as a thesis for the degree of Master of Social Sciences.

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Declaration

I, the undersigned, hereby certify that all of the material, documents, analysis, and findings included within this thesis have been gathered and presented in accordance with the academic regulations and ethical principles of the Institute of Graduate Studies at Near East University. I further declare that in accordance with these rules and conduct, I have thoroughly cited and referenced any material and data that are not unique to this research. This statement was made so that these rules and conduct could be followed.

MARON K. DAKU

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Abstracts

The impact of foreign direct investment and stock market development on economic growth in South Africa between 1975 and 2020 is examined in this thesis. The impact of FDI on the economic development of the recipient nation is one of the many welfare implications that multinational firms express in the form of FDI. According to Bornstein, Gregorio, et al. (1998), foreign direct investment in South Africa has traditionally been capital-intensive. The gross rate of profit as well as the risk profile of the obligations related to foreign direct investment have been the main deciding criteria. The data was gathered using the global bank data site. The ARDL bound and Granger causality tests are both used in this thesis to ascertain the cointegration of variables. The outcome of the bound test reveals a long-term link between the variables. FDI, the stock market, and gross domestic saving all have a significant and advantageous influence on South Africa's economic development, according to the results. According to the Granger causality test findings, there is only one possible chain of events that may account for the link between the variables. The degree of significance necessary for this finding is 5%, and it has been shown that market capitalization and foreign direct investment are causally related. When seen in this light, foreign direct investment (FDI) is something that comes about as a consequence of market capitalization but does not cause market capitalization. However, while FDI does contribute to domestic savings, domestic savings do not immediately result from FDI. This means that although FDI does contribute to domestic savings, domestic savings do not directly result from FDI. The results unmistakably show a positive correlation between economic growth and foreign investment. This means that certain strategies for encouraging foreign direct investment (FDI) may lose their effectiveness if it is assumed that FDI will expand as a consequence of economic progress.

Keywords: Stock market, foreign direct investment, gross domestic saving, Economic growth

Özet

Bu tezde 1975 ile 2020 yılları arasında Güney Afrika'da doğrudan yabancı yatırım ve borsa gelişiminin ekonomik büyüme üzerindeki etkisi incelenmektedir. DYY'nin alıcı ülkenin ekonomik gelişimi üzerindeki etkisi, çok uluslu firmaların DYY şeklinde ifade ettiği birçok refah etkisinden biridir. Bornstein, Gregorio ve diğerlerine göre. (1998), Güney Afrika'daki doğrudan yabancı yatırım geleneksel olarak sermaye yoğun olmuştur. Doğrudan yabancı yatırımlara ilişkin yükümlülüklerin brüt kâr oranı ve risk profili ana karar kriterleri olmuştur. Veriler, küresel banka veri sitesi kullanılarak toplandı. ARDL sınır ve Granger nedensellik testlerinin her ikisi de bu tezde değişkenlerin eşbütünleşmesini tespit etmek için kullanılmıştır. Sınır testinin sonucu, değişkenler arasında uzun vadeli bir bağlantı olduğunu ortaya koymaktadır. Sonuçlara göre, DYY, borsa ve gayri safi yurt içi tasarruf, Güney Afrika'nın ekonomik gelişimi üzerinde önemli ve avantajlı bir etkiye sahip. Granger nedensellik testi bulgularına göre, değişkenler arasındaki bağlantıyı açıklayabilecek tek olası olaylar zinciri vardır. Bu bulgu için gerekli önem derecesi %5'tir ve piyasa kapitalizasyonu ile doğrudan yabancı yatırımın nedensel olarak ilişkili olduğu gösterilmiştir. Bu açıdan bakıldığında, doğrudan yabancı yatırım (DYY), piyasa kapitalizasyonunun bir sonucu olarak ortaya çıkan ancak piyasa değerine neden olmayan bir şeydir. Bununla birlikte, DYY yurtiçi tasarruflara katkıda bulunurken, yurtiçi tasarruflar doğrudan DYY'den kaynaklanmaz. Bu, DYY'nin yurtiçi tasarruflara katkıda bulunmasına rağmen, yurtiçi tasarrufların doğrudan DYY'den kaynaklanmadığı anlamına gelir. Sonuçlar, açık bir şekilde ekonomik büyüme ile yabancı yatırım arasında pozitif bir ilişki olduğunu göstermektedir. Bu, doğrudan yabancı yatırımı (DYY) teşvik etmeye yönelik bazı stratejilerin, ekonomik ilerlemenin bir sonucu olarak DYY'nin genişleyeceği varsayılırsa etkinliğini kaybedebileceği anlamına gelir.

Anahtar Kelimeler: Borsa, doğrudan yabancı yatırım, gayri safi yurt içi tasarruf, Ekonomik büyüme

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Abbreviations

ADF: Augmented Dickey-Fuller

ASGISA: Accelerated and Shared Growth Initiative for South Africa

ARDL: Auto Regressive Distributed Lag

BOP: Balance of Payments

ECM: Error correction model

ER: Exchange rate

FEER: Fundamental Equilibrium Exchange Rate

FDI: foreign direct investment

GDS: Gross Domestic Saving

IMF: international monetary fun

JSE: Johannesburg Stock Exchange

MC: Market Capitalization

NGP: New Growth Path

OTC: over-the-counter

ODA: Official development assistance

PP: Phillips-Perron

PLC: Product life cycle

RDP: Reconstruction and Development Programme

SADC: Southern African Development Community

VAR: vector autoregressive models

CHAPTER I

Introduction

Over the last 10 years, several developing countries all over the world have seen large expansions of their economies, combined with considerably more rapid expansions of their involvement in international trade and commerce, notably in the amount of FDI (WIR, 2011). People are more and more interested in the induces and implications of FDI and economic development as a result of the fact that the net proportion of FDI in the world GDP has increased Throughout the course of five times between the 1990s and the early 1900s (WIR, 2011, p. 44).

Despite the fact that a substantial amount of research has been conducted to investigate the effects of FDI from the perspective of the focus nation, the empirical results has been contradictory. FDI comes from multinational corporations. On the one hand, if FDI has a favorable effect on economic sustainable development, the country that will host the investment should promote FDI flows by offering tax reductions, tax incentives for connection, exemptions from import taxes, and other factors to attract FDI. On the other side, the country that is proposing to host the investment should not support FDI flows if FDI does not have a favorable influence on economic growth. The country hosting the investment is required to take precautionary steps to discourage and restrict the flow of money of this sort if FDI has a detrimental effect on sustainable development. Limiting the quantity of money that may be invested is one of these approaches (Lyroudi, Papanastasiou, et, al Vamvakidis, 2004).

Resolute assessments of individual countries, according to Carkovic and Levine (2002), often show that FDI does not enhance economic progress, and there is no evidence of advantageous technical spillover from foreign businesses to locally owned firms in retrospect. In contrast, macroeconomic research on growth and FDI frequently shows strong evidence that FDI boosts GDP and results in positive technological spillover from foreign to local enterprises. Several research methods have been conducted to study the factors that determine economic development in South Africa. One of the factors that has been looked at is the impact of collective investment expenditure. (Fedderke and Romm, 2004) Few people have talked about how long-term economic growth and development is different for domestic and foreign investments.

According to Bornstein, Gregorio, and Lee's (1998) research, traditionally, foreign direct investment in South Africa has tended to include substantial amounts of investment. The primary factors that have been considered in making this decision have been the gross rate of profit and the danger level of the responsibilities that are associated with FDI. The findings of Bornstein, Gregorio, and Lee (1998) indicate that this pattern has lasted throughout the whole of South Africa's history continuing from the previous paragraph, Bornstein et al. (1998) reinforce the concept that both theoretical and empirical research point to the growth of regulatory and non-policy factors as operator of FDI. This theory was introduced in the previous paragraph. This issue is brought up as a result of the fact that Bornstein and co-authors (1998) were responsible for the research. A market's size, the proportion of the distance component, the degree of political and economic stability, and other features are examples of non-policy variables. Additional factors include other characteristics. Policy concerns include controlling product markets, regulating labor markets, setting tax rates on corporations, arranging labor markets, and infrastructural development. Other policy issues include opening up foreign trade (Bornstein et al., 1998).

The framework of development in South Africa has evolved away from the collection of factors and toward advances in efficiency, which may be quantified by total factor productivity. As a result, the transfer of knowledge and expertise is of utmost significance as a spill-over effect of foreign direct investment (Fedderke and Romm, 2005). As of June 2010, 24% of South Africa's economically active population was unemployed. This is the main thing stopping the country from reaching its full development potential (Stats SA, 2010).

The government implemented a variety of macroeconomic programs, including the RDP, GEAR, ASGISA, and NGP, in an attempt to solve the issue of unemployment as well as to promote economic development. These macroeconomic policies all have a similar thread, which is that of fostering growth and job opportunities. Despite this, the economic potential that was anticipated as a result of these measures has not materialized in South Africa. Direct investments from outside of South Africa are required if the country is going to see any kind of acceleration in terms of economic expansion or job creation. According to Xavier (1994), the possibility of obtaining foreign direct investment increases when there are suitable production factors, supportive government incentives, and managerial skills. He goes on to state that it

has been established that elements such as facilities, government support, corporate strategy, and the demand of consumers are significant contributors to the positioning of industries and the progression of economic growth. So, if you want to make it easier for money to move around, it might be helpful to know more about the component that affect the movement of portfolio capital and FDI. Even though it's been more than 22 years since South Africa became independent, unemployment, hunger, and unfairness are still the country's biggest social and economic problems.

In modern South Africa, the fight against "jobless" growth, poverty, and high levels of inequality is still going strong despite the progress that has been made to address these concerns. The official rate of unemployment has climbed over the previous two decades, going from 17% in 1994 to roughly 26% within the final quarter of 2015. This growth occurred in the United States (StatsSA 2015). The growth rate of the GDP is about 0% to 1%, which is less than the highly preferred development rate of 5% per year for the GDP. When one takes into account the high levels of poverty, which are extremely common among the country's young adults, it is unmistakable that the creation of new jobs is one of the most serious barriers that South Africa is now confronting. This is due to the fact that the high incidence of unemployment is particularly prevalent among the younger population of the nation. The government has taken a number of different policy stances in order to address the concerns of high unemployment and low income in an effort to improve economic growth, progress, and job creation. These issues have been addressed in an attempt to increase sustainable development, progress, and job creation. These policies are aimed at finding solutions to the issues of poverty. Several of these points of view are outlined in the following: These policies are being implemented by the government as part of its initiatives to promote economic development and growth as well as increase the number of jobs that are now open to the public. These initiatives are also a part of the government's efforts to increase the number of jobs that are now available to the public.

Programs like Growth, Work Opportunities, and Redistribution (GEAR), Wealth and Employment Creation Initiative for South Africa (AsgiSA), New Growth Path (NGP), and Public Investment Plan (NDP) are all examples of such programs that are now being implemented (The Presidency, 2011). Boosting economic development, creating new employment possibilities, and supplementing family spending, which makes up a higher share of the overall amount spent and engaged in

by the government, are all reliant on attracting more foreign investors, and this is an inevitable consequence of these activities. All of these aims support the overarching strategy of attracting more foreign capital. The President of the Republic of South Africa stressed the need of luring more international investors in his 2014 State of the Nation Address (SONA). According to him, this is one solution to the issues of widespread inequality, joblessness, and poverty (SONA 2014). Many analysts agree that exports and the free movement of FDI are crucial to the economic growth and employment creation of emerging countries. Asiedu (2006), Xolani (2011), and Mpanju (2012) are only a few examples of such books. These FDI supporters have recognized and stressed the value of attracting FDI to aid the development of countries in transition. Foreign investors provide several advantages, including the spread of information and expertise, the production of new goods and services, the expansion of local markets, and the modernization of aging infrastructure.

The macroeconomic plan that is now being implemented in several nations throughout Southern Africa is expressly geared toward the goal of enhancing circumstances favorable to FDI. During the course of the previous twenty years, a very high quantity of nations has carried out extensive economic reforms. These reforms have included the liberalization of domestic markets as well as some privatization, both of which have had an impact on the amount as well as the composition of foreign investment. Nevertheless, in spite of extremely high increases in overall flows, Africa has, on average, been rather ineffective in alluring foreign direct investment. Even South Africa, which is more established and wealthy in comparison to its neighbors, has received a far less amount of foreign direct investment than was expected, regardless of that its macroeconomic policy framework is clearly investor-friendly. Additionally, the absence of sizeable and liquid equity in terms of the distribution of private sector capital flows, markets in the region—with the possible and noteworthy exception of South Africa have contributed to the marginalization of African economies. South Africa is the likely and remarkable exception to this rule. South Africa stands out as a significant exception from this norm. South Africa is the notable exception to this rule.

It is an argument that is commonly stated that African countries never taken part in the large growth in foreign direct investment that had been a hallmark of worldwide growth within 1990. Globalization has been a feature of the economy since then. This argument is made for two reasons: first, regulatory environments

have historically been hostile to funding in general, and second, funds that could instead of flowing to Africa, resources are being rerouted to support the transitional economies of countries that once belonged to the Communist bloc. Both of these reasons are referred to as the "hostile policy environment."

Investors from other countries are reluctant to put their money into South Africa for a variety of different reasons. These include political instability, economic instability, criminal activity, and corrupt practices. Africa's future seems clouded by a general sense of uncertainty rather than by any one thing that can be pinpointed.

The lackluster response of both domestic and international investors to investment opportunities is a particular cause of aggravation for the governments that are located in the region in the region that have made changes to their economic policies in the hopes of fostering an atmosphere that is favorable to investors. The promotion of sustainable development is the paramount purpose of these changes. It should come as no surprise that the arrival of money from other countries is an essential component of economic success. In both rural and urban settings, unemployment is almost always connected to poverty. Investing is critical to the process of producing new job openings in the formal economy, which in turn has a ripple impact on employment in the informal economy. When there are not enough domestic resources available to fund investments, it is important to bring in foreign money.

Studies that were conducted in the past have provided insight on the reasons why there is so little development in Africa. For instance, it has been shown that the general economic institutional framework is a crucial factor in deciding whether or not to make an investment. In addition, it has been demonstrated that a restricted Africa's trade restrictions, inadequate transport and communications infrastructure, poor productivity, and high levels of corruption make the continent unappealing to potential investors. All of these problems combine to make Africa an unappealing location for investing money (Bhattacharaya et al., 1996; Collier and Gunning, 1999; Collier and Patillo, eds., 1999). Multinational corporations, for whatever reason, have placed a higher priority on emerging economies that are less inventive, more susceptible to corruption, and less competitive on the market. However, it is clear that international corporations have chosen to capitalize on opportunities in other emerging nations.

We also do not know what factors influence the sort of investments that are made by multinational corporations or if these factors vary from place to place. It is also unknown whether or not globalization has resulted in a shift toward manufacturing in countries with high levels of productivity, resulting in fewer jobs being produced by FDI in less advanced nations.

According to Gorg and Greenaway, the findings of research on the influence of foreign direct investment (FDI) on economic growth have produced inconsistent results. This is consistent with the findings of the study that has been carried out. One school of thought maintains that increased levels of foreign direct investment (FDI) stimulate economic development by both increasing the total amount of capital that is now available and enhancing the efficiency with which that total amount of capital is employed (Li and Liu, 2005). Positive technical spillover effects may also be generated by foreign direct investment, and these impacts can go from more developed nations to the country receiving the investment (Borensztein et al., 1998). As a result of this, several advanced nations have, since the 1990s, instituted tax and non-tax incentives with the objective of attracting foreign FDI in order to promote more robust economic growth. This action was taken in order to realize the preceding objective. On the other hand, a number of scholars have expressed skepticism over the objective of FDI. For example, Bhinda and Martin (2009) raise concerns about the long-term viability of foreign direct investment by pointing out that the amount of revenue that advanced countries send back to industrialized economies frequently outpaces the amount of FDI that is received from industrialized economies. This raises questions about the benefits of foreign direct investment (FDI). According to Guerin (2012), a worsening of external imbalances is another unwanted byproduct of FDI inflows into developing nations. Guerin also believes that this effect was not expected to happen as a result of the FDI, hence this finding is particularly concerning. It was one of the outcomes that nobody expected to happen. According to Ram and Zhang (2002) and other academics, the negative effects of foreign direct investment (FDI) may be exacerbated if the transferred technology is not suitable for developing nations and if the FDI disrupts the investments made by local businesses. Additionally, this may be the case if the FDI causes local businesses to invest less. This is due to the fact that, in their opinion, acting in this manner would exaggerate the unfavorable and damaging effects that FDI has. Several studies have demonstrated that the local conditions in developing nations that receive FDI may

limit the influence that FDI has on economic growth. This is something that has been proved to be the case. It is general known that investors like investing in countries that have strong institutions and good governance, but it is less obvious what role democracy may have in the link between economic development and foreign direct investment. This is of the utmost importance since, among other pieces of study (Wei, 2000; Akobeng, 2016), it has been shown that robust institutions are a prerequisite for the development of an economy.

Many African countries have a reputation for lacking political processes and poor administration, which is frequently cited as a major impediment to achieving faster sustainable development. The most common reasons for this perception is the contribution that investors make is common knowledge and it's a preference to nations that have established strong systems of governance for their capital. Mlambo (2005) says that one reason why FDI isn't coming into the countries of the SADC is that people are getting the impression that corruption is getting worse.

Since the beginning of it all up until the present day, South Africa has not been an exception to the norm Stock exchanges has a considerable outcome on sustainable development. This influence has only grown stronger with time. As per De Kiewiet (1941), the finding of gold mines in South Africa signified both the greatest potential for future development and the most significant discovery in the annals of human history. The lack of available financial resources was the key contributor to the challenges that people in those days faced, which were caused by a number of factors. Keeping this information with the creation of the Johannesburg Stock Exchange in mind, which is often referred to as the JSE, was the best action that could have been taken in an effort to try to get control of the situation (Hassan, 2013).

The term "bourse" was often used to refer to the stock market that was formed prior to the introduction of an appropriate automated system. Because of the difficulty posed by the fact that it could only trade securities on a limited scale at the time, the company went out of business in the year 1996. Kock (2009) used a unique method when he investigated the matter and found that the JSE is a component of some of the largest stock markets around. The stock markets of the emerging world are ranked from largest to smallest as follows: South Korea, Taiwan, India, Brazil, and finally China. Number six on this list is the Johannesburg Stock Exchange (JSE). The year when South Africa's market capitalization surpassed \$900 billion US was a

watershed moment in the country's stock market's development. The South African financial markets were facing one of their most perilous times ever. In a period when more than 400 companies were listed on the stock exchange, South Africa was recognized as a developing nation with Africa's largest stock exchange (Kock, 2009).

The rise and development of South Africa's financial sector can be traced back in large part to the construction industry's efforts to create a stock market. The mining industry also made a big contribution to the development of the stock exchange. South Africa's economy has become more reliant on the mineral extraction of precious metals rather than relying on the more traditional method of developing growth and advancement through farming practices. This is because agricultural practices continue function significantly in South Africa's economy. In the sake of bolstering the country's economy, stronger, this action was taken. According to Trevor, Farrell, et al. Cassim (1999), another shortcoming of the mining industry was that it incurred a large amount of expenditures, which meant that money had to be generated So that we may keep the thriving sector, particularly the deep-level mineral wealth. This was a problem because the mining industry needed money in order to sustain its flourishing sector. This was one of the many problems that plagued the mining business. The growth of the market made it possible for an inclusive financial system to emerge in the future, which was made possible by rising demand in the industry.

A commodities exchange is an entity that takes part in the growth of an economy, including both a developing market and an established economy, according to Alile (1984). This definition applies to both types of economies. The market's principal function is to provide a link between the industry that handles surplus money and the industry that manages budget shortfalls. This is the market's *raison d'être*. The connection, which is a kind of funding, involves actions like promoting changes to revive the financial sector and, most significantly, creating a conduit for investments for potential objectives in the economy to increase the productivity and development of the economy. All of these initiatives are meant to increase the economy's capacity for expansion and effectiveness. All of these steps aim to promote economic growth and increase overall effectiveness (Alile, 1984). Emerging businesses have the option of obtaining loans via the capital markets, allowing them to contribute to profitability in the case of expansion and capital expenditure. This is because developing businesses may access financing via the

capital markets. This in turn serves to promote the creation of new jobs and the expansion of the economy. The market is the mechanism that makes the process possible within the financial and/or financial system framework.

According to Osaze (2000), capital markets are the primary engines of any economy due to the fact that they are necessary for the formation of long-term growth capital. Also, capital markets are an important way to save money and put it toward investments that make money and pay for themselves.

According to Adebisi (2005), money is an essential instrument that may be utilized in daily life to meet a need or demand in society, regardless of whether the money was earned through hard labor or obtained via borrowing it. The use of money helped to foster the expansion of capital, which in turn helped to propel the expansion of the economy. In order for there to be capital markets, money has to be raised in a variety of different ways. This may require the engagement of market operators, the implementation of services by a range of financial institutions, or the participation of the government in the position of regulator. To indicate of the pace at which expansion in an economy, particularly in the capital markets, is heavily influenced by a number of factors, one of which is the degree to which that economy's financial markets are established and mature. The existence of preeminent capital markets enables economies and stages of development in nations all over the globe to achieve progress thanks to the globalization of trade. This is achieved by providing these nations with assistance in producing the economic means and the abilities required to meet the economic goals that they have set for themselves. Listed at the beginning of the 1980s, the equity stock markets and other markets in third-world nations were plagued with a great deal of difficulty. This was directly caused by the traditional flaws of economies that were run by banks. The economies were hurt by a lack of capital equity, a lack of liquidity, a small number of foreign direct investors, and a low level of trust in the stock markets by investors.

