THE EFFECT OF FOREIGN DIRECT INVESTMENT ON ECONOMIC GROWTH IN KENYA

BY

ACHIENG PHOEBE GLORIA

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DECLARATION

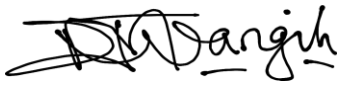
This research project is my original work and has not been submitted to any other University or institution of higher learning for any academic award.

Signed  Date _____

Achieng Phoebe Gloria **D63/40712/2021**

Supervisor

This research project has been submitted for examination with my approval as the University Supervisor.

Signed  Date _____

Prof. Cyrus Iraya

Associate Professor & Chairman

Department of Finance and Accounting

Faculty of Business & Management Sciences

University of Nairobi

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DEDICATION

This research project is dedicated to my parents, Eunice and Boniface, and my siblings; Charles, Joseph, Larry, and Easter who have supported me unwaveringly throughout my academic journey. May God Almighty reward your patience and encouragement.

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ABBREVIATIONS

ANOVA	Analysis of Variance
CPI	Consumer Price Index
FDI	Foreign Direct Investments
GDP	Gross Domestic Product
GNP	Gross National Product
IMF	International Monetary Fund
KNBS	Kenya National Bureau of Statistics
OECD	Organization for Economic Cooperation and Development
SAP	Structural Adjustment Programs
UNCTAD	United Nations Conference on Trade and Development
VIF	Variance Inflation Factor

ABSTRACT

Foreign direct investment has drawn significant attention in many research endevours since it is an instrument for knowledge and technology transfers between nations, a catalyst for economic growth, a means of promoting trade, and a means of international economic integration between economies. The government of Kenya has consciously endeavoured to boost FDI inflows and their impact on the economy through programmes like the Kenya Vision 2030. However, previous research into the real effect of FDI on economic growth have generated inconsistent findings. Using data series from 1981 to 2021, this study aimed to shed more light on how FDI and economic growth are related in Kenya. Alongside FDI, other independent variables like foreign exchange rate, interest rate, inflation rate, and trade openness were also taken into account. The data was analysed using STATA, and the relationships between the variables were examined through descriptive, correlation and inferential analysis. Our analysis of the multiple linear regression model demonstrated that FDI positively affects economic growth. At a 5% level of significance, FDI inflows boost the economy by 0.1278289%. Despite this being a positive influence, the result was statistically insignificant. Therefore, the study proposes that the Kenyan government ought to implement more policies that not only increase the FDI inflows but also better harness FDI-induced growth. Moreover, future researchers may further examine the effects of variables that were excluded to find out their actual influence on FDI inflows and real GDP, such as the influence of institutional integrity and graft on Kenya's economic growth.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

In numerous developing countries, including Kenya, FDI is recognized stands out as one of the primary catalysts of economic growth (Omri & Sassi-Tmar, 2015). Higher economic growth rates are the result of the FDI inflow, which has also boosted technology transfer, expanded employment, and increased productivity in certain industries. Alternately, economic growth promotes a favorable environment for FDI by providing a stable macroeconomic climate, favorable investment policies, and political stability (Hossain, 2008). Therefore, the interrelationship between FDI and economic growth is symbiotic, since FDI can spur economic growth while economic growth can attract more FDI (Türkcan & Yetkiner, 2010).

This study was anchored on the dependency theory, the endogenous and neoclassical growth theories, which offered a framework for understanding how FDI can benefit economic growth in Kenya. The endogenous growth theory shows that FDI can enhance economic growth by promoting technology and knowledge transfer, and advancement of human capital (Romer, 1994). Neoclassical growth theory suggests that FDI promotes economic growth by enhancing technological progress, capital accumulation, and productivity in the host nation (Solow, 1956). Dependency theory asserts that although FDI may boost short-term economic growth, it can cause exploitation and underdevelopment of the host country as it becomes reliant on foreign investors for capital, technology, and management expertise (Prebisch, 1950).

While Kenya significantly attracted FDI in the 1960s and 1970s, the FDI inflows have greatly dwindled in the past couple of decades and the country still underperforms in

this area as compared to its East African neighbours (Mosiori, 2014). The government has made conscious steps to boost FDI inflow and the FDI's influence on economic growth and development. So, the intent of this study was to fully grasp the implications of government strategies and inform the decisions on how the economy can better capitalize on FDI-induced growth.