As a consequence of the massive inflows of OD that are used for growth among these sub-Saharan African nations, rising countries accrue very little or no domestic savings. This is one of the reasons why domestic savings are so important. This is because a significant number of developing countries are dependent on ODA as a source of finance in order to maintain their current levels of economic development. The lack of domestic savings is mostly caused by the quantity of local wealth (in the form of cattle, residences, land, etc.) that cannot be defined in

monetary terms by the official sector. This wealth is primarily responsible for the lack of saves. The primary factor that contributes to the low level of domestic savings is the movement of capital outside the economy. The existence of elements that limit its progress and contribute to its sluggish growth is increasing the demand for development in these nations. This is because these variables contribute to the countries' slow growth. These considerations include the limited amount of domestic capital and the limited amount of private foreign investment that must respond to a high demand for ODA in the form of investments. Other variables include the least amount of private foreign investment. The gradual rise in development may be attributed, in part, to both of these causes. Applegarth (2004) has conducted an analysis of the numerous methods that are currently being utilized, and a developed nation, in particular the United States, has started the preliminary work that will scrutinize if the structures, finance methods, and equitable development chances aid in the growth of developing countries. Applegarth (2004) (2004) has also discussed the various programs that are available.

The United States of America not only fosters economic expansion in African nations but also assists in mitigating the negative effects of inadequate levels of investment. It is necessary that a framework be implemented in order to assist and encourage development in terms of domestic savings and investment. This is because there has been an increase in the urgent need for growth and savings in these sub-Saharan nations, and this demand is only expected to grow. It is difficult to quantify the expansion of capital markets in these emerging nations since there are not many capital markets to begin with.

In the last decade, a large amount of effort has been put into getting a clearer understanding of the contribution to economic development that capital investment flows make. A variety of different approaches have been used to achieve this. The question is whether or whether long-term capital investment flows are beneficial to the expansion of the economy. Numerous empirical studies that all found evidence in favor of the role of private capital flows in the process of improving an economy's performance have been conducted. For instance, according to Borensztein et al. (1998), the existence of foreign capital inflows may greatly increase domestic savings and boost capital accumulation. This argument indicated which influence of the crowd coming in was larger than the effect of the crowd leaving. Because of this, capital flows could be able to help the economy flourish via the dissemination of

previously gathered knowledge and the consequences of a market that is more efficient.

Bosworth and Collins (1999), who contributed to the same body of research, reached the conclusion that between 1978 and 1995, a rise of one dollar in foreign investment resulted in an increase of more than fifty cents in domestic investment. This correlation was found within the same body of research.

Nevertheless, over the course of the last several years, there has been a growing interest among economists in the risks that are connected with private capital movements. Regarding this significant topic, Brecher and Diaz-Alejandro (1977) said some forms of international transactions can result in economic effects for beneficiary nations due to skewed patterns of consumption and production. They based their assertion on their research from the 1970s. In more recent times, McKinnon and Pill (1997) said that when there are worries about moral hazard, domestic banks could do too much lending that is backed by foreign capital, which could be bad for the economy's growth. According to Calvo (1998) and others' research, adverse fluctuations in capital inflows could lead to multiple insolvencies, jeopardizing household debt channels and rendering extra skilled labor obsolete. In addition, domestic credit channels could be placed at risk.

In a similar vein, Reisen and Soto (2001) came to the conclusion that capital influx, and particularly form of capital that are short-term and more mobile, causes production losses and bankruptcies due to the sudden reversibility of the situation. In addition, Kose et al. (2004) came to the conclusion that FDI mitigates the adverse effects of production instability on economic development, but other financial flows exacerbate the low link between economic development and change. Furthermore, recent study by Baharumshah and Thannon (2006) found that short-term capital may be harmful to the growth of Asian nations that are on the rise, particularly during times when foreign investment changes rapidly. This was found to be especially true during times when capital flows changed rapidly.

Multiple possible interpretations of the study's results exist, one of which is that short-term and long-term foreign investment may affect the development of the economy in different ways. These three considerations highlight the significance of exploring the many channels via which private capital flows might promote economic growth in both developed and developing countries. This is because data show that the inflow and outflow of private capital significantly affects GDP growth.

To begin with, the inflow of personal money may smooth out fluctuations in consumption and raise living standards. This is because it can be used to fund investments and boost economic development. This is particularly true in emerging nations, which often have high profit levels and a great number of prospects for investments that might generate profits. It is well recognized that recipients of foreign direct investment (FDI) gain from the presence of this kind of investment in a variety of ways. Contrarily, private capital flows enable developed countries to gain from the growth of one's abroad assets and assist retirement and pension funds. This is made possible by the fact that developed nations are able to attract a great number of investors (Hoti, 2004).

Second, the level of economic development may have some bearing on the amount of impact that capital investment infusions have on the expansion of the economy as a whole. [Case in point:] For example, Edwards (2001) found significant capital investment flows, commonly referred to as financial openness, however, this phenomenon is only seen in countries that have undergone industrialization. Countries with greater levels of wealth often have financial institutions that are more advanced, as well as stock markets that are generally more efficient and productive. In addition, since the financial system is constantly adapting to satisfy market requirements economy, countries that possess had greater influxes of investment wealth have also experienced faster rates of economic development (Soto, 2003; Allen et al., 2006). In reality, Soto (2003) continued by saying that wealthy nations that have higher internal institutional features have a propensity to benefit more from portfolio equity inflows. This idea is supported by the fact that these nations tend to be wealthier.

On the other side, the infusion of private money can end up being more harmful than useful for emerging nations. This is due, in part, to the fact that many developing nations lack the kinds of institutions that are required to properly manage huge sums of money when they are transferred into the country

The inconsistent findings regarding the relationship between private capital financial markets and economic development that have been uncovered in the most recent body of research may suggest that the mechanisms by which private capital flows affect economic growth are significantly different from one nation to the next. This is because private capital financial markets and economic development have been shown to be related to one another. This is due to the fact that the study placed a

significant focus on determining how the movement of private money affects various economies. These processes include, but are not limited to, investment (Hermes and Lensink, 2003; Alfaro et al., 2004; Durham, 2004), trade policy (Bhagwati, 1978; Balasubramanyam et al., 1996), innovation transfer (Barro and Sala-I-Martin, 1995), human capital (De Mello, 1997; Borensztein et al., 1998), and others. Hermes and Lensink However, these mechanisms are just another way of saying that previous research has shown that foreign direct investment (FDI) is beneficial to economic growth because it increases the amount of human capital, the spread of technology, the accumulation of physical capital, the growth of the financial sector, and the volume of trade. In other words, FDI is beneficial to economic growth because it increases the amount of trade. Previous research has demonstrated that, even when benefiting from capital inflows, the necessary structures must be put in place. This is something that has to be done in order to maximize potential returns. This is the general agreement that can be inferred from the results of those investigations. In contrast to this, Levine and Zervos (1998a, b) found that the growth of the banking sector and the growth of the financial markets each had a different influence on the growth of the economy. When investors want to develop their own portfolios, they may purchase and sell stocks efficiently and affordably on the stock market. At the same time, businesses could have an easy time gaining access to cash if they issue shares. The allocation of money is a key driver of economic expansion, which may be improved via the use of assets with lower levels of risk and by having easier access to capital markets. Therefore, increased savings and investments may potentially contribute to further development of economic growth over the long.

The aim of this thesis is to examine the relationships that exist between foreign direct investment (FDI), the development of the financial markets, and the growth of the economy in South Africa in light of the facts offered above.

Statement of the problem

There was a noticeable shift toward less new economic development coming from outside of South Africa towards the start of the 1970s. The composition of international financial flows changed from direct investment to investment in portfolios, but what was more significant was that, as a result of the expanding integrated project against apartheid, foreign investors in South Africa were increasingly subject to pressure from governments back home. These demands were

a direct outcome of the expanding global effort to end apartheid. In the 1980s, when increasing divides in South Africa reached an all-time high and the economy was becoming worse, this campaign became much more aggressive.

Based on this assumption, this thesis will show, in a way that is glaringly evident, the connection between the growth of South Africa's economy and foreign direct investment.

Purpose of the study

Foreign direct investment (FDI), whose main goal is to increase export levels, is a significant source of funding for developing nations. If a host country already has technological, managerial, and human resources, it could be easier for it to obtain such resources. This study's main goal is to determine how foreign direct investment (FDI) influences the growth and development of South Africa's economy through time. The World Bank asserts that one positive outcome of foreign direct investment (FDI) is that it increases countries' desire to cooperate and develop. This ultimately leads to increased production and a better qualified staff, among other things. Additionally, it gives the country that is receiving aid the chance to promote its goods and services around the world.

Research Questions

The following is a list of the broad questions that will attempt to be answer in this thesis:

1. Is there a connection between FDI and the expansion of the economy in South Africa?
2. What impact does FDI have on the economy of South Africa, and how does the South African stock market function?
3. What kind of impact does FDI have on the expansion of the South African economy?
4. What are some ideas that may be used to boost FDI and the stock market in South Africa?

Research Hypotheses

H0: There is no significant relationship between FDI and GDP growth in South Africa

H1: There is a significant relationship between FDI and GDP growth in South Africa

H0: There is no significant relationship between stock market and GDP growth in South Africa

H1: There is a significant relationship between stock market and GDP growth in South Africa

H0: There is no significant relationship between gross domestic saving and GDP growth in South Africa

H1: There is a significant relationship between gross domestic saving and GDP growth in South Africa

Significance of Research

Due to this excitement and interest, academics studying international business have determined that FDI research is one of the most fascinating issues that can be researched in the field of economics. Increasing globalization, transportation, and spending are the characteristics of the emerging global economic system that most distinguish it from past economic systems. This is because worldwide conflict has occurred in all three of these areas. This is due to the fact that it is the component that has undergone the greatest transformation in comparison to past economic systems. In recent years, the size of the globe has shrunk to the extent that it has been reduced to the level of a global village. In other words, the world is now a global village. Because of this, the extent to which nations are economically reliant on one another has grown to an even greater extent. As a consequence of the growing economic activity all over the globe and the development of a wide variety of sectors, the notion of international finance has recently risen to the forefront of the financial world. Per the World Bank, South Africa has demonstrated that it is a suitable investment trading ground even during moments of economic boom. Because of this, South Africa is a desirable investment destination for international investors,

regardless of the country in which they are originally from. Those who are in favor of worldwide integration claim that an increase in foreign direct investment (FDI) on a global scale would result in economic growth if globalization is allowed to continue. The link between economic growths, increases in foreign direct investment (FDI), and stock market activity is going to be investigated in this research. The link among foreign direct investment (FDI), the growth of the stock market, and the growth of the South African economy will be studied thoroughly. In determining the correlation that exists between foreign direct investments (FDI), the growth of the financial markets, and the development of the economy, a prediction model was used. It is suggested that the government and regulators use the findings to evaluate the policies that are currently in place on the link between increasing foreign direct investment (FDI), growing the stock market, and increasing GDP.

Contribution to the study

It is crucial to understand the connection between foreign direct investment (FDI), the increase of the stock market, and the development of the economy. The goal of this thesis is to expand on the information that has already been established via the results of earlier research.

By examining if there is a relationship between the development of FDI, the expansion of stock markets, and economic growth that may be defined as one of replacement or complementarity, this notion adds to the body of previous research. The goal of this thesis is to fill in the gaps left by a number of omissions from earlier research conducted in South Africa while also addressing the anticipated need for more research in this nation. South Africa has benefited greatly from the rise of free trade because of its significant role in the global economy. The amount of direct investment that a country gets from other countries may be used to estimate how connected that country is to the rest of the globe.

In order to develop investment-friendly initiatives that will attract a sizable portion of FDI inflows to the nation and support economic growth in South Africa, decision-makers and the authorities will need help from this research in identifying the reasons behind the volatility in foreign direct investment inflows. The research will also help in identifying the factors that contribute to the volatility of foreign direct investment inflows and in attempting to put these policies into practice. Policymakers could find this study useful since it will help them concentrate their

efforts on the resources and industry sectors that are essential to creating possibilities for South Africa. By identifying the crucial areas of concentration and the required resources, it is possible to achieve this aim.

Limitation

The way the economy of South Africa develops is influenced by a wide range of economic issues. The effect of foreign direct investment and the stock market on the expansion of the South African economy will be investigated for the time period spanning 1975 and continuing through 2020. It will emphasize a few of these many elements.

The ARDL method is preferred for concurrently producing immediate and distant future elasticities for a small sample size, and it uses the ordinary least squares (OLS) approach for variable cointegration. This thesis is limited to classical ideas of international commerce, and the research approach is the ARDL technique (Duasa 2007). When using ARDL, the order in which the variables are merged may be changed freely.

Definition of terms

Foreign Direct Investment (FDI): The total inflows of financing that are made with the intention of obtaining "Foreign direct investment" refers to an investor's purchase of a controlling position (ten percent or more of outstanding shares) in a company located in a country with a different financial system than the investor's own. Capital as seen in the balance of payments is the sum of financial assets, capital expenditures of profits, other long-term capital, and short-term capital. Foreign Reconstruction of Profits (FDI) and other types of long-term capital are two examples of alternative forms of capital. This series illustrates the net inflows that foreign investors have received into the economy that is providing them, which is calculated by subtracting the new investment inflows from the disinvestment inflows. After that, we separate it by GDP. Foreign direct investment (also known as FDI) statistics does not provide a full picture of international investment in a country's economy. Money invested abroad that was earned domestically is not reflected in the balance of payments figures. Investment funding comes mostly from locally earned funds in a number of emerging countries. Furthermore, the figures for foreign direct investment do not include intra-unit cross-border activities that do not include equity,

such as the transportation of products and services. Due to differences in the categorization of economies and the process used to change and segregate the information that was given, the World Bank's estimate of global private financial flows is greater than that published by other organizations. In addition, changes may also be generated by the way in which certain payments and certain offshore issuances are regarded, which is particularly relevant when it comes to the subject of debt financing. The following table provides data on capital flows for all of the nations for whom such information is available.

Stock Market: The phrase "stock market" refers to a set of exchanges located all over the globe in which interests in listed companies may be bought and sold. When it comes to matters pertaining to finances, transactions of this kind may take place on either standard platforms or over-the-counter (OTC) marketplaces. Both are subject to the same guidelines and may be substituted for one another in any context.

The phrases "stock market" and "stock exchange" are often interchanged with one another and mean the same thing. Traders on the stock market will either buy or sell shares of a company's stock inside the confines of the bigger stock market, on a more localized stock exchange (or exchanges).

Economic Growth: The process through which a nation's wealth rises over a course of time is referred to as economic growth. The easiest way to explain growth is to think of it as a transformational process. The process of growth is found to be uneven and imbalanced, regardless of whether one studies an economy that is already modern and industrialized or a state of economic progress before the current one. Many attempts have been made by historians of economic thought to establish a system of phases that any economy must go through as it develops. Many of the early authors, who were fond of metaphor, emphasized the similarities between the evolutionary nature financial growth and developmental phases existence, such as growth, maturity, and decadence. This was a common theme. Later authors, such as the Australian economist Colin Clark, have emphasized the dominance of various sectors of an economy at different periods of its growth and modernization. This is something that earlier writers did not place as much emphasis on. According to Clark, development is a process that involves the production of primary (agricultural), secondary (manufacturing), and tertiary (trade and service) goods and services in ascending order of importance. According to W.W. Rostow, an American economist, a traditional society gives way to a transitional one (during which the

foundations for growth are built), then to a "take-off" society (during which development accelerates), and finally to a mature society. Many other hypotheses have been proposed as potential explanations for the transition from one stage to the next. People usually say that entrepreneurship and investing money are the two most important things. It is common practice to differentiate economic growth from economic development, with the latter term often being reserved for economies that are operating at or near the level of subsistence. Economies that already have growing per capita incomes are referred to as having "economic growth," which is a word used to describe these economies.

Gross domestic Savings: Savings is the amount of money that is set aside for future use rather than being spent on immediate needs. In other words, it refers to the money that is saved up for some unspecified purpose in the future rather than being spent right now. All of these are possible uses for money that has been saved. Putting money aside may also help us meet unforeseen costs, such as those incurred by sickness, the purchase of a new appliance in the event that the old one cannot be fixed, or an unexpected vacation. Additionally, savings may be invested, which means that you can make a return on the money that you have put away for savings. To put it another way, not only will you be able to spend the money whenever you choose in the future, but you'll still earn money while you are going through the process.

Investment: Economists imply the creation of items that will be utilized in the production of other things when they talk about "investment." The common understanding of the term "investment" refers to actions such as purchasing stocks (for more information, see the stock market) or bonds, but this meaning is different. In most cases, increasing one's investment capital requires decreasing one's expenditure. If early people lived in a civilization that was entirely based on agriculture, they would have been forced to choose between storing some of the grain for the next year's sowing and eating some of it after the harvest. The second option was an investment. In a civilization that is farther along the path toward modernity, the productive capacity of society is split between the production of products that are purely for consumer consumption, such as hamburgers and hot dogs, and the production of goods that are for investment, such as semiconductor foundries. If we manufacture hamburgers today that each have a value of one dollar, then the sum of the size of the economy will grow by one dollar as a result of this

action. If we make an investment of one dollar in a semiconductor foundry right now, it will lead to a rise of one dollar in our gross domestic product. On the other hand, it will go up by one dollar the next year as a result of the fact that the foundry will keep producing computer chips even after the production of hamburgers has been discontinued. This change will take place in the following year.

Investing money in anything ultimately results in a larger economy. Without it, there would be no further advancement in human history.

CHAPTER II

LITERATURE REVIEW

Introduction

The current corpus of written material on the issue may be studied to provide insight into previous research that has been done on the subject. Before settling on a project's subject, it's vital to do a thorough literature review of related work. The project's theme can't be decided upon till then. The research for this study may be culled from a variety of readily accessible resources, including but not limited to the aforementioned books, periodicals, research papers, written and unpublished research reports, and others. Of course, the most probable options are the usual suspects: books, periodicals, journals, written and unpublished research papers, and so on. Foreign direct investment, emerging stock markets, and GDP are all thoroughly examined in this chapter (GDP). International direct investment (FDI) and the literature around it have been the subject of much study by academics. Foreign direct investment and the expansion of the stock market are two areas that have received much study. Numerous academics and industry professionals have voluntarily contributed their knowledge and expertise to the examination into FDI and the stock market, providing a wealth of information and insight. This chapter presents the study's conclusions, backed by a sizable body of literature on foreign direct investment and related themes. In this section, we will seek for previous theoretical and empirical work on the topics of FDI and the growth of stock markets. The purpose of this chapter requires us to embark on this hunt in order to achieve our goal. This section will cover some of the most important works of prior scholarship that bear on the present study.

Theoretical literature

A lot of time and effort has been put into researching and analyzing the many different parts of foreign direct investment.

However, in the days gone by, the causes and effects of FDI were talked about in a theoretical way, without any real-world examples.

Theories of FDI

The original concept of foreign direct investment may be seen as a development of the traditional notions of international trade, and it has its origins in

the field of economics. Ricardo's theory of comparative advantage was thought to be the first effort to explain foreign direct investment (FDI). One of the foundations for the conception of global capital flows for the benefit of commerce is the Heckscher-Ohlin (1933) thesis. In 1933, this hypothesis was written up. This is due to the fact that various countries have access to various resources, which explains why this is the case. It extends David Ricardo's notion of comparative advantage by forecasting patterns of trade and production based on the factor inventories of a trading zone. In the 18th century, David Ricardo initially formulated his theoretical framework. The model predicts that nations would export goods that make use of whatever factor(s) of production they have in surplus and at a cheap cost, while simultaneously consuming goods that make use of whatever factor(s) of supply other countries do not have. However, Ricardo's theory cannot be used to explain foreign direct investment since this kind of investment requires the participation of two different countries, the trade of two different products, and the full mobility of all constituents at the municipal level. A paradigm like this could not even begin to contemplate the idea of allowing FDI.

It is generally agreed that Stephen Herbert Hymer was the one who originally introduced the microeconomic concept of international trade in the year 1960 (1960), but it was not released until 1976. It is generally agreed upon that his study is a key contribution to the area of FDI study. As per Hymer, the internationalization of firms is influenced by a variety of variables that fall into two distinct categories: The variables that fall under the first group are those that are connected to the quantity and ownership of certain assets that are owned by the firm. The division is composed of a variety of elements that are associated with the presence of market inefficiencies. Hymer came up with the theory that FDI can just take place whenever the advantages of using solid benefits (FSAs) beyond boundaries make it possible for the company to make a profit despite the higher costs associated with doing business in another country. It has been hypothesized that multinational firms (also known as MNCs) have advantages that are unique to their companies and that allow them to compete economically in other countries. The viewpoints held by Hymer serve as the foundation for this argument. On the other hand, Hymer recognized four of the contentions that Heledd Straker raised in his book "Understanding the Global Firm," namely the following:

1. The more traditional view was that financial resources moved in just one direction, from more established to less developed nations. Nevertheless, following the war era, foreign direct investment (also known as FDI) was conducted in both directions among industrialized nations.

2. A nation has only been intended to participate in foreign direct investment (FDI) in one of two directions: either outward or inward. Hymer discovered that multinational corporations crossed country borders in both directions in developed countries. This demonstrates that nations participated in both receiving and making contributions to FDI.

3. The amount of FDI that goes out varies from industry to industry. If access to cash was what drove foreign direct investment (FDI), then there shouldn't be any variations across businesses since all industries would have the same capacity and motivation to invest overseas.

4. In addition, Hymer (1960) and Aliber (1969), who were both cited in Hymer's work, state that there are two reasons why businesses decide to become MNEs:

I. Imperfections in the market: Firms become MNEs because they have competitive advantages, and they exploit these competitive advantages in multiple nations in order to optimize their production.

II. The way competition is set up in some industries makes it more likely that companies will decide to expand their operations to other countries than in other industries. However, these benefits must not be offered to enterprises based in the host nation on the same terms and at the same rate as those offered to companies based on the nation, which is the origin.

According to Caves (1971), the variety of items is the most important factor that influences consumers. According to Caves, FDI may be divided into three categories: vertical, horizontal, and conglomerate. A further subdivision of the vertical kind that may be made is either forward or backward this subtype of FDI is also known as "vertical FDI t." This kind of foreign direct investment (FDI) generally entails foreign associates in countries with lower salaries creating employment intermediaries that are subsequently sold to economies with higher earnings, often to the original business itself. Vertical foreign direct investment is once in a while often known as "efficiency-seeking" foreign direct investment given

that the investment's primary goal is to raise the selling price of the firm's product. This is because the intended direction of the investment is upward. Additionally, vertical FDI may be expressed in two distinct ways. One example of backward integration FDI is when a company invests in a foreign sector of the global economy and then uses those funds to purchase inputs for its operations in the home nation. The extractive sectors have historically attracted the lion's share of retrograde vertical FDI (e.g., oil extraction). Forward vertical FDI is one kind of vertical foreign direct investment. When a corporation in one country sells the goods made by a company in another country, this is called a "backwards integration" venture.

When companies from different countries invest in one another to produce or provide the same product or service, this is known as "horizontal foreign direct investment" (FDI). This kind of financing prioritizes the production of subsidiaries and affiliates in order to supply domestic markets, rather than the export of products from the MNE's home country. Foreign direct investment of the kind we're talking about here is often called "market-seeking" FDI. When companies from developing nations invest in companies from more developed countries, the resulting horizontal expenditures tend to enhance the demand for local labor in the investor's home country (Mariotti, S.; Mutinelli, M.; Piscitello, L., 2003). An example of a horizontal asset is setting up a factory in a foreign nation that uses the same exact manufacturing methods as the investor's home country. In the past, FDI was used to capitalize on expanding commercial opportunities in massive markets. Similarly, this is the goal of horizontal foreign direct investment (Botric, V.; Skulic, L., 2005).

Buckley and Casson (1976) are the ones credited with the conception of the theory that would later become known as the "internalization hypothesis." One example of backward integration FDI is when a company invests in a foreign sector of the global economy and then uses those funds to purchase inputs for its operations in the home nation. The extractive sectors have historically attracted the lion's share of retrograde vertical FDI (e.g., oil extraction). Forward vertical FDI is one kind of vertical foreign direct investment. When a corporation in one country sells the goods made by a company in another country, this is called a "backwards integration" venture.

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In spite of this, the fact of the matter is that Success is determined by more than just price, though need to take into consideration a range of other elements, including cultural, regulatory, as well as some other environmental issues (Jigme, 2006). One of the problems with the internalization hypothesis is that it places an excessive amount of emphasis on manufacturing factors when making decisions about whether or not to internalize processes. The inadequacies of the theory as a whole are exacerbated by this particular defect. The hypothesis does not need an explanation for the decision that company owners make to locate their companies in certain locations based on their own liking for the atmosphere of such locations. This is due to the fact that the theory focuses on how people interact with the environment in which they find themselves. There are instances when one location is superior to another because of the religion practiced there, the language spoken there, or the culture.

A contemporary theoretical development that investigates the roots and manifestations of globalization is the product life cycle. Raymond Vernon, writing in

the middle of the 1960s, is credited as being the first person to present this idea. Vernon said that it is normal practice for the same firms to seek FDI in order to develop a product for consumption in international markets. These businesses were the first to introduce the goods to their respective domestic marketplaces. The PLC Theory predicts that the creation of businesses will go through a series of clearly defined stages as more time passes. The first stage that a product will go through is the stage of introduction, which will then be followed by the phases of growth and eventual deterioration. How much time a product spends in each step of the process of the manufacturing process is contingent upon a variety of different aspects and may be affected by a number of distinct variables. If a company wants to get the most out of its investments and optimize their profits, according to Vernon, they shouldn't even think about making direct investments abroad until a particular point in the product's life cycle. Emerging markets are home to a plethora of stores that focus only on selling vintage goods. When the degree of domestic demand in other developed countries rises to where it can sustain domestic production of goods, then they will start to participate in other developed countries. This has the immediate and direct effect of making the domestic market the top target for FDI. As a result of how production of products and market saturation cause price competition and cost restrictions, manufacturing is eventually relocated to emerging nations. One prevalent fallacy is that investing in less developed nations is the most effective way to reduce expenses and hence decrease prices. The earnings in these countries are often lower than those in wealthy nations. This means that in the latter stages of a product's life cycle, FDI will be focused on exports rather than domestic production, with concerns about the availability of cheap labor acting as the primary driver. During the twilight of a product's life cycle, when exports fall short of imports, the nation that pioneered the product finds itself a net importer. However, the PLC theory does not explain why it is beneficial for a corporation to participate in FDI at these periods rather than going with a transfer from its home base or licensing an overseas firm to produce its product. In other words, the PLC hypothesis does not provide an adequate rationale for why a company would benefit from FDI under these circumstances. Despite the fact that Vernon's idea has relevance to some things, it is not applicable to multinational firms that have mergers since such companies operate on a different scale. Some detractors are of the opinion that business owners would sometimes buy assets in other countries before releasing their wares on the

market (Jigme, 2006). The term "oligopolistic response" was used by Knickerbocker (1973) to describe the process by which businesses follow their competitors into overseas markets. The idea asserts that foreign direct investment (FDI) flows are a representation of strategists' competition among companies operating in global marketplaces. Oligopolistic businesses are distinguished by a high degree of interdependence among the large firms; this means that the actions of any one company have an immediate impact on the other significant enterprises in the industry. Similarly, there is an imitative tendency in FDI. This indicates that if a firm operating in an oligopolistic market were to experience growth in that market, its competitors would almost certainly be able to eliminate that company's export business to the same market. In other words, the firm's competitors will want to replicate the firm's success.

Meyer (1995) presented the concept of structural change FDI as a different kind of development strategy, including FDI. Because of the pressure on costs, existing businesses that are at risk of going out of business owing to a loss of competitiveness are confronted with the need to reorganize. Restructuring might be accomplished by the installation of industrial facilities in other countries. With this method, businesses are able to maintain the development of their current industry-specific assets while switching from the more costly labor force of their home nation to the more affordable labor force of the organize country (Meyer, Klaus E., 1995). As was said initially, institutional change FDI is based on export-oriented FDI, which means that it is focused on factor cost differentials.

Empirical literature

FDI and economic growth

The relationship between foreign direct investment and economic development has long been a controversial issue in the study of macroeconomics, which Tanaya and Suyanto (2022) address. While some studies find a connection between the two elements, others come to the opposite result. This study fills that gap by examining the relationship between foreign direct investment and Indonesian economic development for the time frame starting in 1970 and continuing through 2018. Given that Indonesia is a developing country and one of the countries that receives the most foreign direct investment (FDI), research on how FDI affects economic growth is crucial. Several unit-root tests, including Augmented Dickey-

Fuller (ADF), Phillips-Perron (PP), Kwiatkowski-Phillips-Schmidt-Shin (KPSS), and Lee-Strazicich (LS), an auto-regressive, distributed-Distributed-Lag (ARDL) bounds-testing method for cointegration, are used in this investigation's analysis of time series. The results suggest a causal connection between GDP and FDI over the long and short terms. Foreign direct investment, in contrast, barely has any long-term effects on GDP.

The findings of the Granger causality test show that the ARDL's assertion that GDP can only affect FDI in one way is true. The effect of foreign direct investment (FDI) on the development of Nigeria's economy, the continent's most populous nation at the time, was studied by Orji et al. in 2021. Additionally, from 1981 to 2017, they evaluated the long-term relationship between foreign direct investment and economic development in Nigeria. Their findings were published in the journal *Economics and Finance*. During the course of the investigation, both the ordinary least squares method and the autoregressive distributed lag modeling strategy were used. A favorable and sizable correlation was found between the growth of the Nigerian economy throughout the study period and FDI, according to the empirical research FDI. The research came to the conclusion and made the recommendation that the government of Nigeria should create policies designed to increase foreign direct investment across the board, but particularly in the industrial and service sectors, in order to improve the nation's physical infrastructure, productivity, and employment opportunities. In order to increase the number of human resources that are accessible to businesses and industries, the nation's educational policy must be improved. The government would then be able to create effective policies that are capable of enticing profitable FDI into the nation.

Joshua (2022) is tasked with researching the FDI-led development hypothesis with respect to South Africa for the time period spanning 1970 to 2017. It is necessary to use the autoregressive distributive lag (ARDL) approach if trying to find the unit root using more traditional techniques since this shows a separate order of integration. In addition, the present study makes use of some cutting-edge accounting methods, such as the impulse response function and forecast error variance decomposition (FEVD), in order to investigate the responsiveness of the variables to one another. These methods were chosen because they are relatively recent developments in the field. Our research shows that receiving foreign direct investment has a major positive impact on country economies; as a consequence, the

FDI-induced growth nexus in the South African economy has been validated. Additionally, the results of the causation analysis show that there is a one-way relationship between urbanization and FDI inflows, just as there is a one-way relationship between FDI inflows and economic development. In order to draw foreign direct investment to South Africa, urbanization appears to be the only factor that matters. The expansion of the country's ready market and absorptive capacity should be given high priority by the government in light of these results. They might do this by making investments in the development of metropolitan centers, enhancing infrastructure, and establishing industrial zones. By bolstering the existing infrastructure, metropolitan centers can be enlarged in order to achieve this goal.

The study carried out by Odhiambo (2022) examines the relationship between foreign direct investment and economic development in Kenya between the years 1980 and 2018. This spans the years 1980 to 2018. omission of As intermittent variables in the Granger causality model, M1 and M2 are used to generate a set of multivariate Granger causality equations for the money supply and commerce, respectively. This is carried out in an effort to combat the variable bias that has been demonstrated to exist in several prior research investigations. The results, which were obtained by applying the ARDL bounds testing methodology, show that there is a one-way causal relationship between economic growth and FDI in Kenya. Regardless of the number of time periods included in the causal analysis, these results remain constant (short run or long run). Given these results, it is plausible to conclude that Kenya's thriving economy and the prudent macroeconomic policies it has adopted over the last ten years may be somewhat to blame for the current rise in foreign direct investment into the nation. Foreign direct investment and Kenya's economic growth has both been the subject of prior studies, but to our knowledge, this is the first study to examine whether or not there is a causal relationship between the two variables throughout the course of the most recent few years. The ramifications for policy are discussed.

For the Federal Government of Somalia, Ahmed Yusuf (2022) performed study on the issue of how foreign direct investment affects economic growth. The topic of foreign direct investment in Somalia has been the subject of a sizable quantity of research. Even while corruption is a problem that impacts people everywhere, Somalia is particularly adversely affected by it. As a result, it has prevented advancement in every sphere of social life. This study examines

information on a wide range of investment prospects for economic growth in order to achieve this aim. The scope of investment and its implementation inside public entities were the main study focuses. Additionally, the responsibility of government workers was made public, and authorities' investing methods were looked examined. As a result of foreign direct investment, the growth of the economy, the numerous alternatives revealed by this study, and other factors, the method in which foreign direct investment is handled with has become more effective. This research emphasized the importance of government employees sharing their thoughts on how to reduce corruption through increasing foreign direct investment and economic growth. In order to identify the tactics that have been most effective in the struggle against corruption, research has been done. The results of this study show that changes in economic status are not distributed equally between the sexes. Zhang, Q., & Wang, Y. (2004). The results of a study into the educational backgrounds of bureaucrats helped to confirm the validity of the responses offered in this study. The survey's methodology and methodologies were adjusted to incorporate respondents' views on FDI, economic expansion, and the fight against corruption. A questionnaire was used to gather the main data that was required for the investigation. In order to increase the level of comprehension that the target audience possessed, secondary data were also incorporated into the main body of the study. According to the article's conclusions, Somalia's public sector is present in the country's economy. An added benefit of both is that they may be used in activities that promote development.

Wang (2022) an extensive study has been conducted on the issue of direct correlation between FDI and GDP expansion, often known as FDI-EG. Since the first publication in the Web of Science pertaining to the FDI-EG study was published in 1992, the total amount of time spent on research is getting close to 30 years. The purpose of this work is to do a bibliometric analysis in order to evaluate the FDI-EG research from a variety of perspectives. The researchers gathered a total of 1,075 documents pertaining to the FDI-EG study and then used the Bibliometrix program to conduct a thorough bibliometric analysis and examination of the methodologies used. The Bibliometrix program has shed light on the prominent scholars in the FDI-EG study as well as the conceptual structure and theme development of the investigation. Reviewing the relevant research helps with doing content analyses, Authorship, citation/co-citation analyses, publications with the greatest impact, and

co-citation/citation analyses, among other types of analyses. According to the results, C. Chen, the *Publication of International Economics*, and the United States of America are, in descending order of influence, the most influential researcher, journal, and country. Research conducted by the FDI-EG is centered on technological advancements and their effects on business performance, as well as research modeling and theoretical inquiry. Additional discussion is given about the present state of research, potential routes for future study, as well as the benefits and downsides of the methodologies. This page provides assistance in comprehending the development of FDI-EG research from the points of view of bibliometrics and reviews.

Over the last several decades, there has been an increase in foreign direct investment flows, and many researchers think that there is a significant relationship between trade, FDI, the labor force, and economic development in the nations receiving the investments. The fact that worldwide flows of foreign direct investment have expanded over the previous few decades lends credence to this notion (Ciobanu, 2020). With the aid of the data at our disposal, we will investigate the effects of FDI on GDP growth as well as the relationships between GDP, trade openness, labor force, and FDI in the context of Romania during the past three decades. We investigate the existence of a long-term relationship between FDI, trade, labor, and GDP growth using the ARDL bound testing technique. The direction of any potential causation that may exist between the variables may then be determined using the error-correcting Granger causality test. The results of the study showed that real GDP and FDI co-integrate when they were employed as the dependent variables. Over the next several decades, the size of Romania's labor force, the level of trade liberalization, and foreign direct investment will all have a significant impact on the nation's economic growth. Factors attracting foreign direct investment include long-term growth in the gross domestic product (GDP), exports, imports, and the size of the working population.

Intriguing research on the impact of FDI on economic development has been released regularly during the last three decades. Educators from all across the globe have participated in these research. The dynamic influence of a trade policy regime on foreign direct investment (FDI), trade, and growth in a single host nation was originally theorized in Bhagwati's 1978 thesis. His notion of stifling expansion got a boost from Bhagwati (1994), Brecher, and Findlay, and they supplemented it with

this new idea. Furthermore, he provided this idea as an expansion of his theory about growth constraints. His idea of growth that mimics other growth led him to propose this concept (1983).

The concept, which is also called as the "Bhagwati hypothesis," suggests that in an environment with limited shipping (IS), foreign direct investment (FDI) inflows are more likely to impede economic progress than to assist it. This concept was first proposed by Jagdish Bhagwati in the beginning. Foreign direct investment (FDI) often provides huge firms with the opportunity to maintain and even enhance income, profits, market share, and economic rent as a consequence of the highly protected local market that is under the control of IS. This is due to the fact that multinational firms often see foreign direct investment as an opportunity to invest in poor nations with minimal competitive advantages. This is due to the fact that FDI is often used by international companies as a means to preserve and even enhance their economic rent, market share, and profitability (Aitken, Hanson, & Harrison, 1997; Brecher & Findlay, 1983).

This is due to the fact that multinational firms often employ something called FDI in order to maintain and even enhance their market dominance. This is because the developing countries that is hosting the FDI does not have a significant advantage in terms of competition. In addition to the two assumptions that were mentioned before, a significant amount of research, both theoretical and empirical, acknowledges the availability of various routes via which FDI may have a positive or negative effect on economic development. Increasing human capital, making technology advancements, being more competitive, and selling more products are some other possible routes (Mohamed & Sidiropoulos, 2010; Blomstrom & Kokko, 1998). In addition to the increased investment accumulation and efficiency brought about by agreements and demonstrations, the advantages of these channels for the host financial system are as follows: (Mohamed & Sidiropoulos, 2010). The creation of new jobs in the host nation, as well as the facilitation of data transfer and professional skill development via migration in both directions within those countries, may be another way that foreign direct investment (FDI) can contribute to the acceleration of economic growth (Brecher and Findlay, 1983). According to Whalley and Xin (2009), it is conceivable for the efforts of local businesses to innovate and learn to enhance the productivity of the economy where such businesses are situated. The presentation of this took place in the United Kingdom.

Diffusion of technology is a process that, in addition to being the result of technology transfer, acts as a way of boosting economic development. Diffusion of technology is a process (Grossman and Helpman, 1990). Romer (1990) came to a similar conclusion and emphasized the significance of international commerce in the dissemination of innovation as a driver of economic progress. Romer's findings provided evidence in support of Romer's conclusions. Endogenous growth theorists like Romer (1990) and Grossman and Helpman (1990) are not the only ones who recognize the significance of technology dissemination in facilitating the quickening of economic development in developing countries. Additional examples may be found in Young (1991) as well as Eaton and Kortum (1999).

Love and Chandra (2004) and Chakraborty and Basu (2002), two other pro-liberalization of FDI studies, also emphasized the role that FDI may play in helping the economy grow. Thus, Love and Chandra (2004) concluded that FDI should be encouraged if rapid economic growth in advanced economies is to be achieved. Durham (2004) cautioned, however, that although FDI may help stimulate economic development in the developing world, the extent to which it does so depends on factors such as the capabilities of the local labor force, trade regulations, and the adaptability of local enterprises. Although foreign direct investment (FDI) has been shown to drive economic growth in many developing nations, it may not do so everywhere (Felipe, 1997; Durham, 2004). Even though FDI may help most developing countries grow their economies, this is still the case.

Research on the impact of FDI on economic growth has been mixed, contrary to the positive prognosis stated above. Singh (2003), Chakraborty and Basu (2002), and Young and Lan (1996) are only a few of the scholars who have voiced skepticism regarding the effect of FDI on economic growth. Both Singh (2003) and Young and Lan (1996) found that FDI's impact on GDP growth varied by sector. In addition, the benefits of FDI were skewed by the rate of growth in the investor's home country. The political and economic climate of the host nation may also have a role, as shown by Young and Lan (1996). Chakraborty and Basu (2002), who studied the impact of international trade and FDI on the spread of new technologies, shared this pessimistic view. However, investments in foreign direct investment may slow economic development in the country that receives such money because to the large reverse flows produced by multinational corporations (Akinlo, 2004). These reverse flows may take the form of dividends, significant concessions, or transfers of revenues, as

stated by Akinlo (2004). They might also materialize in the form of a financial return for the investor.

Pradhan examined the impact of FDI in Australia, Canada, and Israel on the trade-led development hypothesis from 1965 to 2009, and his findings were published in 2011. Panel cointegration and causality tests were the theoretical foundations for this investigation. Taking into consideration the effects of several countries, the findings point to a long-term cointegration between economic development and foreign direct investments. Based on the results of the causality test, we can conclude that openness and economic growth are positively correlated both in the long and short terms. It is also shown that this causality works in both directions. The results of both the short-term and the long-term investigations corroborate this conclusion. Foreign direct investment (FDI) is shown to be correlated with economic growth, but not the other way around. This is a one-way street. FDI was shown to be the primary factor in the expansion of the Australian economy. The study's findings suggested that stronger economic development in the three nations under study might have a detrimental effect on openness and FDI.

Using the BRICS nations as a case study, Sridharan, Vijayakumar, et al. Chandra (2009) looked at the connection between FDI and economic growth (Brazil, Russia, India, China, and South Africa). Time series data from 1996–2007 were analyzed for Brazil, 1994–2007 data was analyzed for Russia, 1992–2007 data was analyzed for India, 1999–2007 data was analyzed for China, and 1990–2007 data was analyzed for South Africa. The rate of economic expansion is tracked throughout this inquiry through the Industrial Production Index (IPI). His contributions to the field of estimation comprised not only the cointegration model that he developed, but also the vector error correction model (VECM). The empirical research shows that foreign direct investment (FDI) has a unidirectional effect on economic development in India and China, but a bidirectional effect in Brazil, Russia, and South Africa.

Using detailed data on FDI inflows to Indonesia from 1997 to 2006, Khaliq and Noy (2007) investigate the impact of FDI on economic growth. Foreign direct investment (FDI) and GDP growth were examined using these numbers. They used improved manufacturing function definition and the method of regression with time-fixed effects to reach this verdict. When everything was said and done, they found that FDI contributed positively to overall economic development. To the contrary, after taking into consideration the varying average growth performances of the

various industries, it was determined that the positive effect of FDI was no longer visible. The findings of the estimate demonstrated that the composition of FDI is relevant with regard to the influence it has on economic growth. This was discovered by studying various effects across sectors. Foreign direct investment (FDI) helped only a few industries, and one industry even showed that foreign direct investment stunted development significantly.

Foreign direct investment in South Africa and the effect it has on the country's economy as a whole as a result of this investment was studied by Moolman et al. (2006). Cointegration techniques and data pertaining to time series from 1970 to 2003 have been used as building blocks in the development of a model suitable for policy analysis. The model included five distinct factors to explain FDI.

Facilities, trade access, and a predictor variable for fines are also included. Other measures of market size include the real gross domestic product (GDP) and the real exchange rate. Additionally, the exchange rate between two currencies is shown. The empirical findings suggest that the South African government should prioritize market size, adaptability, and connectedness in its efforts to entice FDI. As a result, it became clear that FDI contributed significantly to the economy's growth in this way.

Fedderke and Romm (2004) used the vector error correction model as the primary research method in their analysis of the effects of FDI on growth in South Africa. Foreign direct investment (FDI) in South Africa was studied in order to provide a structural understanding of the stimulative effect of FDI and the variables that drive it. This study makes use of time series data collected in aggregate form in South Africa between the years 1960 and 2002. Evidently, the presence of international capital has a positive spillover effect on production in South Africa, as shown by empirical evidence on the effects of foreign direct investment (FDI). Foreign direct investment is shortened to FDI. In spite of mounting evidence that suggests foreign direct investment might ultimately supplant domestic investment, the impact of this trend is likely to be minimal in the short future. Alfaro, Chanda, Ozcan, and Sayek (2006) used cross-section regression for 71 developing countries to explore whether or not economies with sophisticated financial markets are able to benefit and increase their economic development by attracting foreign direct investment. The scholars wanted to know the solution to this puzzle. They stated that if domestic financial markets are not established, it would be more difficult for the country to reap the benefits of potential economic repercussions from foreign direct

investment. This is due to the fact that FDI is the source of the benefits from these spillovers. Net FDI was calculated using information from the International Monetary Fund's "Financial Statistics" report from 2000. The expansion of the economy was quantified by the rise in real per capita GDP in constant US dollars. The rate of economic growth was calculated using this figure. These statistics were mostly from the World Development Indicators. A contact exercise was performed to calibrate the theoretical and empirical literature. In most of the 71 developing countries studied, the data showed that FDI had a negative effect on economic development. The selection of these countries was made from a bigger group. Thus, they have provided evidence supporting their claim that underdeveloped financial markets and institutions might dampen the benefits of FDI (FDI).