1.1.1 Foreign Direct Investment

According to Njeru (2013), FDI is a multinational investment where a citizen of one economy acquires a long-term stake in a business in another country's economy. Kunle et al. (2014) asserted that FDI entails a person or corporation from a country making a direct investment into production or an enterprise located in a different nation, either through the acquisition of shares of the enterprise based in that country or via the extension of operations of a currently operating company in the nation. According to Kimotho (2010), FDI involves the sustained involvement of one country in another. FDI is often a financial investment made into a company with operations in another country by a non-citizen corporation or individual. It implies having control of the company's assets and the power to decide how it should be run.

Various FDI research areas call for further inquiry. First and foremost, FDI motivations and drivers are a crucial topic of research because knowing why companies choose to invest in foreign markets can shed light on the forces behind globalization and economic growth (Franco, 2013). Although FDI can have both favourable and unfavourable consequences on economic growth, employment, technology transfer, and social and environmental factors, it is also a crucial area of study (Ngángá, 2013). The study on how government policies affect FDI is vital

since they have a big impact on the extent and type of FDI (Globerman & Shapiro, 1999). Examples of these policies include taxation, trade restrictions, and investment incentives. The concept of FDI spill-overs, or how far the advantages of FDI trickle down to domestic businesses and industries, is also a crucial subject for research since it can reveal if FDI can foster broader economic development.

Other researchers have measured FDI using various indicators and methods. One common approach is to measure FDI as the flow of capital from a foreign entity to a domestic entity, either as equity or debt (Barrell & Pain, 1996). This measure is typically reported as a dollar value and can be used to compare FDI flows across countries and over time. Researchers have also developed indices, such as the FDI Restrictiveness Index (Mistura & Roulet, 2019) and the FDI Confidence Index (Mitra, 2021), to capture the regulatory environment and investor sentiment toward FDI. These indices incorporate various factors such as investment regulations, political stability, and market size, and can provide insight into the attractiveness of a country for FDI.

1.1.2 Economic Growth

Economic growth represents the increase in consumption per person and a multiplication of the total output of production (Mosiori, 2014). For Njeru (2013), it is the process of gradually increasing a country’s real national and per capita income over time. Economic growth also translates to increasing the volume of production or GDP, as the main quantitative indicator of production, in a country for one year (Ivić, 2015). In a nutshell, economic growth is the steady increase in a country's output and

intake of goods and services. The primary method of quantifying the economic growth of a country is through its GDP or GNP over time.

Economic growth is a dynamic and diverse idea that poses some research questions. Sustainability, wealth distribution, institutions, technology, globalization, and human capital are a few of these concerns. Promoting inclusive and sustainable growth that benefits all societal members requires addressing these issues. Researchers need to comprehend how growth can be influenced by technical advancements, the consequences of globalization on growth, and the policies required to support investments in human capital. To ensure that economic growth is socially inclusive, environmentally sustainable, and beneficial to all societal members, these challenges must be addressed.

Economic growth has been operationalized by researchers as a rise in real GDP or real per capita income within a given period, typically measured annually or quarterly (Hasan & Tucci, 2010). Borensztein et al. (1998) acknowledged the complementary influence of human capital on economic growth and thus used human capital to measure economic growth. It is widely acknowledged that economic growth is a multidimensional concept that requires the consideration of various factors such as income distribution, social welfare, and environmental sustainability.

1.1.3 Foreign Direct Investment and Economic Growth

Both theoretical and empirical studies suggest a positive correlation between FDI and economic growth. As Blomstrom and Kokko (1998) proposed, FDI can increase investment and productivity in the host country, leading to higher output and overall

economic growth. Borensztein et al. (1998) also reaffirmed this positive relationship, showing that FDI can transfer knowledge and technology to the host country and boost the economic growth rate more than domestic investment. Nonetheless, the study emphasized that the nation's capacity to absorb new technologies determined the impact of FDI on economic growth.

Whereas Mosiori (2014) and Njeru (2013) suggested that FDI favourably affected economic growth, others yielded divergent results. Carkovic and Levine (2005) concluded that FDI's impact on economic growth depended on the nation's degree of development. In particular, they found that FDI showed a negative relationship with economic growth in more developed nations, but a positive correlation in less developed ones. This implied that the FDI-economic growth nexus may differ given the specific context of the host country.