Chen (1992) also conducted research across China's major regions in the 1980s and found strong correlations between the availability of human resources and economic growth. The results obtained by Chen were published in the journal *Economics and Society*. More than that, Romer (1990) highlighted the importance of international commerce in the dissemination of innovation as a key factor in economic growth. The purpose of this was to highlight the role that technological advancement plays in fostering economic development. Grossman and Helpman (1990), who studied the impact of technology transfer on developing countries' economic progress, provided more evidence for this claim in their study. Having access to cutting-edge technology was highlighted as being of paramount significance, in particular for nations in the process of economic and social development. More evidence for the previously indicated correlation was provided by this study's findings. Because of this, Tian et al. (2004) concluded that promoting FDI is something that should be promoted if fast economic development in developing nations is to be achieved. Foreign direct investment (FDI) is widely regarded as one of the most effective tools for combating poverty in developing countries, with a variety of transmission mechanisms linking FDI to growth in the economy (Ikiara, 2003). As a result of these factors, economic expansion may be fostered further (OECD, 2002). De Mello's (1997) research suggests that FDI may promote economic growth in two main ways. These include the transfer of knowledge brought about by FDI in the form of skills and labor training, better management practices, and new organizational structures, as well as the adoption of new technologies brought about by FDI in the form of capital spillovers. These two

ways have been pointed out as possible ways to boost growth. Foreign direct investment (FDI) may stimulate economic development by adding cutting-edge technology, ideas, management strategies, and capital goods to the economy of the country hosting the investment. Recent studies on expansion have focused heavily on the role that technological advancement plays as a catalyst for economic development (Grossman and Helpman, 1990). This is predicated on the assumption that less developed countries' ability to rapidly adopt and use cutting-edge technology exported from more developed nations is a crucial factor in determining their own growth pace. This is due to the fact that more developed nations are better able to adopt and implement cutting-edge technologies (Ozturk, 2007).

The transfer of cutting-edge technology to MNC affiliates based in the host nation can be another way that FDI can contribute to the development of the economy. This can be accomplished through an increase in total factor productivity (TFP) in the economy of the host nation. Additionally, FDI may help in the formation of quality of human resources by contributing to the integration of international trade as well as by generally bettering the environmental and social conditions of the country that receives the investment (Blomstrom et al., 2000; Ikiara, 2003). (Kumar, 1996; Akinlo, 2004; El-Wassal, 2012) said that having a financially stable, well-developed market is also important for sustainable development.

Nevertheless, in order for this to be the case, there must be robust and active financial institutions (Prasad et al., 2007; Alfaro et al., 2004). Even while overseas investors may not be able to obtain cash through the local market, a well-developed local financial intermediation might still be useful to local suppliers in terms of updating their technology and equipment in order to supply better inputs for foreign investors (El-Wassal, 2012).

Foreign direct investment (FDI) is expected to promote economic growth since it brings in capital from outside and inspires domestic investment. This action will be taken so as to fulfill the hope that FDI would promote economic growth. By establishing both forward and backward links with the domestic economy, new job opportunities and more economic activity may be generated indirectly. Two possible methods of accomplishing this goal include establishing connections either forward or backward with the home economy. Bosworth and Collins (1999) found that FDI resulted in a "one-for-one boost in domestic investment," in contrast to other forms

of private finance, which are more likely to support consumption. The fact that FDI came from overseas allowed for this discovery. Of the 58 developing countries that took part in the study, several are in Africa (see also Loungani and Razin, 2001). Foreign direct investment (FDI) may also help promote efficiency in established markets by driving increased competition and, as a consequence, increasing output. This is another way in which FDI may contribute to improving efficiency.

In the next paragraphs, we'll dive into this topic (Cotton and Ramachandran, 2001). Herding may lead to even greater gains in this regard. Foreign direct investment is concentrated in areas that are already home to several multinational businesses, as stated by Hanson (2001). Foreign direct investment (FDI) may attract even more FDI if it inspires confidence among prospective foreign investors; according to this theory (see also Jacobs, 2001). Though FDI may hasten development, it always carries with it the danger that monopolistic tendencies on the part of foreign firms would discourage reinvestment in the host country. Despite FDI's potential to hasten economic growth, this is the case (Gardiner, 2000). An increase in rivalry between local and foreign corporations may be useful for a number of reasons, including making the market more competitive, fixing weak ties between businesses, and making better use of scarce resources. There is a danger that FDI may "push out" indigenous enterprises, which might affect sector size and job growth (Cobham, 2001; Jacobs, 2001). Foreign competitors sometimes have an upper hand over their domestic counterparts because of their greater marketing and advertising might, their inclination to stay as oligopolies, and their ability to engage in predatory pricing in order to discourage new entrants. Despite this, the available information shows that crowding out is a less common occurrence and that the advantages of FDI are more likely to occur overall. Gains in these areas include enhanced creativity, more robust competition, and more efficient operations (Cotton and Ramachandran, 2001:1).

Stock Market and Economic Growth

The Chinese economy, which is now the most valuable and is growing at the fastest rate in the world, is the subject of Pan and Mishra's (2018) examination into this relationship. By utilizing unit root testing with an ARDL model in the presence of structural failures, we get to the conclusion that the global financial crisis had a significant impact on China's real and financial sectors. After analyzing the data, this

conclusion was drawn. After carefully examining the available data, this conclusion was drawn. Our findings suggest Shanghai is more pertinent. It is sufficiently negligible that a negative relationship between a stock market and an industry can be disregarded over a long period of time. Our hypothesis, which holds that the existence of irrational stock market performance and financial bubbles in China may be inferred from the fact that there is a relationship between the two that is negative, is supported by the finding that there is a negative correlation between the two. No information that we can find supports the hypothesis that, in the foreseeable future, the stock market will be correlated with the real economy. The Toda Yamamoto causality test may be used to back up the demand-driven claim that rising GDP promotes the growth of stock markets throughout the world, including China's B share market. We may use this to show that the demand-driven assertion is accurate.

Pan and Mishra (2018) investigate this connection in relation to the Chinese economy. This is due to the fact that China's economy is now the most valuable and is growing at the fastest rate. By applying unit root testing with an ARDL model and structural failures, they discover that the global financial crisis had a major influence on both the real sector and the financial sector in China. After discovering that China was affected by the global financial crisis, this conclusion was drawn. This conclusion was made possible by the analysis of the data. Not only that, but we also learned that Shanghai Long-term, a stock market's negative association with a certain economic sector still holds true, but its effect is so minimal that it may be disregarded. According to our hypothesis, bubbles in the country's financial system and the excessive rise of the stock market in China are intimately related. There is nothing in the near future that supports the theory that the stock market can predict the economy's growth with any degree of accuracy. The results of the Toda Yamamoto causality test support the demand-driven notion that emerging economies, like China's B share market are the key drivers of new stock markets.

According to Grbi, M. (2021), there are connections between the growth of the economy and the stock market in the Republic of Serbia from 2002Q1 to 2018Q4 that merit further study. Investigating this is something that is necessary. The total value ratio and turnover ratio are indicators of the liquidity of the stock market, the market capitalization ratio may be used to measure the size of the stock market, and the rate of real GDP growth can be used to measure the health of the economy.

To account for important features of the stock market's evolution, the whole set of these indicators is used. The Toda-Yamamoto-Dolado-Lütkepohl approach is used to conduct the study within the parameters of the Vector Autoregressive model. The Granger causality test, the impulse response function, and the prediction error variance decomposition are all included in this approach. The one-way Granger causation, which relates economic growth to gains in the stock market, is supported empirically by this study. According to the impulse response function, abrupt and large changes in stock value have a positive impact on economic development, but liquidity shocks produce short-term fluctuations in the rate of economic growth between positive and negative values. University of Chicago economists created the impulse response function. The results of a research known as variance decomposition suggest that shocks in the market capitalization to total assets ratio may account for at least some of the variation in the pace of economic growth.

The information may be interpreted in a variety of ways, one of which recommends that the Republic of Serbia's government should prioritize creating a plan to promote the stock market in order to hasten economic progress. analyzes the relationship between the growth of the stock market and the growth of the economy in the Republic of Serbia, focusing on the time period starting in the first quarter of 2002 and finishing in the fourth quarter of 2018. Comparing market capitalization to GDP will tell you how big the stock market is, comparing total value to turnover and turnover will tell you how liquid the market is, and comparing real GDP growth to total GDP growth will tell you how fast the economy is growing. To account for important features of the stock market's evolution, the whole set of these indicators is used. The Granger causality test, the impulse response function, and the prediction error variance decomposition are performed as part of the research using the Toda-Yamamoto-Dolado-Lütkepohl approach within the framework of the Vector Autoregressive model. These steps are all completed in the correct order.

The one-way Granger causation, which relates economic growth to gains in the stock market, is supported empirically by this study. According to the impulse response function, abrupt and large changes in stock value have a positive impact on economic development, but liquidity shocks produce short-term fluctuations in the rate of economic growth between positive and negative values. University of Chicago economists created the impulse response function. The results of a research known as variance decomposition suggest that shocks in the market capitalization to

total assets ratio may account for at least some of the variation in the pace of economic growth. The information may be interpreted in a variety of ways, one of which recommends that the Republic of Serbia's government should prioritize creating a plan to promote the stock market in order to hasten economic progress. analyzes the relationship between the growth of the stock market and the growth of the economy in the Republic of Serbia, focusing on the time period starting in the first quarter of 2002 and finishing in the fourth quarter of 2018. Comparing market capitalization to GDP will tell you how big the stock market is, comparing total value to turnover and turnover will tell you how liquid the market is, and comparing real GDP growth to total GDP growth will tell you how fast the economy is growing.

All of these indicators are used to take into consideration important facets of the stock market's development. The Granger causality test, the impulse response function, and the prediction error variance decomposition are carried out within the framework of the Vector Autoregressive model using the Toda-Yamamoto-Dolado-Lütkepohl approach. These steps are all completed sequentially. The one-way Granger causation, which connects economic expansion to rises in the stock market, is empirically supported by this study. A fast and considerable change in stock value can have a positive or negative impact on economic development, according to the impulse response function, whereas liquidity shocks can induce short-term fluctuations in the rate of economic growth between positive and negative values. Economists at the University of Chicago created the impulse response function. The shocks in the market capitalization to total assets ratio may account for at least some of the variation in the pace of economic growth, according to the results of a research known as variance decomposition. The information may be taken in a variety of ways, but one interpretation recommends that the Republic of Serbia's government should prioritize creating a strategy to boost the stock market in order to hasten economic growth.

The vector auto regression (VAR) model was used in research by Rehman (2018) to examine the association between improvements in banking technology and gains in Saudi Arabia's GDP between the years 1985 and 2016. The rise of the stock market and the expansion of the banking sector are two of the components that make up the financial sector's expansion. The two variables that are the focus of this inquiry do not have a connection that can be referred to as long-term co-integration, according to the results of the Johansen co-integration test. Only a small number of

the asserted variables have coefficient values that are statistically significant, according to the results of the VAR analysis. The Granger causality test shows that there is a link between the growth of broad money to GDP and the increase in real GDP per capita that is both positive and negative (M2 to GDP). The SMD, which may be calculated as the ratio of stock market capitalization to GDP, can be used to calculate the SMD, which is the fundamental source of the BSD. To promote economic growth, the Kingdom's government should enact and strictly execute a comprehensive package of fiscal changes in line with expectations from the international community. This would be in keeping with what the world community would anticipate.

The key idea behind Schumpeter and McKinnon's finance-growth theory is that it is necessary to have an understanding of how finance contributes to growth in order to appreciate what makes the connection between stock markets and economic development possible (Schumpeter, 1932; McKinnon, 1973). Liquidity, risk diversification, information collecting about firms, corporate governance, and the mobilization of savings are only few of the ways in which stock markets contribute to economic growth when seen in this light (Levine and Zervos, 1996). The danger of a shortage of liquid resources is mitigated, as Bencivenga et al. (1995) show, since stock markets facilitate the transfer of financial assets. According to Levine (1997), stock markets provide companies the opportunity to have a diverse portfolio, which protects investors from the idiosyncratic risks associated with their individual investments. In other words, the stock market makes it possible for enterprises to have many types of investments. In addition, since large portfolios are easily accessible, businesses now have the chance to concentrate on manufacturing processes, which is a positive development. results in an increase in the efficiency of the business According to Acemoglu and Zilibotti (1997) The consistent delivery of information on companies is another way that stock markets encourage economic expansion. The easiness and promptness with which information may be released that impacts the stock prices and profits of companies that are publicly traded stimulates research and development, which in turn furthers economic expansion. In the context of good corporate governance, well-functioning stock markets facilitate the effective distribution of resources and economic expansion by reducing the impact of the principal-agent issue.

When discussing how stock markets affect economic growth, several viewpoints exist. Several theoretical models suggest that expanding stock markets might eventually slow economic development. Popular belief is that the stock market significantly affects economic growth; nevertheless, this may not be the case. Numerous scholars, including Bencivenga and Smith (1991), Bhide (1993), Shleifer and Vishny (1986), and Joseph Stiglitz (1985, 1994), have warned that the stock market might be holding back economic growth. They argue that the externalities associated with capital accumulation may lead savings rates to fall, making the stock markets' liquidity counterproductive to economic growth, effectiveness of corporate governance and, by extension, and the results of broad stock ownership. Stock market growth is stifled as a result of this.

Even though there are other points of view, empirical studies continue to show that financial markets and sustainable development are linked in a positive way, at least to some degree. According to the findings of Kenny and Moss (2001), participation in the stock market provides beneficial impacts that significantly outweigh any potential negative consequences. Levine and Zervos (1998) made a number of important observations, one of the most important of which was that strong financial institutions and robust stock markets are essential components of a healthy economy and fast economic growth. Even further, Bekaert et al. (2004) highlight the significance of deregulatory efforts made in the equity market as a means of fostering economic expansion.

The years 1968-1998 were included in the sample, however the precise years covered by the data differed each country. Countries from all across the globe were represented in this sample. Real GDP, the market capitalization ratio, domestic bank lending to the private sector, and stock market volatility are only few of the variables taken into account by the VAR framework. The results suggest a possible causal relationship between the growth of the German banking sector and the growth of the German economy. Contrarily, the impact of the stock market on output is mostly endogenous. In the long run, the growth of the financial sector does not benefit the United States' actual GDP. British statistics suggest a one-way causal relationship between the financial sector and the stock market over the long run. That's in contrast to Japan, where financial stability, stock market performance, and GDP all move in tandem. Real GDP, the stock market, and the banking system in Japan may all be considered as evidence of a cyclical relationship.

Beck and Levine (2004) examine the hypothesis that a flourishing stock market and banking system contribute to economic growth. They found that when simultaneity and omitted factors bias were taken into account, it became clear that stock market and financial development were really substantial contributors to system-wide growth in their regression models. This was found after they found that these two factors had been found to be significant contributors to system-wide growth. After removing the impacts of bias and making the necessary adjustments for data simultaneity, we came to this conclusion. Capasso (2006) explores the connection between expanding stock markets and expanding economies from 1988 to 2002 using a sample that includes 24 industrialized OECD nations as well as a few developing economies.

Vector auto regression (VAR) is a statistical model that Carporale, Howello, and Soliman (2005) used to examine the connection between the stock market, investment, and economic growth. The endogenous growth theory served as the overarching basis for their research. Specifically, it uses quarterly data from the years 1971q1 through 1998q4 for the nations of Chile, South Korea, Malaysia, and the Philippines. Stock market variables are often measured using ratios such as market capitalization to GDP or value traded to GDP. The endogenous growth model accords with the overarching inference from the data, which is that various factors influence the stock market, investments, and economic growth. It also shows how the level of investment may affect the stock market and contribute to economic growth in the long run.

The relationship between financial development and economic growth in India is studied by Singh (2008) using time series data from 1951–1952. This research looks at the years 1951–1952 through 1995–1996. This inquiry covers the time period beginning in 1951–1952 and ending in 1995–1996. Using techniques like as bivariate VAR, impulse responses, and variance decomposition, they hypothesized that there may be a bidirectional relationship between financial development and economic growth.

Further, Handa and Khan (2008) use time series data from thirteen nations to examine four hypotheses on the causal relationship between financial development and economic growth. They incorporate stock market and banking sector data in their economic assessments. It has been shown that there is a one-way relationship

between economic growth and financial development in the countries of Bangladesh, Sri Lanka, Brazil, Malaysia, Thailand, and Turkey via the use of data generated by using the Johansen process and the VEC model. They, on the other hand, prove that Pakistan is not a part of any such agreement. However, they show that many nations, including the United States, Germany, Japan, India, Argentina, the United Kingdom, and the United Kingdom, benefit from a positive correlation between financial development and economic growth.

In his paper "Ang (2008)," the author probes the mechanism that, in his view, connects Malaysia's financial expansion to economic development. He studies the six main mechanisms that connect rising financial activity with expanding economies using the Autoregressive Distributed Lag (ARDL) method. Topics covered include developments in the financial sector, private savings, direct foreign investment, the relationship between savings and investment, private investment, and GDP growth. The results suggest a strong link between progress in the financial sector and economic expansion, and this link can be traced back in both qualitative and quantitative ways. Furthermore, it is observed that the government of Malaysia's restrictive policies, like as interest rate limitations and high reserve requirements, have a positive effect on economic growth. He concludes that government involvement is crucial in establishing a safe and sound financial system.

The relationship between and is investigated by Luintel et al. (2008). We employ a time series and a dynamic heterogeneous panel to examine the correlation between financial structure and economic growth across a sample of 14 countries. Financial development and structural improvements are predicted to have a large impact on economic growth in the majority of sampled countries during the next year, according to the study's conclusions. It also demonstrates that data from multiple nations cannot be integrated and that there is no correlation between panel and country-level estimates. Meanwhile, time series data reveals that output level, capital stock, financial structure, and financial growth are all connected throughout the course of a very long time period.

Using a panel data test, Zang and Chul Kim (2007) establish that progress in the financial sector is directly correlated with increased GDP. It is speculated that the former is responsible for this connection. Somewhat surprisingly, they find that growth in the economy is inversely connected to progress in the financial sector. Levine et al. used the Sims-Geweke method to conduct causality checks on both the

given and the used panel data (2000). The article uses three different financial indicators to analyze the economy: liquid liabilities, the ratio of private sector credit granted by financial intermediaries to gross domestic product, and the division of commercial banks' assets by their combined assets with those of central banks. Each of these measurements is important in understanding the current state of the economy. A panel's data collection includes information for seven different time periods and seventy-four different nations, and it covers the years 1961–1995. Their findings, which showed that economic expansion leads to financial development, were in contradiction to the conclusions that Levine et al. (2000) had found.

Yartey and Adjasi (2007) say that when there are liquid markets, investors have more freedom with their money in terms of how easy it is to get to and how they can use it. When it comes to gaining access to their money, investors do not necessarily have to wait until the project is finished to do so. This makes it possible for investors to have access to their investments ahead of the completion of the project by selling their ownership in the firm on the secondary market in a way that is simple, fast, and doesn't cost much money. When compared to an investor who holds a large portion of a project that cannot be easily and inexpensively executed, an investor who holds a small portion of that project is likely to be less committed to actively monitoring the project. This is because the investor knows that they can easily and quickly transact their stock. Because of this, businesses will have trouble, which will slow the growth of the economy. According to Levine (2003), liquid markets cause investors to shift their commitment away from corporate control and toward the more flexible dealing of shares within the secondary market for the purpose of making a profit due to the fact that it will be simple and inexpensive to transact. Therefore, the spread of ownership across projects is caused by liquid securities. Corporate governance may weaken due to the stock market's ease of access, Yartey and Adjasi (2007) said. They reasoned that this may be the case because speculative short-sightedness might be fostered in highly liquid markets. Any increase in the returns on savings in a more liquid market will lead to a decrease in the saves rate if the income impact is more important than the substitution effect (Barth et al.2004). Raising money for the project will be more difficult if sufficient savings are not established. Levine (2003) adds that if a liquid stock market leads to a significant loss in the degree of control that firms have over their own operations, it might have a detrimental impact on economic growth and the allocation of resources.

Because of this, it is difficult to anticipate the overall impact that high stock market liquidity has on an economy's productivity.

When investors make regular trades in the stock market, they will, in turn, start to have some incentives to spend on various sections of the economy, and as a consequence, this may produce the healthy activity that the economy needs to thrive. The stock market's liquidity helps the economy grow by getting people to save money and giving them other options with better returns.

This is possible because markets and financial intermediaries aggregate information, leverage economies of scale, and disseminate it to the public (Dalsenius 2007). There are higher-yielding and more efficiently priced options for savers outside debt savings. The prevailing expectation is that these options will provide savers with more utility and returns on their investments. The income impact or the substitution effect, in terms of both present and future consumption, will determine whether or not this also results in greater rates of savings (Mukhopadhyay et al. 2011).

When there is sufficient liquidity in the financial markets, both information and transaction costs are reduced. This facilitates the transfer of funds between lenders and borrowers. Costs associated with dissimilar degrees of expertise between a company's management and its shareholders may be mitigated as a result (Dalsenius, 2007).

Levine and Zervos examine the potential for a long-term empirical connection between the growth of the stock market and the expansion of the economy in their 1996 research. Analysis of this correlation was conducted using pooled cross-country time-series regression from 1976-1993, and 41 countries were included in the analysis. In a similar vein to the work of Demirgüç-Kunt and Levine (1996), this study provides an indication of stock market development based on factors such market capitalization, trading volume, and interconnection with other markets across the globe. Starting conditions, political stability, investment in human capital, and macroeconomic conditions were all taken into account by regressing the rate of increase of GDP per capita on a variety of characteristics. Everything had to be taken into consideration, therefore this was done. The study accounted for both the cyclical and secular trends in GDP growth per capita, as well as the consolidated index of stock market development. The research concludes that the growth of the global stock market correlates strongly with the growth of the economy. This finding

accords with theories that propose a connection between the rise of the stock market and economic expansion as the economy ages.

Additionally, Nyong (1997) attempted to develop a worldwide indicator of the expansion of the capital market. He explored, using this metric, whether or not the growth of Nigeria's capital markets was connected to the overall economic progress of the nation.

Time series data gathered between 1970 and 1994 were used for this analysis. Multiple indicators were used to assess the growth of the capital market: the market capitalization as a proportion of GDP, the value of transactions on the principal stock exchange as a percentage of GDP, the value of equity transactions as a percentage of GDP, and the number of listings. Each of these calculations takes into account the ratios by using percentages. Principal component analysis was used to combine the four indices into a single composite metric in order to produce a measurement that is more comprehensive of the development of the capital markets as a whole. By dividing the ratio of wide money to stock of money to gross domestic product, a proxy for the robustness of the financial markets was obtained within a control group (GDP). The growth of Nigeria's capital markets is shown to significantly and inversely correlate with the country's potential for long-term economic development. These results suggest a two-way street connecting a robust economy to a dynamic financial sector.

Gross domestic saving- economic growth

The saving rate in Africa has been continuously low relative to other regions (Kibet et al., 2009). In addition to poor income, it must contend with strict credit limitations, which might drastically reduce any drive to save. The importance of domestic saving mobilization in maintaining the virtuous cycle of saving, investment, and growth in developing nations has been a source of concern for development economists for quite some time (Nwachukwu & Egwaikhide, 2007).

Therefore, African nations need to increase their savings if they wish to expand in a manner that is sustainable and helps eliminate poverty.

(Keho, 2011) Consistent with historical patterns, it is reasonable to anticipate that rising gross savings would spur more investment and, therefore, faster GDP expansion in the near future. It suggests that a faster rate of economic growth is possible when people save more money relative to how much they spend.

By combining the Granger causality test with the VAR/VECM framework, Jangili (2011) studied the connection between savings, investment, and GDP growth in India between 1950/51 and 2007/08. Years 1950/51 through 2007/08 were included in the analysis. In addition, the long-term relationship between the variables was investigated using a cointegration test based on the method proposed by Johansen and Julius (1990). Aside from private business saving, all series demonstrate a link with GDP that may be defined as cointegration, as determined by the results of the cointegration test. Findings show that savings and investment both contribute to economic growth, and that the direction of causation flows from savings and investment to growth at both the national and local levels. The private sector's investment and saving activities are undoubtedly linked to economic growth. Since growth in turn spurred saving and investment in the home sector, it seems likely that both variables contributed to the connection. Furthermore, empirical studies have not shown any connection between private firm savings and higher economic growth.

Using annual time series data from 1950 to 2001, Verma and Wilson (2005) investigated India's savings, investment, foreign inflows, and economic progress. There were numbers for every year from 1950 through 2001. There was no conclusive proof that changes in sectoral per-worker savings and investment affected GDP over the long run, but there was substantial evidence that these changes had an impact on the savings and investment behavior of household employees over the short term. In the long run, feedbacks on GDP are nonexistent, and in the near run they are negligible and difficult to predict. Although savings have an effect on investment, the connection between investment and output is weak. Generally speaking, their findings do not support the Solow and endogenous growth policy suggestions that households save and invest more to assist India's economy thrive.

Research by Verma (2007) looked at the connection between savings, investment, and GDP growth in India using annual time series data from 1950/51 to 2003/04. Research was conducted for the years 1950/51 through 2003/04. The cointegration study was conducted using the Autoregressive Distributed Lag (ARDL) Bounds Testing method. As shown by ARDL Long-run cointegration suggests that, with the exception of GDP-dependent models, GDP, GDI, and GDS are all intertwined.

The long-run and short-run elasticities of GDP growth relative to GDS and GDI were also estimated, and three conclusions were drawn from this analysis. A first line of support for the Carroll and Weil hypothesis may be found in economic statistics, which shows that growth creates savings rather than savings creating growth. This theory states that prosperity causes people to put money aside. Second, the results provide unwavering credence to the idea that savings motivate investment across the short and long terms. It may be concluded that throughout the sample period, investment did not significantly contribute to India's economic development. From 1961 to 1994, Attanasio et al. (2000) analyzed 123 nations to determine the relationship between savings, investment, and economic development. Their studies were limited to the years spanning 1961-1994. The following results, achieved using methods like ordinary least squares, Granger causality, and impulse response functions, are consistent across data sets and estimation approaches. The Granger causality study demonstrates a negative relationship between growth and investment, a positive relationship between investment and growth, and a negative relationship between saving and investment lags.

CHAPTER III

METHODOLOGY

Introduction

This portion of the study will provide you with an in-depth review of the data source utilized, the model used for analysis, and all of the tests done for our analysis. You'll also get an overview of the variables used in this chapter.

Data

Statistics must be both trustworthy and relevant in order to be useful. They must be appropriately compiled using established standards and methods. They must also suit the demands of users and respond to policymakers' queries.

Providing data that matches these standards poses a variety of challenges for developing nations. They are often locked in a vicious cycle in which underinvestment in national statistics systems constrains activities and results in poor-quality data on which policymakers are hesitant to depend. Because there is a dearth of demand for data, fewer resources are made available for its development and quality monitoring. The World Bank is dedicated to assisting developing nations in breaking free from this cycle. Their mission includes investing in statistical activities; developing and implementing standards and procedures for data collection, analysis, and dissemination; enhancing the international statistical system; and assembling global data sets.

FDI and South Africa Economy

The movement of FDI within the South African saw a decline between the middle of the 1970s and the middle of the 1980s. This was primarily the result of political turmoil as well as pressure exerted on the apartheid state by the international world. At the beginning of the 1990s, when democracy was slowly making its way back into South Africa, direct and portfolio flows of foreign money also began to increase. The government took a variety of steps, both liberalizing the economy and adopting economic policies, in order to encourage greater direct investment. When sanctions were lifted, South Africa was forced to liberalize its capital restrictions so that it could continue to compete successfully on a global scale. Because of this, the government was forced to make a choice between having according to the trilemma

model, an autonomous monetary policy and a stable exchange rate. The South African government opted for the second scenario (Gelb, 2005).

According to Akinboade, and Roussot, because of the country's favorable conditions, South Africa is a prime inflow of FDI due to the country's abundant natural resources, low business costs, good infrastructure in comparison compared to the rest of Africa, a reasonably stable political structure, and some of the highest returns on investment. All of these factors contribute to the country's relatively stable political system (2006, p. 189-199).

However, compared to the bulk of other developing countries, South Africa still gets a lower amount of FDI.

South Africa's corporate past may be to blame for the country's poor FDI growth. Large companies in South Africa were able to legally dominate their industry and expand into related fields during the apartheid era. Each of these businesses rose to the top of its field as a consequence of the economy's growth. Foreign investors found it challenging to enter the market and compete with the country's established giants (Lagace, 2006).

In addition, Lagace (2006), the needs of the South African mining sector throughout the country's formative years shaped the country's early political, economic, and social institutions gave birth to a complex and highly developed financial sector. This was because of the need of the business. When compared to investing in the nation via its stock market, acquiring assets is a riskier alternative for investors from outside the country. Because of their liquidity, portfolio additions are often looked upon favorably.

After the currency crisis that occurred in 2001, a lot of economists believed that the South African Rand was up to fifty percent overvalued. As a result, they believed that the Rand encouraged imports while discouraging exports and foreign direct investment. The South African Reserve Bank, on the other hand, brushed this off as "unavoidable volatility" that was "beyond its control" (Gelb, 2005, p. 22).

Table 1.1: Variable description

#	<i>Variables</i>	<i>Abbre viation</i>	<i>Measurement</i>	<i>sour ce</i>
1	<i>Economic growth</i>	<i>EG</i>	<i>GDPgrowth(an nual %)</i>	<i>Worl d Bank</i>

2	<i>Foreign direct investment</i>	<i>FDI</i>	<i>net inflows (% of GDP)</i>	<i>World Bank</i>
3	<i>Market capitalization</i>	<i>MC</i>	<i>(% of GDP)</i>	<i>World Bank</i>
4	<i>Gross domestic saving</i>	<i>GDS</i>	<i>(% of GDP)</i>	<i>World Bank</i>

Variables

Foreign direct investment: When we talk about "foreign direct investment," we're referring to equity flows that are made directly in the economy that's being reported on. This total is comprised of the aggregate of other capital, as well as profit reinvestment and equity capital. Direct investment is a kind of international investment that happens when an individual who resides in one country exerts a large amount of control or influence over the administration of an individual who resides in another economy. If a person owns at least ten percent of the voting stock's total common shares, then that person is considered to have a direct investment relationship.

The Framework for Direct Investment Relationships establishes principles that may be used to determine whether or not a One of the outcomes of a muddled foreign ownership structure is a power dynamic in the form of a direct investment connection. Foreign direct investment, often known as FDI, differs from other types of international investment in that its primary objective is must invest in long-term leadership or ownership position in a business that is located in another country. The construction of factories, warehouses, and other permanent or long-term organizations in a foreign country is often a component of a company's investment in the company's long-term future. This is done in a greenfield investment. When starting a new business, an investor may choose to participate in a joint venture by forming a partnership with a well-known and reputable business located in another nation. Through the process of merger and acquisition, an investor will purchase an overseas company that is already in operation. For capital expenditures to be considered FDI, as recommended by the IMF, they must constitute at least 10% of the voting stock. In point of fact, a number of nations have established a higher criterion. There is not a single definition of which everyone can agree on constitutes

a long-term loan, and many governments neglect to declare income that have been invested. "Balance of Payments" is the full meaning of the abbreviation "BoP."

The vast majority of funding for development comes from private sources (equity and debt). Equity flows include things like portfolio equity and foreign direct investment (FDI), whereas debt flows include things like the cash obtained from the sale of bonds, bank loans, and supplier credits. Examples of equity flows include the following:

Data on foreign direct investment (FDI) does not offer a comprehensive picture of foreign investment in a nation. In many developing nations, money created inside the country represents a significant source of investment capital; yet, these funds are not accounted for in the statistics on foreign direct investment that is included in the balance of payments (FDI). In addition, the figures on foreign direct investment do not take into consideration cross-border transactions that include transfers of goods and services within a unit or transactions involving non-equity investments. It is possible but not guaranteed that the quantity of global private financial flows recorded by the World Bank will coincide with the number reported by other sources. This is typically the case due to differences in the sources that are used, the way in which economies are classified, and the methods that are used to alter and disaggregate the data that is provided. It's possible that changes will also take into consideration the classification of some offshore issuances and the installments of certain transactions, especially in regards to debt financing. Information on equity flow is presented for every country for which there is at least one data to be found.

GDP growth: Gross domestic product (GDP) is computed by summing the gross value supplied to the economy by all resident producers, less any product taxes, and then adding back any subsidies that are not reflected in the product value. Depreciation of manufactured assets and natural resource depletion are ignored in the calculation.

Each economic sector's contribution to the expansion of the economy's production is evaluated by calculating its growth rate in terms of the value it adds. In principle, it is feasible to calculate the amount of output during a certain time period, the prices of outputs may be set within a preset range of prices for the base year, and the cost of inputs, which are also measured in constant prices, can be subtracted from the output total. To successfully apply this double-deflation strategy, one must have

an in-depth understanding of the dynamics of input and product price movements. Estimates of value added, on the other hand, are often calculated by extrapolating from a base year using single volume output indexes or, less commonly, input indexes. We'll go through both of those approaches in detail down below. It is usual practice to account for either the real wage or the number of employees in the services sector, where the majority of the government is employed, when calculating value added in constant prices. In the lack of production statistics, it may be difficult to precisely gauge the growth of services. Technology advancements may also lead to enhanced production methods and final goods. Measures of growth and wealth creation might be skewed if these enhancements are given their due weight. In the case of nonmarket services, when production is approximated using inputs, the quantity of production is understated because of unmeasured advancements in technology. Production and value added are underappreciated in a similar way to the unmeasured increases in quality. This has the potential to overstate GDP and productivity gains while underestimating inflation. For countries currently in the throes of economic development, where the great majority of economic activity is not registered, the problem posed by informal economic activities is particularly acute. In order to provide a complete picture of the economy, it is necessary to include estimates of home outputs created for internal use, sales in unofficial markets, barter exchanges, and activities that are either illegal or purposely unreported. The reliability and completeness of these projections depend on the statisticians' degree of experience and the precision of their methods. There is a risk that the expected growth rate of an economy may alter after a rebasing of national accounts, and that the data consistency would worsen as a result of gaps in the series. In order to represent the most up-to-date trends in output production or consumption, governments regularly revise the weights that are allocated to each component in their countries' national accounts. There should be no major shocks or distortions in the economy in the new base year for comparison purposes. A number of developing countries have put off rebasing their national accounts for many years. Using a prior base year may provide inaccurate results due to the decline in usefulness and relevance of implicit pricing and volume weights with time. To produce a comparable set of data based on constant prices that can be utilized in the calculation of aggregates, the World Bank rescales GDP and value added by industrial origin to a common reference year. It is no longer viable to compare aggregate growth rates

observed in earlier versions of the research that used different base years due to rescaling, which modifies the implicit weights that are used to generate regional and income group aggregates. If the rescaled GDP is added to the total of the rescaled components, the resulting figure may be different from the original. Because it might distort growth rates, the difference isn't used for anything. This causes a discrepancy between the GDP growth rate and the weighted average of the component growth rates.

Domestic Saving: The difference between total final consumption and Gross domestic product is often referred to as gross national saving. As a rule, the figure is expressed as a share of GDP. Sectors include households, businesses, and government three components that make up what is known as gross domestic saving. After 2008, the gross domestic savings rate had been trending in a downward direction. The movement that may be seen among investors toward a preference for tangible assets rather than financial assets is the most troubling aspect of the situation. One possible explanation for this is that inflationary pressures have been on this rise. The level of gross domestic savings is used as a basis for calculating the quantity of gross capital creation.

Market capitalization: When discussing publicly traded U.S. corporations, "market capitalization" and "market value" may be used interchangeably to refer to a company's overall worth. When determining market value, it is customary to multiply the share price by the total number of outstanding shares, which includes all share classes. Specifically, this does not include investment funds, unit trusts, or entities whose only business is to hold shares in other publicly listed firms. Both size (measured by things like market cap and the number of domestically listed enterprises) and liquidity are included in the statistics (value of shares traded as a percentage of gross domestic product and value of shares traded as a percentage of market capitalization). Due to conceptual and statistical mistakes, such faulty reporting and discrepancies in the standards of accounting that are used, it may be difficult to compare such data from various nations.

Since April of 2013, Standard & Poor's has not released their monthly "Global Stock Markets Factbook" and database of stock market information. Since then, many supplementary groups have been used. Data from the World Federation of Exchanges was used to update the time series in December 2015, and this

modification may not be backwards-compatible with S&P's previous methods and policies.

Model specification

In order to learn more about the underlying assumptions in this investigation, multiple regression analysis was performed.

Multiple regression analysis is a useful statistical technique that should be used, according to Hair et al. (1998), when the researcher has to look at the relationship between a single dependent variable and a number of independent variables. The approach of multiple regression analysis may be used in practical settings. The capacity of multiple regression analysis to examine the relationship between a single dependent variable and a number of independent variables simultaneously makes this conceivable. In other words, it now becomes conceivable to carry out previously impractical tasks.

Multiple linear estimating was used in the study to assess the effects of variables including the stock market and foreign direct investment on the progression of the economy in connection to the dependent variable (GDP) as well as the independent factors (FDI, MC, and GDS). These variables are represented in the form of functions as:

$$EG = f(FDI, MC, GDS) \dots\dots\dots 1$$

In a sequential manner, as seen in the following form:

$$EG_t = \alpha_0 + \alpha_1 \sum EG_{t-1} + \alpha_2 \sum FDI_{t-1} + \alpha_3 \sum MC_{t-1} + \alpha_4 \sum GDS_{t-1} + \varepsilon_t$$

..... 2

Where

EG = Economic Growth

FDI = Foreign Direct Investment inflow

MC = Market Capitalization (proxy of stock market)

GDS = Gross Domestic Saving

Et = Error term and $\alpha_0 - \alpha_4$ are the estimation parameters and t is the time of the research (1975-2020)

Descriptive Statistics

Statistics that are descriptive are those that are used to explain the fundamental aspects of the data that are employed in an investigation. Included are some brief explanations of the sample as well as the metrics that were taken. They are the foundation of almost all quantitative analysis of data and may also be used to conduct a fundamental investigation of visuals.

This common distinction is often used in the process of differentiating inferential statistics from descriptive statistics. When you use descriptive statistics, all you have to do is explain the things that are there or what the data demonstrates. Utilizing inferential statistics helps one arrive at conclusions that are more robust than those that can be deduced only from the data that is at their disposal. For instance, by using inferential statistics and basing them on the data from the sample, we may create an educated judgment on what the total population as a whole would believe. Alternately, we may use inferential statistics to assess whether or not a difference between groups that was seen in this research is one that can be relied upon or whether or not it is just a coincidence that the difference occurred. As a result, we use descriptive statistics to just describe what is happening in our data while using inferential statistics to deduce conclusions about broader contexts from our data. By inferring meaning from our data, inferential statistics are utilized to make inferences about broader contexts. Descriptive statistics may be used to summarize and categorize the characteristics of a data collection. A "data set" is a compilation of observations or replies drawn from a sample or the whole population. You may gather these responses or observations in any way.

After all of the data have been gathered for a quantitative study, the next step in the process is the beginning of the statistical analysis. This phase is characterized by descriptive statistics. During this step, you will be describing the properties of the replies, such as the connection between two variables or the average of a single variable (such as age). It's possible, for instance, that you're describing the median age of the responders (e.g., age and creativity).

Stationary Test

Since non-stationary is indicated by the existence of unit roots, this is the first and most important step in the testing technique. The Augmented Dickey-Fuller

(ADF) test, created by Dickey and Fuller, and the Phillips-Perron (PP) test were the most often employed kinds of tests in this analysis. Important economic indicators like GDP growth and the Gross Savings Growth Rate may be examined using tests for unit roots to see whether they are really stationary. Since the variable has a unit root if parameter $\alpha < 0$, the data is non-stationary.

A rigorous test is used to identify non-stationary (the existence of unit roots). It is usual practice to conduct both a Phillips-Perron (PP) test (owing to the necessity for uncorrelated error terms) and an augmented Dickey-Fuller (ADF) test (at the level and first difference) simultaneously (Hair et al., 1998; Ozturk, 2007). The first difference null hypothesis was rejected by the unit root tests at all significance levels, indicating that the data series was stationary (maximum lag of one). Because of this, the models are considered to be static processes with integrating orders of $I(0)$ and $I(1)$. According to a study (Ozturk, 2007).

ADF And PP Unit Root Test

It is easy to get to the conclusion that the enhanced Dickey-Fuller test, often known as the ADF, is nothing more than an updated version of the original Dickey-Fuller test if one has a fundamental knowledge of the underlying premise behind the Dickey-Fuller test. In 1984, statisticians altered their basic autoregressive unit root test, which was referred to as the Dickey-Fuller test. This was done so that they could account for more complicated models with unclear ordering. (also referred to as the "augmented Dickey-Fuller test")

In a time series sample, the enhanced variant of the Dickey-Fuller test, in the same way as the regular test, looks for a unit root. The test is used in the field of econometrics, which is the study of how mathematics, statistics, and computer science may be applied to economic data in addition to statistical analysis.

The key distinction between the two tests is that the ADF is used for a bigger and more intricate collection of time series models. This is the fundamental reason for the difference. A negative result was found for the enhanced Dickey-Fuller statistic in the ADF test. The concept of the unit root is rejected with increasing vehemence the more negative it is. Of course, we can only say with a certain degree of assurance that this is correct. If the ADF test statistic is positive, then one does not necessarily have to reject the null hypothesis that there is a unit root in the data. One

case with three delays led to a result of -3.17, which caused the test to be rejected with a p-value of .10.

Peter C.B. Phillips and Pierre Perron, both of whom were professors of statistics at the time, came up with the Phillips-Perron (PP) unit root test in the year 1988. The way in which the PP unit root test and the ADF test deal with serial correlation is the primary distinction between the two tests, despite the similarities between the two. While the PP test disregards the possibility of a serial correlation, the ADF imitates the structure of errors via the use of parametric auto regression. Both of these tests, despite their variations, often provide the same findings.

The augmented Dickey-Fuller test, often known as the ADF, is easily deduced to be only an upgraded version of the original Dickey-Fuller test provided one is familiar with the original's concept. In 1984, statisticians made a change to the Dickey-Fuller test, a simple form of the autoregressive unit root test. This was done so that they could take into consideration more intricate models with ambiguous ordering. Also known as the "enhanced Dickey-Fuller test"

The improved Dickey-Fuller test seeks a unit root in a time series sample in the same manner as the standard test. In econometrics, the study of how mathematical and statistical methods, as well as computer technology, may be applied to economic data, the test is used.

The ADF is utilized for a more extensive and sophisticated set of time series models, which is the primary differential between the two tests. This underlies the primary distinction. The ADF test failed to find significance for the improved Dickey-Fuller statistic. As the unfavorable evaluation of the unit root increases, so does the intensity with which it is rejected. Naturally, we can only state with some certainty that this is right. In the event that the ADF test statistic is positive, it is not necessary to reject the null hypothesis of a unit root in the data. One instance with three delays yielded a -3.17 value, which resulted to a p-value of .10, rejecting the hypothesis.

In 1988, statistic professors Peter C.B. Phillips and Pierre Perron developed the Phillips-Perron (PP) unit root test. There are some parallels between the PP unit root test and the ADF test; however, the main difference between the two tests is in how they handle serial correlation. The PP test doesn't take into account the potential of a serial correlation, but parametric auto regression is used by the ADF to mimic

the structure of mistakes. Even though these tests differ somewhat from one another, they often provide identical results.

ARDL Model

To demonstrate the direction of causality between variables, the article employs the newly created ARDL framework by Pesaran and Shin (1995, 1999), Pesaran et al. (1996), and Pesaran (1997). There are benefits to employing this strategy rather than the traditional Johansen (1998) and Johansen and Juselius (1990) approaches. Unlike the traditional cointegration approach, which uses a series of equations to predict long-run connections, the ARDL method uses just a single reduced form equation (Pesaran & Shin, 1995). Because the ARDL technique does not use pre-testing variables, the test on the existing connection between variables in levels is relevant regardless of whether the underlying regressors are entirely $I(0)$, purely $I(1)$, or a combination of both. Given the peculiarities of the cyclical components of the data, this aspect alone renders the usual cointegration approach unacceptable, and even the current unit root tests to determine the sequence of integration remain extremely suspect. Also, the ARDL method gets rid of the need for a larger number of specifications than is needed in the usual cointegration test.

These include considerations about the number of endogenous and exogenous variables to include (if any), how to handle deterministic aspects, and how many delays to provide. In general, empirical findings are very sensitive to the technique and the different alternative options accessible in the estimating phase (Pesaran & Smith, 1998). The ARDL allows for various variables to have different optimum lags, which the usual cointegration test does not allow for. Most crucially, the model may be employed with a small sample size (30 to 80 observations) given the set of essential values initially produced by Narayan (2004) using eviews.

The ARDL method to cointegration (Pesaran et al., 2001) basically involves estimating the ARDL model's conditional error correction (EC) version for economic growth and its causes:

$$LNEG_t = \alpha_0 + \delta_1 LNEG_{t-1} + \delta_2 LNFDI_{t-1} + \delta_3 LNMC_{t-1} + \delta_4 LNGDS_{t-1} + \sum_{i=1}^p \phi_{1i} LNEG_{t-i} + \sum_{i=1}^p \beta_{2i} LNFDI_{t-i} + \sum_{i=1}^p \psi_{3i} LNMC_{t-i} + \sum_{i=1}^p \varphi_{4i} LNGDS_{t-i} + \mu_t \dots\dots\dots 3$$

Where $\ln(EG)$, $\ln(FDI)$, $\ln(MC)$, and $\ln(GDS)$ are the natural logarithms of where is the first-difference operator, p is the optimal lag length, GDP growth, FDI, Market Capitalization (a proxy for the stock market), and GDS are the independent variables, is the error term, and t is the time lag.

ECM Model Equation

$$\Delta EG_t = \alpha_0 + \sum_{i=0}^q \Delta\beta_1 \ln EG_{t-k} + \sum_{i=0}^p \Delta\beta_2 \ln FDI_{t-k} + \sum_{i=0}^p \Delta\beta_3 \ln MC_{t-k} + \sum_{i=0}^p \Delta\beta_4 \ln GDS_{t-k} + \lambda ECM_{t-1} + \varepsilon_t \dots \dots \dots 4$$

Where $\ln(EG)$, $\ln(FDI)$, $\ln(MC)$, $\ln(GDS)$ and (ECM) are the natural logarithms of economic growth, foreign direct investment, Market Capitalization (proxy of stock market), gross domestic saving, and error correction model, respectively, Δ is the first-difference operator, and p is the ideal lag length, t is the time interval and ε_t is the error term.

Residual Diagnostic Tests

Serial correlation is a statistical term used to explain the relationship between repeated measurements of the same variable taken at different points in time. To put it another way, if there is no association between the observations, the serial correlation of the variable is 0. When the serial correlation of a variable approaches 1, it indicates that the observations are influenced by previous values in the series. A serially linked variable exhibits some regularity as opposed to being completely random.

In layman's terms, it's a test of whether or not your data has a normal distribution. But what exactly does it entail? Normality refers to the statistical distribution known as the normal distribution, often known as the Gaussian distribution or the bell-shaped curve. The normal distribution, a symmetrical continuous distribution, is constructed using the data's mean and standard deviation. A non-normal distribution of the residual variance across the values being measured is called heteroskedasticity. Non-normality in the distribution of the residuals (or error term) in a regression analysis is what we mean when we talk about

heteroskedasticity. To identify heteroskedasticity, look for a fan or cone shape in the residual plot. Because ordinary least squares (OLS) regressions presume residuals originate from a population with a fixed variance, heteroskedasticity presents a challenge in statistics. Inconsistent residual dispersion suggests that the sample population used for the regression did not have consistent variance, which might introduce error into the study.

Granger Causality Test

The Granger causality is the basis for this idea. In this section, we apply a Granger causality test to see whether there is a connection between the growth of the South African economy, the success of its stock market, and the influx of FDI into the nation. The Granger causality test approach was chosen for this study over the numerous others that may have been used because it performs well with both big and small samples. This choice has been made. Standard components of the Granger causality test include testing the null hypotheses that FDI does not cause EG and vice versa, that stock markets do not cause GDP and that domestic saving does not cause FDI. The last step is to check whether or not a correlation exists between domestic saving and FDI. The advantages of just using the two regression models are as follows:

$$\begin{aligned} \Delta \ln EG_t &= \lambda_0 + \sum_{i=1}^m \lambda_{1i} \Delta \ln EC_{t-i} + \sum_{i=1}^n \lambda_{2i} \Delta FDI_{t-i} + \sum_{t=1}^p \lambda_{3i} \Delta MC_{t-i} \\ &+ \sum_{i=1}^q \lambda_{4i} \Delta \ln GDS_{t-i} + \mu_t \dots \dots \dots 5 \\ \Delta \ln FDI_t &= \lambda_0 + \sum_{i=1}^m \lambda_{1i} \Delta \ln FDI_{t-i} + \sum_{i=1}^n \lambda_{2i} \Delta EC_{t-i} + \sum_{t=1}^p \lambda_{3i} \Delta MC_{t-i} \\ &+ \sum_{i=1}^q \lambda_{4i} \Delta \ln GDS_{t-i} + \varepsilon_t \dots \dots \dots 6 \end{aligned}$$

Where EG_t is real gross domestic product, FDI is foreign direct investment, MC is market capitalization, GDS is gross domestic saving; ε_t is white noise error processes, and m , n , p and q denote the number of lagged variables. The null hypothesis that FDI_t does not Granger cause EG_t is rejected if the λ_{2i} are jointly

significant in Equation (5), also, if λ_{3i} are jointly significant, the null hypothesis that MC does not Granger cause EG is rejected. Similarly, in Equation (6), the null hypothesis that EGt does not Granger cause FDIIt is rejected if the λ_{2i} are jointly significant and the null hypothesis that MCt does not Granger cause FDIIt is rejected if λ_{3i} are jointly significant.

Stability Tests

In a multiple linear regression model of the form $y = \beta X + \varepsilon$, cusum tests evaluate the consistency of the coefficients that make up the model. The inference is made based on a series of sums, or sums of squares, of recursive residuals, which are generated iteratively from nested subsamples of the data. If we assume that the coefficients stay the same throughout time, then values of the sequence that fall outside of the predicted range indicate that there has been some kind of structural change in the model. By adding up a certain amount over a certain amount of time, the CUSUM test can tell if a set of numbers can be considered random or not.

CHAPTER IV

RESULTS AND INTERPRETATION

INTRODUCTION

The results of the research are discussed in further depth in the first of this chapter's three sections. An analysis of the effects of foreign direct investment (FDI) and the stock market on the expansion of the South African economy is presented next, along with a discussion of the many perspectives on the significance of this growth-promoting influence. The first part of this piece devotes its attention to and provides a substantial amount of information about several approaches to data analysis. In the first part, we analyze and discuss the results of the stationary test applied to a data set. In the second half, we study and discuss the results of the co-integration test. In the last section, among other topics, we will investigate and talk about regression analysis, diagnostic tests, and establishing the stability of data or results. In spite of this, the presentation was carried out in a manner that was consistent with the objectives of the research, and the testing was carried out in an effective manner by making use of the E-Views program.

Descriptive Statistics

Table 2.1: Descriptive Statistics

	EG	FDI	GDS	MC
Mean	2.036619	0.736611	21.21557	155.7706
Median	2.398116	0.438403	19.48100	142.3783
Maximum	6.620583	5.3683357	33.69330	322.7110
Minimum	-6.431975	-0.768651	16.57912	47.87459
Std. Dev.	2.491066	1.092306	4.843130	72.41712
Skewness	-0.817730	1.986928	1.100914	0.502681
Kurtosis	4.333060	8.478507	2.924340	2.491424
Jarque-Bera	8.532577	87.79400	9.303065	2.433024
Probability	0.014034	0.000000	0.009547	0.296262
Sum	93.68450	33.88409	975.9161	7165.447
Sum Sq. Dev.	279.2434	53.69092	1055.516	235990.8
Observation	46	46	46	46

Source: Eviews 12

Economic growth averages 2.036619, FDI averages 0.736611, and market cap averages 155.7706, according to the descriptive statistics part of this study, with a mean value of 155.7706 being the highest mean value among those investigated.

Maximum potential GDP growth for South Africa for the duration of this thesis is calculated to be 6.620583, whereas maximum possible FDI growth is 5.368357. Meanwhile, under the South African Economic System, the highest possible market capitalisation is R322,7110. It's just MC and EG that show any appreciable skewness. The following seems like a good rule of thumb: When the skewness is between -0.5 and 0.5, the data exhibits a very symmetrical distribution. The data is considered highly skewed if the skewness is between -1 and -0.5 or 0.5 and 1. Data is said to be very skewed when the skewness is either less than -1 or more than 1. A normal distribution has a skewness of 0, hence any symmetric data should have a skewness close to zero. When the value of skewness is negative, it indicates that the data is biased to the left, and when it's positive, it indicates that the data is slanted to the right. The left tail of a distribution is longer than the right tail if it is said to be "skewed left." As with a left skew, a right skew indicates that the right tail is more extended than the left. Whether or not the data is multi-modal might affect the sign of the skewness

Unit Root Test

Establishing whether or not the data at hand include any unit roots, an indication that the data are not stationary, is the first and most crucial stage in the testing method. In this study, researchers mostly used the Phillips-Perron (PP) and Augmented Dickey-Fuller (ADF) tests. Both of those examinations were developed by Dickey and Fuller. The purpose of the test is to determine whether a certain variable, such the growth rate of GDP or the growth rate of gross savings, has a unit root. If the parameter is identical to itself, then the variable has a unit root, which means that the data is not stable.

To determine whether or not an object is non-stationary, one must adhere to a set of very specific guidelines (the presence of unit roots). The standard augmented Dickey-Fuller (ADF) test is supplemented with a Phillips-Perron (PP) test under the premise that there are no uncorrelated error terms at the first difference level (Hair et al., 1998; Ozturk, 2007). The results of the unit root tests showed that series

stationarity was present for all variables since the null hypothesis for the initial difference was not supported at any of the significant levels (maximum lag of one).

Therefore, the models are steady-state processes with integrating orders of I (0) and I (1) (Ozturk, 2007)).

Table 3.1: Unit Root Test Result

<i>Variable</i>	<i>Augmented Dickey-Fuller (ADF) unit root test</i>		<i>Phillips-Perron (PP) unit root test</i>		<i>Order of intergration</i>
	<i>level</i>	<i>1st difference</i>	<i>level</i>	<i>1st difference</i>	
<i>EG</i>	0.8093	0.0000***	0.4447	0.0000***	<i>I(1)</i>
<i>FDI</i>	0.5603	0.0002***	0.0005**	-0-	<i>I(0)</i>
<i>MC</i>	0.9619	0.0057**	0.8093	0.0000***	<i>I(1)</i>
<i>GDS</i>	0.4447	0.0000***	0.4432	0.0000***	<i>I(1)</i>

Source: Eviews 12

*Note: ADF t-statistic automatic selection, PP Newey- west Bandwidth automatic selection= 1%*** 5% ** 10% **

Non-stationarity was found after extensive testing (the existence of unit roots). In order to reduce autocorrelation and increase white noise, we conducted a standard augmented Dickey-Fuller (ADF) test and a Phillips-Perron (PP) test on the level, first difference, and second difference series. The need for unrelated mistake terms prompted this action (Hair et al., 1998; Ozturk, 2007).

Three of the variables in this thesis are stable at the first difference, while one is stationary at the level, as shown by the ADF and PP unit root tests. The fourth factor is unstable on both the micro and macro scales. Economic growth had an ADF p-value of 0.0000, foreign direct investment a p-value of 0.0002, stock market capitalization a p-value of 0.0057, and gross domestic saving a p-value of 0.0000. All at 1st difference.

According to the results of the PP unit root tests, FDI have stalled out at the same low level. Contrarily, GDP growth, stock market and domestic saving remain unchanged after the first discrepancy. For these data, the ARDL model was utilized since there was no change in the variables between I (0) and I. (1).

ARDL BOUND TEST

Table 4.1; ARDL Bound Test Results

<i>Model</i>	<i>Lag.</i>	<i>F-Statistic</i>	<i>Decision</i>
<i>EG, FDI, MC, GDS</i>	<i>(1, 3, 2, 4,)</i>	<i>6.295850***</i>	<i>Co-Integration Exist</i>
<i>Bound Critical Value</i>			
		<i>I (0)</i>	<i>I (1)</i>
<i>Sign.</i>	<i>10%</i>	<i>2.37</i>	<i>3.3.2</i>
	<i>5%</i>	<i>2.79</i>	<i>3.67</i>
	<i>2.5%</i>	<i>3.15</i>	<i>4.08</i>
	<i>1%</i>	<i>3.65</i>	<i>4.66</i>

****at 1percent level of significance **at 5percent level of significance *at 10percent level of significance*

Source: Eviews 12, Akaike info criterion (AIC) Pesaran et al. suggest the critical value bounds (2001)

An ARDL limits test for cointegration that uses a second F-test on the lagged levels of the independent variable in the ARDL equation is called an ARDL bounds test with lagged levels (s). At the 5% level of significance, the research results did not back up the no-effects hypothesis (i.e., 1975–2020). At these significance levels, the F-statistics (6,295,850) were statistically significant (4, 66). When the F-statistic is more than the upper critical boundary value, the null hypothesis of no cointegration is rejected, but when it is less than the lower critical boundary value, the null hypothesis is accepted. A co-integration relationship forms in this context.

ARDL Short and Long--Run Results

Table 5.1 ARDL Short and Long Run Test Result

<i>Variables</i>	<i>ARDL Short run</i>				<i>ARDL Long run</i>			
	<i>Coef.</i>	<i>Std.error</i>	<i>t- statistic</i>	<i>P value</i>	<i>Coef.</i>	<i>Std.error</i>	<i>t- statistic</i>	<i>P value</i>
<i>EG</i>	<i>0.855</i>	<i>0.172</i>	<i>-4.942</i>	<i>0.0000***</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
<i>FDI</i>	<i>0.358</i>	<i>0.326</i>	<i>-2.74</i>	<i>0.0105**</i>	<i>1.268</i>	<i>0.606</i>	<i>2.092</i>	<i>0.0456**</i>

MC	0.049	0.010	4.408	0.0001***	0.049	0.014	3.225	0.0032***
GDS	0.579	0.219	2.620	0.0140**	0.579	0.249	2.312	0.0283**
C	--	--	--	--	4.557	3.210	1.419	0.1668
ECM	-0.85	0.142	-5.998	0.0000	--	--	---	--

*Note:***at 1percent level of significance **at 5percent level of significance *at 10percent level of significance Source: Eviews 12*

The subject to be explored is if there is a link between economic development and direct investments from other nations. The test findings provide an answer to the question of whether or not foreign direct investment (FDI) and economic growth have a significant and positive relationship across short and long times.

Foreign direct investment is beneficial to South Africa's economy in both the short and long term. The 0.35% rise in foreign direct investment inflows is contributing to South Africa's 1% economic growth. S. Masipa's (2018) study, for example, explores the relationship between FDI inflows and economic development from 1980 to 2014. The goal is to establish and quantify the long-term relationship that exists between the model's variables.

According to the data, foreign direct investments (FDIs) and the real effective exchange rate have a positive long-term relationship with economic development, but government spending has a negative long-term relationship with economic growth.

The following are the consequences for management and practice: This research adds to the ongoing discussion over how foreign direct investment affects economic development and job creation in countries that benefit from it. As a result, its results emphasize the importance of attracting foreign direct investments to South Africa, as well as the extent to which these investments effect employment and economic development. In terms of strategy, the process of attracting foreign money to South Africa should focus on sources that may boost the economy while also creating employment possibilities. To create an atmosphere that is appealing to

multinational businesses, the government must strengthen its anti-corruption framework. According to the facts offered in this article, South Africa's economic development and job creation potential is therefore dependent on its capacity to enhance GDP growth and attract more foreign direct investment (FDI). The allure of FDIs, on the other hand, must be seen as a tool for achieving other objectives, such as eradicating poverty and inequality in South Africa.

To answer the question, what type of relationship does the South African stock market have with the South African economy? According to the findings, there is a strong and positive relationship between the status of the economy and the South African stock market in both the short and long term. Tokunbo Simbowale Osinubi's (2002) study investigates whether the Nigerian stock market adds to the country's economic progress.

To accomplish this goal, the ordinary least squares regression (OLS) approach was used to data from 1980 to 2000. According to the statistics, there is a favorable relationship between expansion and each of the several stock market growth indicators studied. According to the data, the model properly projected Nigeria's economic development between 1980 and 2000, with an R-squared accuracy of 99 percent and a modified R-squared accuracy of 98 percent. The findings show that independent factors account for 98% of the variance in economic activity.

The study's findings, which show that there are beneficial links between the stock market and economic growth, imply that efforts should be taken to swiftly expand the stock market. Cooperation across all sectors of the economy is required if we are to capitalize on the potential given by the interdependence of Nigeria's economic development and the stock market.

The last test in this series explores the relationship between South Africa's pace of economic growth and the country's total gross domestic saving. Gross domestic saving and economic growth have a significant and favorable relationship across both long and short time periods. This is a positive connection.

This is congruent with the findings of Samuel Elias and Abebe Worku's (2015) study of the relationship between economic growth and savings in East Africa, which used Johnson's approach and the Vector Error Correction (VEC) technique. They discovered that economic growth was positively associated to savings (1981–2014). All of the statistical data in this article was derived from the

World Bank's database. The empirical analysis in Ethiopia and Uganda indicated a substantial relationship between national savings and economic development. During the investigation period, the Johnson co-integration technique found no statistically significant associations with Kenya. According to Granger's conclusions after studying the conditions of Ethiopia and Uganda, there is only one way that economic development (measured as GDP) and gross domestic savings (measured as GDS) may be related. Domestic savings are primarily driven by gross domestic product, so that economic development likely increases the pace at which domestic savings accrue in Ethiopia and Uganda. It is highly advised that governments establish policies that accelerate the speed of economic growth by increasing total factor productivity and, as a consequence, raise the proportion of personal income saved inside the nation. In order to promote long-term prosperity, the government must also implement policies that encourage residents to save money and invest in the country.

The ECM results show that the transition from the short run to the long run happens at an extremely fast rate of 85%. This suggests that the transfer has been made smoothly.

Residual Diagnostic results

Table 6.1 Residual Diagnostic Result

<i>Tests</i>	<i>Statistic</i>	<i>p value</i>	<i>Results</i>	<i>source</i>
<i>Serial correlation</i>	<i>0.557310</i>	<i>0.4218</i>	<i>no serial correlation</i>	<i>Breusch-GodfreryLM test</i>
<i>Normality</i>	<i>0.286052</i>	<i>0.866732</i>	<i>normal distribution</i>	<i>Jarque-Bera</i>
<i>Heteroscedasticity</i>	<i>1.314073</i>	<i>0.2538</i>	<i>homoscedasticity</i>	<i>Breuch-Pagan-Godfrery</i>

Source: Eviews 12

Table 4.5 shows that there is no serial correlation or conditional heteroscedasticity among the residuals, indicating that they follow a normal distribution.

The alternative hypothesis states that serial correlation does exist in the model, which contradicts the null hypothesis's claim that there is none. An upper bound of 0.05% is reached with a probability value of 0.4218. Thus, we must accept the null hypothesis and draw the conclusion that the model does not include any serial correlation.

The heteroscedasticity test's null hypothesis states that heteroscedasticity does not exist in the model at 5% but exists at 10%, when it then becomes stationary. This is a quote from [author needed] That's when citations come in handy. In this case, the probability value of 0.2538 is more than the cutoff of 0.05 percent, hence the residual diagnostic test finds that the problem is more serious than first thought. Therefore, we cannot infer that the model exhibits heteroscedasticity with a 95% confidence level. Nonetheless, we may infer that heteroscedasticity exists in the model with a 90% likelihood by rejecting the null hypothesis.

As a conclusion, the alternative hypothesis suggests that the residuals are normally distributed, whereas the null hypothesis suggests that they are not normally distributed at the 5% level. More than 5% chance of Jarque-Bera happening. We found that, after rejecting the null hypothesis, residuals have a normal distribution at 5%, but are statistically significant only at 10%.

Granger Causality Test Results

Table 7.1: Granger Causality Test Results

<i>Null Hypothesis</i>	<i>Obs.</i>	<i>F-Statistic</i>	<i>Prob.</i>
<i>FDI does not Granger Cause EG.</i>	45	0.58027	0.4505
<i>EG does not Granger Cause FDI</i>		3.12614	0.0843
<i>GDS does not Granger Causes EG</i>	45	0.72140	0.4005
<i>EG does not Granger Cause GDS</i>		0.01595	0.9001
<i>MC does not Granger Cause EG</i>	45	0.31796	0.5758
<i>EG does not Granger Cause MC</i>		0.27023	0.6059
<i>GDS does not Granger Cause FDI</i>	45	5.9234	0.0193**
<i>FDI does not Granger Cause GDS</i>		2.34409	0.1333
<i>MC does not Granger Cause FDI</i>	45	5.95471	0.0190**
<i>FDI does not Granger Cause MC</i>		1.03582	0.3146
<i>MC does not Granger Cause GAS</i>	45	1.03661	0.3144

<i>GDS does not Granger Cause MC</i>		<i>3.09160</i>	<i>0.0860</i>
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To see whether foreign direct investment in South Africa is related to the country's economic growth and stock market performance, the authors here conducted a dynamic Granger causality test. The Granger causality, already established in this article, serves as the basis for this model. Granger causality testing was chosen as the methodology for this study rather than any of the other options that may have been used. This is so due to the fact that the Granger causality test method may be used successfully to both large and small sample sizes. Examining the null hypotheses that foreign direct investment does not cause domestic investment, that stock markets do not influence GDP, and that gross domestic saving does not cause foreign direct investment is what the standard Granger causality test entails. The hypotheses are being put to the test to determine their reliability.

As shown by the results of the Granger causality test, there is only one path of causation that can be followed to explain the relationship between the variables. It has been shown that market capitalization and foreign direct investment are associated with one another in a way that is causative; the level of significance required for this result is 5%. When seen in this context, foreign direct investment (FDI) is something that results from market capitalization, but market capitalization does not arise from FDI. However, domestic savings do not directly come from foreign direct investment (FDI), therefore although FDI does contribute to domestic savings, domestic savings do not directly result from FDI.

Stability Test Result

Figure 1.1: CUSUM Test Result

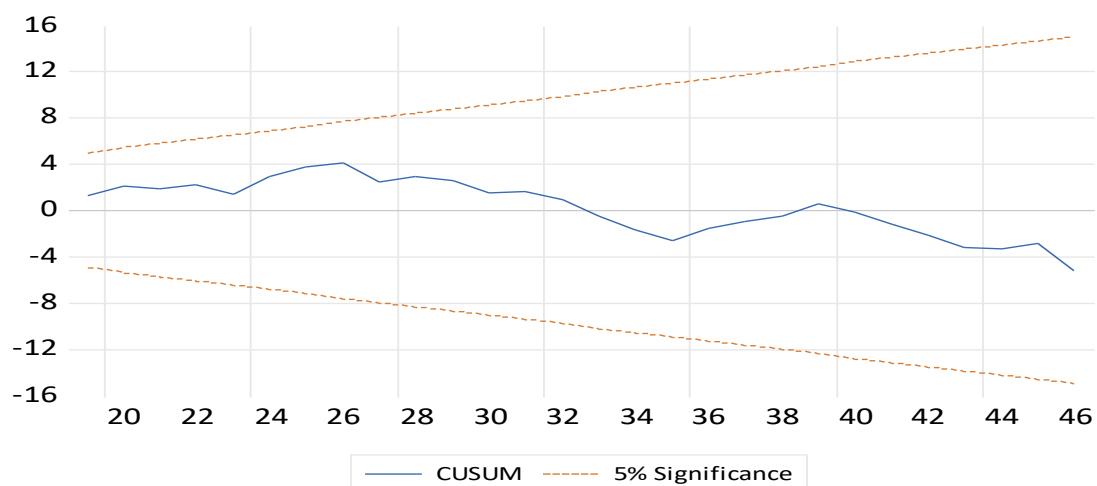
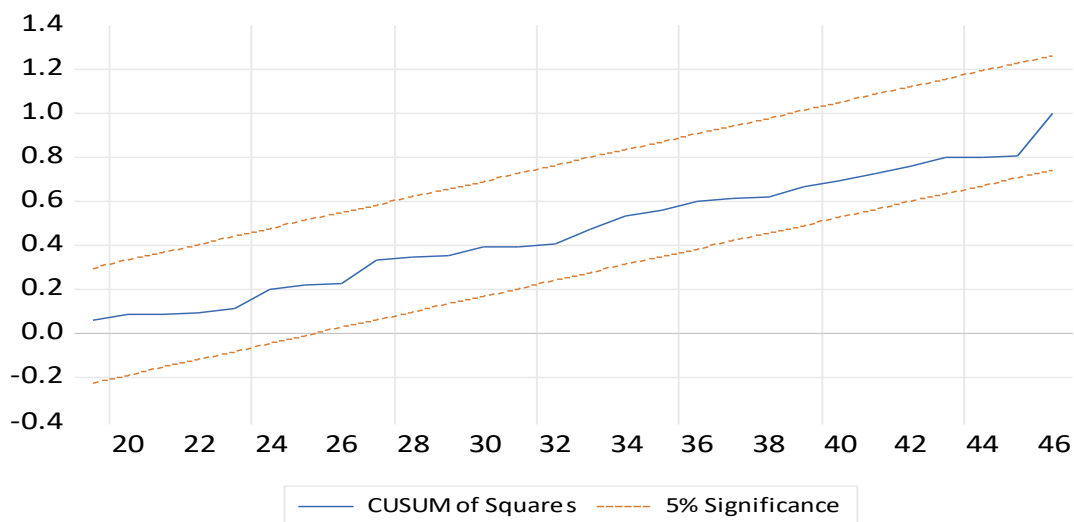


Figure 2.1: CUSUM of squares test



When the parameters are held constant, as is stated by the null hypothesis, the alternative hypothesis cannot be supported. According to the results of the test, the blue line must stay inside the limits set by the red line. However, we would rather accept the null hypothesis and reject the alternative hypothesis, which would imply that residual variances are stable rather than unstable. This occurs because we have a strong preference for accepting the null hypothesis. Additionally, we may deduce that the residual variance is stable as opposed to unstable. Long-term stability of the ARDL model's long-term coefficient was tested by comparing the short-term dynamics of FDI, stock market, and economic growth variables using the cumulative sum of recursive residuals (CUSUM) and cumulative sums of squares (CUSUMQ). This was performed to see how the short-term dynamics of the variable compared to the long-term stability of the long-term coefficient. The base-case assumption of the error-correction model is that all error-correction coefficients will be stable within a 5% confidence range (Bahmani, Oskooee, & Ng, 2002). The consistent coefficients null hypothesis may be rejected at a 5% level of significance if any of the lines are broken. The 5% significance level is often used for this purpose. Important limitations are shown in the following diagram and must be followed while arranging CUSUM and CUSUMQ data. Long-term stability of the FDI coefficient is therefore ensured.

CHAPTER V

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Summary

This study which began in year 1975 and extended into the year 2020 looked at how FDI and the stock market have affected the development of the South African economy. Data for the World Bank Data Base was compiled with an eye toward analysis, and as a result, it includes numerical information for a wide range of categories and subcategories. One of the many welfare benefits supplied by multinational corporations through FDI is the impact it has on the economic growth of the country that receives it. If foreign direct investment (FDI) is seen to have a positive effect on economic growth, the country receiving the investment should encourage FDI flows by providing tax cuts, infrastructure subsidies, duty exemptions, and other incentives. If, however, FDI dampens economic growth, the country receiving the investment must take preventative steps to limit or even block the inflow of capital (Lyroudi, Papanastasiou, and Vamvakidis, 2004:99).

There is no evidence of long-term positive technical spillover from foreign corporations to domestically owned firms, according to Carkovic and Levine (2002), who analyzed research of specific countries' firms to get this conclusion. To add insult to injury, Carkovic and Levine (2002) argue that there is no proof that FDI causes economic growth. However, a large body of macroeconomic research shows that FDI boosts GDP and leads to beneficial technical spillovers from foreign to local businesses. This occurs because FDI motivates international firms to learn new methods, which are then adopted by domestic competitors. These findings should be interpreted cautiously owing to the simultaneity bias, country-specific effects, and the common practice of including lagged dependent variables in growth regressions (Carkovic and Levine, 2002:2).

In an effort to identify the driving forces behind South Africa's economic expansion, several research have been done. The results of these collective investments are taken into account. Fedderke and Romm claim that few have investigated the effects of local and foreign investments on economic growth and development over the long term (2004).

The amount of FDI in South Africa has been significantly impacted by factors such as the net rate of return and the risk profile of the liabilities connected with FDI, as reported by Borensztein, Gregorio, and Lee (1998:120). Research from both

theory and practice reveals that factors unrelated to policy, as well as those connected to policy, may affect the expansion of FDI, as stated by Borensztein et al. (1998:120). Market size, distance factor ratios, political and economic stability, and many more factors are examples of non-policy factors. Among the challenges faced by policymakers are the regulation of commodity prices, wage rates, corporate tax rates, and the expansion of physical infrastructure (Borensztein et al., 1998:121).

The development structure of South Africa might be evaluated using total factor productivity. It's because efficiency improvements have replaced factor accumulation as the primary driver of development in South Africa. Foreign direct investment may have positive knock-on consequences, making it all the more important to share information and lessons learned (Fedderke and Romm, 2005:180). In June 2010, 24 percent of South Africa's working-age population was unemployed. This is the main obstacle stopping the country from reaching its full economic potential (Stats SA, 2010).

The government implemented many macroeconomic policies meant to reduce unemployment and boost the economy. Common examples are RDP, GEAR, ASGISA, and NGP. All these broad economic measures are intended to foster growth and new job prospects. The economic potential that may be achieved in South Africa as a consequence of these acts has not yet been realized, despite the fact that they have been taken. South Africa's government needs FDI to achieve its goals of accelerating economic growth and expanding employment opportunities.

According to Xavier, increasing the chance of attracting foreign direct investment may be accomplished by ensuring that the appropriate manufacturing inputs, attractive government incentives, and managerial capabilities are all present (1994:15). He continues by adding that the placement of industries and the functioning of the economy are dependent on a number of variables, such as infrastructure, the support of the government, the strategy of corporations, and the demand of consumers. Therefore, if you want to make it simpler for money to travel around, it could be good to learn more about the variables that impact the mobility of portfolio capital and foreign direct investment.

There is evidence that foreign direct investment (FDI) and the stock market both have a significant bearing on economic expansion. Sridharan, Vijayakumar, and Chandra conducted research in 2009 to investigate the relationship between foreign direct investment and economic development in the BRICS states. (South Africa,

Brazil, Russia, India, and China). The years covered by Brazil's quarterly data ranged from 1996 to 2007, the years covered by Russia's quarterly data ranged from 1994 to 2007, the years covered by India's quarterly data ranged from 1992 to 2007, the years covered by China's quarterly data ranged from 1999 to 2007, and the years covered by South Africa's quarterly data ranged from 1990 to 2007. Throughout the whole of this investigation, the Industrial Production Index (IPI), a metric that gauges the health of the economy, is used. Estimation methods included Johansen's cointegration model and the vector error correction model, sometimes known as VECM. The results of the empirical study indicate that foreign direct investment (FDI) only helps to growth in a single direction in the countries of India and China, but in the countries of Brazil, Russia, and South Africa, FDI contributes to growth in both directions simultaneously.

Jyun-Yi and Hsu conducted research to determine how the presence of foreign direct investment affects the growth of the economy (2008). Caner and Hansen's threshold regression techniques provided the foundation for this study, which they suggested (2004). The sample for this piece of study covers the years 1975 to 2000 and is comprised of 62 different countries. These countries range from developing to developed states. As threshold factors, the original Gross Domestic Product, the quantity of human capital, and the amount of commerce were used. When the threshold regression method was used, it was discovered that starting GDP and human capital were important predictors of FDI. It has been shown that when the Gross Domestic Product (GDP) and human capital of the host country are already high, foreign direct investment has a large and positive influence on economic growth.

According to Kenny and Moss, trading in the stock market has a number of benefits that far exceed any possible negatives and should be considered worthwhile (2001). Levine and Zervos (1998) highlight the additional essential point that thriving stock markets and modern banking systems are required for economic development. This is a significant issue. Bekaert et al. (2004) even go so far as to underline how essential deregulation of the stock market is for the promotion of economic growth.

Arestis et al. (2001) used quarterly time-series data in order to investigate the relationship between expanding stock markets and expanding economies in five industrialized countries. Specifically, they were interested in the United States,

Canada, Japan, and Germany. They take into account the volatile nature of the market in addition to the effect that the overall financial system has. Countries such as the United States of America, the United Kingdom, France, Germany, and Japan are included in this group.

This time period covers the years 1968 to 1998, however the data span differed for each of the countries that were sampled. The years that were covered by this time frame are: The VAR framework takes into account a number of different parameters, some of which include real GDP, the market capitalization ratio, domestic bank lending to the private sector, and volatility in the stock market. According to the results, there is a causal connection that runs in both directions between the expansion of the German economy and the growth of the banking business. On the other hand, the stock market's influence on the overall level of output is relatively little and insignificant. Despite overall improvements in the country's economy, the real GDP of the United States has not been growing over time. There is a causal relationship that can be traced in both directions between Japan's actual GDP, stock market, and banking system. The data from the UK, on the other hand, suggest that there is long-term evidence of a unidirectional link between the expansion of the banking system and the expansion of the stock market. This is shown by the difference. There is evidence of causality operating in both directions within Japan's financial system, stock market, and actual GDP.

According to the data from France, throughout time, both the country's banking industry and its stock market contribute to the country's real GDP. On the other hand, the contribution of the banking system has been far more significant than that of the stock market.

Both the traditional augmented Dickey-Fuller (ADF) test and the Phillips-Perron (PP) test, which requires uncorrelated error terms, were carried out on our results at the level, the first difference, and the second difference series. The ADF test eliminates autocorrelation and whitens noise, and the PP test requires uncorrelated error terms (Hair et al., 1998; Ozturk, 2007).

According to the results of the ADF and PP unit root tests, all of the variables discussed in this thesis are stable at the first difference. These tests produced p values that were 0.0000 for economic growth, 0.0002 for foreign direct investment (FDI), 0.0057 for stock market capitalization, and 0.0000 for gross domestic saving.

The results of the unit root tests carried out using the PP model indicate that Foreign Direct Investment (FDI) is the only variable that has remained unchanged. The other elements, such as the rate of economic growth ($p = 0.0000$), the activity and capitalization of the stock market, and gross domestic saving, remain constant at the beginning difference.

Since the values of the variables did not change between iteration 0 and 1, the ARDL model was used to conduct the analysis of the data (1). An extended autoregressive distributed lag (ARDL) limits test for cointegration consists of an extra F-test on the lagged levels of the independent variable in the ARDL equation. This is done in order to test for the presence of cointegration (s). The acceptance of the null hypothesis was excluded during the whole of the research period due to the significance criterion of 5%. (i.e. 1975–2020). At the aforementioned levels of significance, the F-statistics, which totaled 6.295849, were higher than the upper limit value of 4.66, which represented the critical value. When the F-statistic value is lower than the lower boundaries value, the null hypothesis of no cointegration is accepted. The null hypothesis of no cointegration is rejected when the value of the test statistic is higher than the value of the upper crucial limits. As a result, there is a connection of co-integration present in this scenario.

According to the study question, what is the link that exists between economic progress and direct investment from other countries? The purpose of the test is to establish whether or not there is a substantial and beneficial association between FDI and economic development over both the short and the long term.

Both in the short term and over the long term, investments made directly from outside are beneficial to South Africa's economy.

Every one percentage point rise in foreign direct investment results in a 0.35% increase in South Africa's GDP. For example, Tshepo S. Masipa (2018) examines the relationship between foreign direct investment (FDI) inflows and economic growth from 1980 to 2014. Using the vector error correction model, the long-term connection that the model's variables have with one another is uncovered and estimated. According to the data, real effective exchange rates as well as FDIs have long-term associations that are beneficial to economic growth, whereas government expenditures have long-term associations that are detrimental to economic growth. The following are examples of government and corporate repercussions: This study makes a contribution to the ongoing debates regarding the

role that foreign direct investment plays in the expansion of recipient nations' economies and the creation of new employment opportunities. The study's findings shed light on the significance of South Africa's efforts to attract FDIs and the breadth of the advantages such investments provide to the economy in terms of both job creation and growth.

The policy recommendations include that South Africa should direct its efforts to attract foreign investment toward channels that have the potential to aid in the creation of employment and the expansion of the economy. The government has to improve its anti-corruption measures if it wants to create a welcoming atmosphere for international investors. If the data presented here is to be believed, South Africa's economic development and the country's ability to attract foreign direct investment are closely tied to the country's capacity to create and sustain new employment opportunities. Foreign direct investments (FDIs) should be sought, but they should be seen as a means to an end, such as the alleviation of poverty and the narrowing of the income gap in South Africa. I'll attempt to address your question on the connection between South Africa's stock market and economy. The findings point to a positive and significant correlation between the health of the South African economy and the performance of the stock market in both the short and long terms. Tokunbo Simbowale Osinubi's (2002) research delves into the idea that growth in the Nigerian stock market contributes to the country's expanding GDP.

The data from 1980-2000 were analyzed using Ordinary Least Squares Regression (OLS) to reach the goal. All of the factors taken into account throughout the procedure of developing the stock market were shown to have a good correlation with expansion. From 1980 to 2000, the model successfully predicts Nigeria's GDP growth with an R-squared accuracy of 99 percent and a modified R-squared accuracy of 98 percent, respectively. According to the results, independent factors explain 98% of the diversity in economic activity.

After finding strong associations between stock market growth and economic success, the study's authors concluded that measures should be implemented to hasten stock market expansion. More importantly, it is essential that all facets of the Nigerian economy work in tandem for the country to reap the full benefits of the connections between the growth of the stock market and the growth of the national economy.

Our research concludes with a discussion of the role that gross domestic saving has had in South Africa's growing economy. Growth in GDP and improvements in GDI are mutually exclusive in the long and short run.

This corroborates the findings of a research conducted in East Africa by Samuel Elias and Abebe Worku (2015), who used Johnson's strategy and the Vector Error Correction (VEC) technique to look at the connection between economic expansion and savings (1981–2014). The statistics presented in this article were collected from a World Bank database. Domestic savings significantly correlate with economic growth, according to empirical study conducted in Ethiopia and Uganda. Using data from Kenya using the Johnson co-integration method, it was determined that there was no statistically significant correlation between the two variables. The results of applying Granger's theory that GDP growth is positively correlated with GDS to the economies of Ethiopia and Uganda demonstrated the validity of this hypothesis. In both Ethiopia and Uganda, rising GDP is a consequence of expanding economies since GDP affects GDP. National savings and, by extension, a country's total factor productivity should be increased via the implementation of government-backed policies and initiatives. For sustainable growth in the economy, policymakers should prioritize both saving and investment.

At 85% speed, the ECM output demonstrates an extraordinarily high rate of adaptation from the short run to the long run. Furthermore, the Residual Diagnostic test findings demonstrate that the residuals have a normal distribution, there is no serial correlation, and there is no conditional heteroscedasticity. In contrast to the null hypothesis, which asserts that there is no serial correlation in the model, the alternative hypothesis asserts that serial correlation exists in the model. The probability value of 0.4218 is more than the threshold of 0.05%. As a consequence, we conclude that the model does not include any components that are serially associated.

The null hypothesis of the heteroscedasticity test indicates that the model is stable at the 10% level but has no heteroscedasticity at the 5% level in this situation. The fact that the probability value of the residual diagnostic test is 0.2538, which is larger than the 0.05 percent threshold, shows that there is a more serious problem. As a consequence, when the significance level is set to 5%, we cannot deduce that the model is heteroscedastic; but, when the significance level is adjusted to 10%, we can.

In contrast to the null hypothesis findings, the alternative hypothesis results reveal that the residuals follow a regular distribution at 5%. Jarque-Bera syndrome has a greater than 0.05% probability of occurring. We conclude that the null hypothesis cannot be true since the residuals follow a normal distribution at 5% but only become statistically significant at 10%. Finally, the alternative hypothesis refutes the null hypothesis, which states that the parameters remain constant during the experiment. According to the test findings, the blue line is only allowed to make touch with the red line's margins. Worse, we prefer to accept the null hypothesis rather than the alternative hypothesis because we prefer to suppose that residual variances are stable rather than unstable. As a result, we accept the null hypothesis. We also conclude that the residual variance is constant rather than variable. To assess the long-term stability of the ARDL model's long-term coefficient in connection to the short-term dynamics of the variables foreign direct investment, stock market, and economic growth, the cumulative sum of recursive residuals (CUSUM) and the cumulative sum of squares (CUSUM of Q) were used. This was done to ascertain whether or not the long-term coefficient is stable over time. The null hypothesis states that there is no variance in any of the error correction coefficients that comprise the error correction model within a 5% confidence interval. Bahmani, Oskooee, and Ng (2002) If any of the lines are found to be crossed at a level of significance of 5%, the coefficient consistency null hypothesis may be regarded rejected. To maintain the consistent value of the foreign direct investment coefficient across time, the plot of CUSUM and CUSUMQ data must be maintained within the significant bounds illustrated in the picture above.

Conclusion

This research project examines the effects of FDI and stock market expansion on South Africa from 1975 to 2020. Accessible quantitative data on a wide range of subjects and challenges is the primary goal of the World Bank Data Base. Foreign direct investment (FDI) has a favorable impact on the economic development of the country in which it is invested, which only one of the many positive welfare benefits is brought about by the presence of multinational firms in the form of FDI. If FDI is shown to boost economic development, the host nation should incentivize it by tax breaks, funding for infrastructure and duty exemptions. If foreign direct investment (FDI) impedes South Africa's economic growth, however, the nation must adopt

preventative measures to dissuade and restrict the flow of these funds (Lyroudi, Papanastasiou, et.,al Vamvakidis, 2004). There is minimal evidence of long-term beneficial technical spillover from foreign enterprises to locally held firms, as stated by Carkovic and Levine (2002), and studies of individual nations at the company level show that FDI does not aid economic development. In addition, according to Carkovic and Levine (2002), there is no proof that FDI helps economies grow. However, substantial evidence that FDI increases GDP and produces favorable technical spillovers from foreign to local companies is often found in macroeconomic studies of growth and FDI. Careful consideration is required when applying these results because of the potential for simultaneity bias, the relevance to individual countries, and the common practice of including lagged dependant variables in growth regressions (Carkovic and Levine, 2002:2).

A great deal of study has been done on the factors that influence the rate of economic growth in South Africa. The impact of people's aggregate investment expenditure is a factor. Following Romm and Fedderke (2004): Long-term local and foreign investments' effects on an economy's growth and development have not been the subject of much research.

According to the topic question, what is the connection between GDP growth and FDI? The purpose of the study is to see whether foreign direct investment (FDI) has a positive effect on economic expansion.

Foreign direct investments are helpful to the South African economy in the short and long term. Every percentage point rise in FDI contributes 0.35 percent to South Africa's GDP. For instance, Tshepo S. Masipa (2018) examines the connection between foreign direct investment and economic development from 1980 to 2014. The vector error correction model is used to uncover and estimate the underlying long-term connection between the model's variables. Long-term statistical connections show that real effective exchange rates and FDI both promote economic development, but government expenditures undermine this process. Examples of government and business repercussions include the following: This research contributes to the ongoing discussion on the impact of FDI on the economies of developing countries and the creation of new job opportunities there. Therefore, their results stress the significance of recruiting FDIs to South Africa, and the role that FDIs play in fostering economic development and generating new employment opportunities.

The policy recommendations include that South Africa should direct its efforts to attract foreign investment toward channels that have the potential to aid in the creation of employment and the expansion of the economy. The government has to improve its anti-corruption measures if it wants to create a welcoming atmosphere for international investors. If the data presented here is to be believed, South Africa's economic development and the country's ability to attract foreign direct investment are closely tied to the country's capacity to create and sustain new employment opportunities. Foreign direct investments (FDIs) should be sought, but they should be seen as a means to an end, such as the alleviation of poverty and the narrowing of the income gap in South Africa. Exactly what ties the South African stock market to the economy of the country? Both the long-term and short-term results demonstrate a positive and strong connection between the South African economy and the stock market. Tokunbo Simbowale Osinubi's (2002) research on whether or not the Nigerian stock market contributes to economic growth is instructive.

To do this, data from 1980–2000 were analyzed using Ordinary Least Squares Regression (OLS). All aspects of stock market evolution were shown to have a substantial correlation with growth. The results show that the model accurately reflects the growth in Nigeria's economy between 1980 and 2000, with an R-squared of 99 percent and a modified R-squared of 98 percent. The results show that the variability in economic activity may be attributed to exogenous factors to the tune of 98%.

The study's results, which showed that the stock market is linked to economic growth, indicate that measures should be taken to assist rapid stock market expansion. Further, cross-sector cooperation is essential if Nigeria is to reap the full benefits of the stock market's potential to boost the country's economy.

When everything is said and done, this analysis explores how GDP growth relates to South Africa's economic development. It is impossible to achieve both long-term economic development and substantial domestic saving at the same time.

This is consistent with the work of Samuel Elias and Abebe Worku (2015), who utilized Johnson's technique and the Vector Error Correction (VEC) methodology to establish a link between economic growth in East Africa and savings (1981–2014). The article's statistics information came entirely from the World Bank's archives. An empirical analysis of the economies of Ethiopia and Uganda found a robust connection between household savings and GDP growth. Johnson's

co-integration method was used to the instance of Kenya, but it failed to find any meaningful association. In both Ethiopia and Uganda, we see evidence supporting Granger's thesis that GDP growth is positively correlated with GDS. Increases in both Ethiopia and Uganda's GDP maybe traced back to an increase in their respective levels of gross domestic savings. Rapid economic expansion may be fostered if governments adopt measures that boost total factor productivity and, in turn, the level of domestic savings. Moreover, for sustained growth, national policy should actively encourage both domestic investment and savings.

The ECM result demonstrates an extremely fast transition from the short run to the long run at 85% speed. When testing for cointegration using the ARDL method, one also does an F-test on the lagged levels of the independent variable (s). All during the study's duration, the 5% threshold of significance ensured that the null hypothesis would never be adopted (i.e., 1975–2020). The F-statistics (6.295850) exceeded the upper limit value (4.66), indicating statistical significance at the aforementioned levels of significance. The null hypothesis of no cointegration is rejected when the value of the test statistic is larger than the upper essential limits value, whereas it is accepted when the value

of the F-statistic is less than the lower bounds value. Thus, a co-integration relationship exists here. Although it has been relatively minor in recent years compared to other emerging market economies, foreign direct investment (FDI) has been a significant contributor to economic development in South Africa. The natural resource and market size advantages of South Africa have not been enough to pique the attention of foreign investors, notwithstanding the country's broad macroeconomic improvement.

Recommendations

The increasing value of the service sector in terms of foreign direct investment lends credence to this trend. However, the surge in mergers and acquisitions rather than fresh investment in Greenfield projects lend credence to this theory. Finance and services foreign direct investment (FDI) policy should encourage FDI that places a premium on efficiency. Diversifying and boosting overall inflows requires foreign direct investment (FDI) into other economic sectors. South Africa is obliged to uphold its bilateral obligations to its many different economic partners. Foreign direct investment (FDI) in South Africa increased considerably in 2010, a

year after the BRICS (Brazil, Russia, India, China, and South Africa) program was launched. At the 2012 annual conference of the International Centre for Tax and Development, participants examined the possibility for foreign direct investment incentives to have unintended consequences that might distort the economy. This is because of the difficulties inherent in creating efficient incentive systems, and the country's limited administrative capacities. Therefore, the most efficient method of fiscal management would be to introduce a transparent tax system with reasonable rates. There should be no difference in the tax treatment of domestic and foreign investors. As an added measure, corporation tax rates should be lowered to be more competitive with those of other net capital exporting nations.

There is undeniable evidence that linking economic growth with FDI. Consequently, if it is hoped that economic growth would attract a greater amount of FDI, some techniques aimed at luring FDI may be unproductive. Foreign direct investment (FDI) is a key driver of economic growth, but there are other factors at play that might have a similar or even greater influence. Third, more work is needed to equip workers and job-seekers alike for success in today's globalized, technologically advanced economy. Particularly in the mining industry, trade unions should devote greater resources to avoiding and ending strikes and other forms of worker unrest. Moreover, the government should make fostering entrepreneurship a top priority so that more young people are exposed to the idea of starting their own business. The government should fund programs that teach young people skills that will help them create jobs rather than just find them.

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Appendix

Appendix 1: Descriptive Statistics

	EG	FDI	GDS	MC
Mean	2.036619	0.736611	21.21557	155.7706
Median	2.398116	0.438403	19.48100	142.3783
Maximum	6.620583	5.368357	33.69330	322.7110
Minimum	-6.431975	-0.768651	16.57912	47.87459
Std. Dev.	2.491066	1.092306	4.843130	72.41712
Skewness	-0.817730	1.986928	1.100914	0.502681
Kurtosis	4.333060	8.478507	2.924340	2.491424
Jarque-Bera Probability	8.532577 0.014034	87.79400 0.000000	9.303065 0.009547	2.433024 0.296262
Sum	93.68450	33.88409	975.9161	7165.447
Sum Sq. Dev.	279.2434	53.69092	1055.516	235990.8
Observations	46	46	46	46

Appendix 2: Unit Root Test ADF

Null Hypothesis: SOUTH_AFRICA_ZAF_GDP_GROWTH__ANNUAL__ NY_GDP_MKTP_KD_...
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on t-statistic, lagpval=0.1, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.399917	0.0161
Test critical values:		
	1% level	-3.584743
	5% level	-2.928142
	10% level	-2.602225

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

Null Hypothesis: D(SOUTH_AFRICA_ZAF_GDP_GROWTH__ANNUAL__ NY_GDP_MKTP_K...
 Exogenous: Constant
 Lag Length: 1 (Automatic - based on t-statistic, lagpval=0.1, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.157165	0.0000
Test critical values:		
	1% level	-3.592462
	5% level	-2.931404
	10% level	-2.603944

PP

Null Hypothesis: SOUTH_AFRICA_ZAF_GDP_GROWTH__ANNUAL__NY_GDP_MKTP_KD_...

Exogenous: Constant

Bandwidth: 2 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-3.380560	0.0169
Test critical values:	1% level	-3.584743
	5% level	-2.928142
	10% level	-2.602225

Null Hypothesis: D(SOUTH_AFRICA_ZAF_GDP_GROWTH__ANNUAL__NY_GDP_MKTP_K...

Exogenous: Constant

Bandwidth: 20 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-8.211182	0.0000
Test critical values:	1% level	-3.588509
	5% level	-2.929734
	10% level	-2.603064

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

FDI ADF

Null Hypothesis: SOUTH_AFRICA_ZAF_FOREIGN_DIRECT_INVESTMENT__NET_INFLOWS_...

Exogenous: Constant

Lag Length: 5 (Automatic - based on t-statistic, lagpval=0.1, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.425462	0.5603
Test critical values:	1% level	-3.605593
	5% level	-2.936942
	10% level	-2.606857

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

Null Hypothesis: D(SOUTH_AFRICA_ZAF_FOREIGN_DIRECT_INVESTMENT__NET_INFLOW...

Exogenous: Constant

Lag Length: 4 (Automatic - based on t-statistic, lagpval=0.1, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.082680	0.0002
Test critical values:	1% level	-3.605593
	5% level	-2.936942
	10% level	-2.606857

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

PP

Null Hypothesis: SOUTH AFRICA ZAF FOREIGN DIRECT INVESTMENT NET INFLOWS ...
 Exogenous: Constant
 Bandwidth: 0 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-4.602087	0.0005
Test critical values:	1% level	-3.584743
	5% level	-2.928142
	10% level	-2.602225

MC ADF

Null Hypothesis: SOUTH_AFRICA_ZAF_MARKET_CAPITALIZATION_OF_LISTED_DOMESTIC...
 Exogenous: Constant
 Lag Length: 9 (Automatic - based on t-statistic, lagpval=0.1, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.106143	0.9619
Test critical values:	1% level	-3.626784
	5% level	-2.945842
	10% level	-2.611531

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

Null Hypothesis: D(SOUTH_AFRICA_ZAF_MARKET_CAPITALIZATION_OF_LISTED_DOMESTI...
 Exogenous: Constant
 Lag Length: 8 (Automatic - based on t-statistic, lagpval=0.1, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.845146	0.0057
Test critical values:	1% level	-3.626784
	5% level	-2.945842
	10% level	-2.611531

PP

Null Hypothesis: SOUTH_AFRICA_ZAF_MARKET_CAPITALIZATION_OF_LISTED_DOMESTIC...
 Exogenous: Constant
 Bandwidth: 3 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.800553	0.8093
Test critical values:		
1% level	-3.584743	
5% level	-2.928142	
10% level	-2.602225	

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

Null Hypothesis: D(SOUTH_AFRICA_ZAF_MARKET_CAPITALIZATION_OF_LISTED_DOMESTI...
 Exogenous: Constant
 Bandwidth: 7 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-14.09292	0.0000
Test critical values:		
1% level	-3.588509	
5% level	-2.929734	
10% level	-2.603064	

GDS ADF

Null Hypothesis: SOUTH_AFRICA_ZAF_GROSS_DOMESTIC_SAVINGS ___ OF_GDP ___ NY_G...
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on t-statistic, lagpval=0.1, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.659230	0.4447
Test critical values:		
1% level	-3.584743	
5% level	-2.928142	
10% level	-2.602225	

Null Hypothesis: D(SOUTH_AFRICA_ZAF_GROSS_DOMESTIC_SAVINGS ___ OF_GDP ___ NY...
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on t-statistic, lagpval=0.1, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.035126	0.0000
Test critical values:		
1% level	-3.588509	
5% level	-2.929734	
10% level	-2.603064	

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

PP

Null Hypothesis: SOUTH AFRICA ZAF GROSS DOMESTIC SAVINGS OF GDP NY G...
 Exogenous: Constant
 Bandwidth: 2 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.662062	0.4432
Test critical values:		
	1% level	-3.584743
	5% level	-2.928142
	10% level	-2.602225

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

Null Hypothesis: D(SOUTH_AFRICA_ZAF_GROSS_DOMESTIC_SAVINGS__OF_GDP__NY...
 Exogenous: Constant
 Bandwidth: 2 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-6.023556	0.0000
Test critical values:		
	1% level	-3.588509
	5% level	-2.929734
	10% level	-2.603064

F-Bounds Test Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	6.295850	10%	2.37	3.2
k	3	5%	2.79	3.67
		2.5%	3.15	4.08
		1%	3.65	4.66

Appendix 3: Long-Run ARDL Bond Test Result

ARDL Long Run Form and Bounds Test
 Dependent Variable: D(GDP)
 Selected Model: ARDL(1, 3, 2, 4)
 Case 2: Restricted Constant and No Trend
 Date: 10/30/22 Time: 13:17
 Sample: 1 46
 Included observations: 42

Conditional Error Correction Regression				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.557821	3.210689	1.419577	0.1668
GDP(-1)*	-0.855016	0.172989	-4.942589	0.0000
FDI(-1)	1.268160	0.606056	2.092481	0.0456
GDS(-1)	-0.012931	0.114369	-0.113065	0.9108
MC(-1)	-0.024342	0.008625	-2.822232	0.0087
D(FDI)	0.358869	0.352073	1.019303	0.3168
D(FDI(-1))	-0.895070	0.446181	-2.006070	0.0546
D(FDI(-2))	-0.707448	0.316526	-2.235037	0.0336
D(GDS)	0.305465	0.260063	1.174582	0.2501
D(GDS(-1))	0.576090	0.249094	2.312738	0.0283
D(MC)	0.002015	0.009933	0.202902	0.8407
D(MC(-1))	0.047441	0.014706	3.225905	0.0032
D(MC(-2))	0.049258	0.014304	3.443619	0.0018
D(MC(-3))	0.032505	0.012827	2.534042	0.0172

Appendix 4: ARDL Short-Run Result

ARDL Error Correction Regression
 Dependent Variable: D(GDP)
 Selected Model: ARDL(1, 3, 2, 4)
 Case 2: Restricted Constant and No Trend
 Date: 10/30/22 Time: 13:21
 Sample: 1 46
 Included observations: 42

ECM Regression Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FDI)	0.358869	0.293177	1.224071	0.2311
D(FDI(-1))	-0.895070	0.326245	-2.743548	0.0105
D(FDI(-2))	-0.707448	0.268119	-2.638558	0.0134
D(GDS)	0.305465	0.217933	1.401647	0.1720
D(GDS(-1))	0.576090	0.219829	2.620632	0.0140
D(MC)	0.002015	0.008687	0.231991	0.8182
D(MC(-1))	0.047441	0.010762	4.408185	0.0001
D(MC(-2))	0.049258	0.011720	4.202772	0.0002
D(MC(-3))	0.032505	0.010981	2.959982	0.0062
CointEq(-1)*	-0.855016	0.142550	-5.998024	0.0000

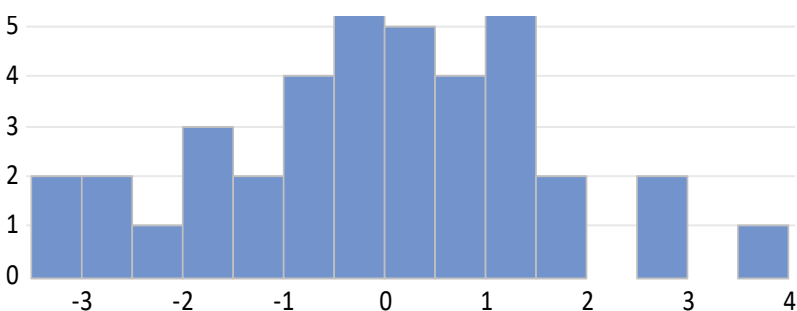
Appendix 5: Residual Diagnostics Result

Breusch-Godfrey Serial Correlation LM Test:
 Null hypothesis: No serial correlation at up to 2 lags

F-statistic	0.557310	Prob. F(2,26)	0.5794
Obs*R-squared	1.726523	Prob. Chi-Square(2)	0.4218

Heteroskedasticity Test: Breusch-Pagan-Godfrey
 Null hypothesis: Homoskedasticity

F-statistic	1.314073	Prob. F(13,28)	0.2627
Obs*R-squared	15.91475	Prob. Chi-Square(13)	0.2538
Scaled explained SS	6.650346	Prob. Chi-Square(13)	0.9193



Series: Residuals	
Sample	5 46
Observations	42
Mean	1.97e-15
Median	0.153097
Maximum	3.743277
Minimum	-3.495646
Std. Dev.	1.621061
Skewness	-0.193107
Kurtosis	2.880429
Jarque-Bera	0.286052
Probability	0.866732

Appendix 6: Granger Causality Test

Pairwise Granger Causality Tests

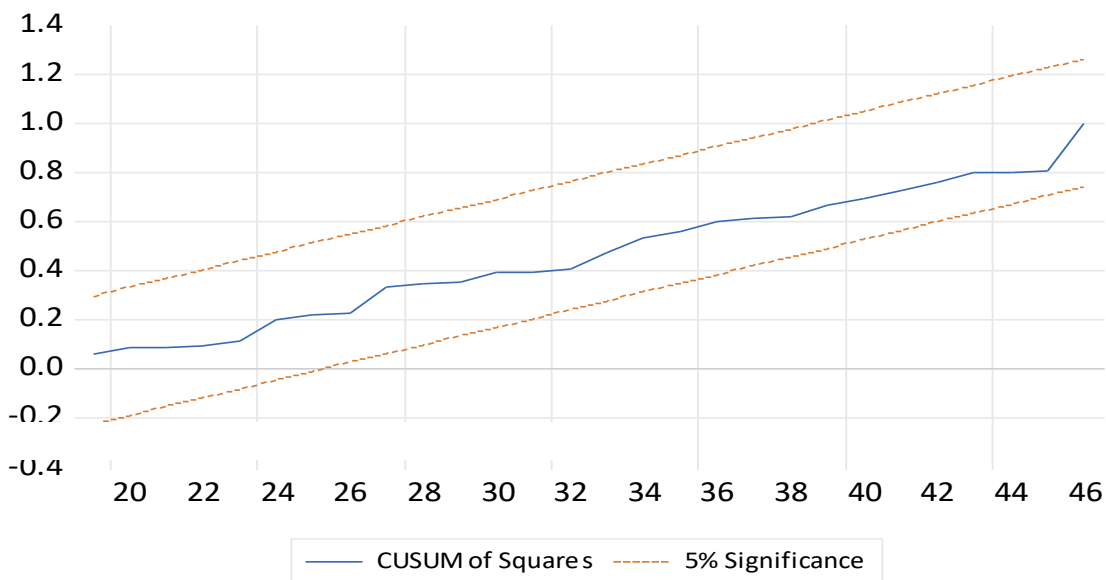
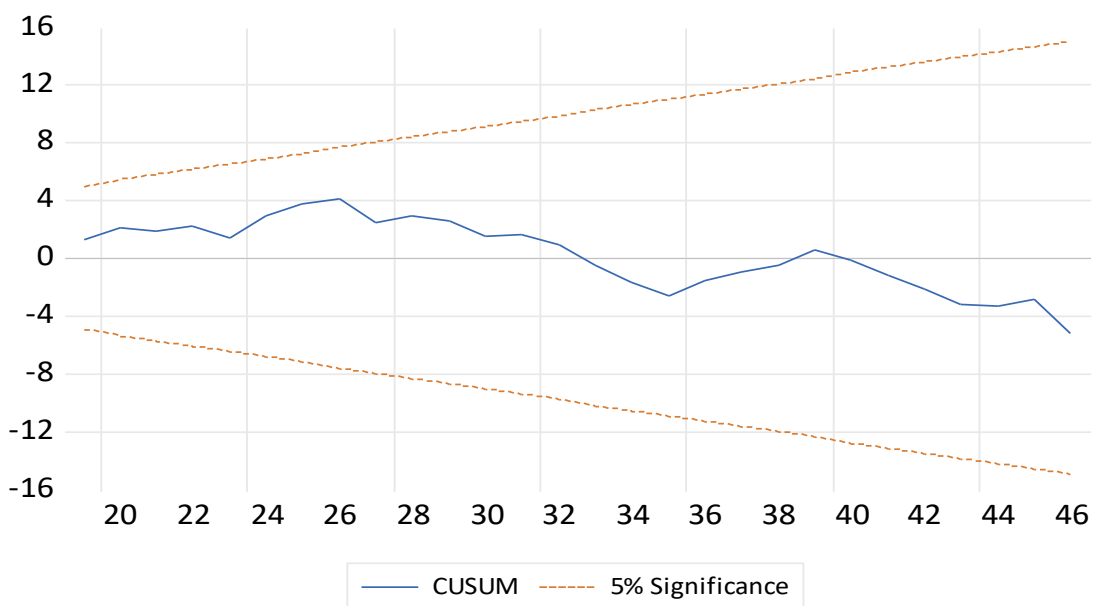
Date: 12/11/22 Time: 14:15

Sample: 1 46

Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
FDI does not Granger Cause EG	45	0.58027	0.4505
EG does not Granger Cause FDI		3.12614	0.0843
GDS does not Granger Cause EG	45	0.72140	0.4005
EG does not Granger Cause GDS		0.01595	0.9001
MC does not Granger Cause EG	45	0.31796	0.5758
EG does not Granger Cause MC		0.27023	0.6059
GDS does not Granger Cause FDI	45	5.92340	0.0193
FDI does not Granger Cause GDS		2.34409	0.1333
MC does not Granger Cause FDI	45	5.95471	0.0190
FDI does not Granger Cause MC		1.03582	0.3146
MC does not Granger Cause GDS	45	1.03661	0.3144
GDS does not Granger Cause MC		3.09160	0.0860

Appendix 7: Stability Test Result



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