1.1.4 Foreign Direct Investment and Economic Growth in Kenya

From 1981 to 2021, Kenya experienced varied performance in its economic growth. With real GDP growng at an average rate of 5.1% between 1984 and 1988, the economy's performance in the mid-1980s was satisfactory (Kiringai & Wanjala, 2007). Early in the 1990s, Kenya’s economy went through a slump that was caused, among other things, by prolonged drought, high rates of inflation, and the suspension of foreign aid (Gertz, 2008). The economy progressed rapidly and steadily during the 2000s (often at rates above 5% annually), and as of 2015, Kenya was placed in the lower middle-income range (Maupeu, 2021).

Kenya's economy had a GDP of approximately $100 billion in 2020, making it one of the rapidly expanding economies in sub-Saharan Africa. The agriculture sector employs nearly 50% of the workforce and contributes around 23% to the country's GDP (KNBS, 2021). The manufacturing sector is also expanding and driving economic growth, but Kenya faces challenges such as high poverty rates, inequality, and unemployment (USAID, 2022).

For the period 1981 to 1999, Kenya received FDI inflows averaging 22 million USD per annum, a low figure by developing country standards. Towards the culmination of the 20th century and the beginnning of the 2000s, Kenya had only been attracting about a third of what Tanzania and Uganda each attract with regard to FDI inflows (Abala, 2012). This demonstrated that Kenya’s unattractiveness to FDI inflows lay squarely within its borders. However, FDI was anticipated to lead to Africa’s and subsequently Kenya's integration with the global economy to promote economic growth and reduce poverty (Khadenje, 2015).

FDI inflows have been concentrated in manufacturing, energy, and telecommunications, and are seen as a potential propeller of economic growth in Kenya (KNBS, 2021). However, concerns exist around the drawbacks of FDI, such as marginalizing local savings and investment, dependence on foreign capital, and growth-inhibition of indigenous companies (Wasseja & Mwenda, 2015). To develop policies that can maximize the benefits of FDI inflows while minimizing risks, it was vital to look into how FDI impacted economic growth in Kenya.

1.2 Research Problem

Productive FDI often generates steady and long-term flows of capital since they involve long-term assets. The proceeds are pumped into the economy, thus increasing the country's general demand for goods and services and, consequently, its economic growth (Mosiori, 2014). FDI can bring in capital, technology, and expertise, which can promote economic growth and development, boost productivity, and competitiveness, and create job opportunities (Mahembe & Odhiambo, 2014). However, FDI can also have negative effects, such as increased economic inequality which depends on the degree of economic development of the host countries (Mihaylova, 2015). So, it was crucial to assess the connection between FDI and economic growth to comprehend the potential upsides and downsides of FDI and to establish policies that can optimize the benefits while mitigating the risks associated with FDI inflows.

Kenya is attracting FDI from various industries, including manufacturing, agriculture, and ICT. FDI inflows are still relatively modest given the size of its economy and present state of growth. UNCTAD (2022) reports that FDI inflows in Kenya decreased to $448 million in 2021 compared to $717 million in 2020, the lowest level in the last five years. During times of economic crisis, a nation often implements structural adjustment plans to achieve short- or long-term recovery. However, the capacity of the host nation to absorb FDI dictates how it influences the economy. If the country can absorb FDI, it can positively influence productivity and income growth (OECD, 2002). Efforts such as the 2030 Vision initiative, launched in 2008, aim to make Kenya a middle-income economy with sustained growth rates of 10% or more.

In previous studies, scholars have had mixed and inconclusive results concerning the correlation between FDI and economic growth in Kenya. Njeru (2013) displayed a favourable influence of FDI on economic growth, however Wanjiku (2016) and Koskei et al (2013) reported a negative or insignificant impact. These findings suggested that the relationship between these two variables was complex and may be influenced by other controlling variables including the interest rates, exchange rates, inflation rates, and trade openness in Kenya. Hence, this study intended to bridge the existing research gap by establishing the relation between FDI, economic growth, and the absorptive capacity of Kenya's domestic economy.

1.3 Research Objective

The main objective of the research was to evaluate the effect that Foreign Direct Investment has on economic growth in Kenya.

1.4 Value of the Study

This study sought to focus on the FDI-economic growth nexus in Kenya, aiming to address the research gap by investigating the influence of FDI on economic growth when control variables like interest rates and exchange rates were included. Therefore, the study's outcomes were meant to guide investment strategies, and policy creation, while emphasizing the need for policies that support both FDI and domestic capacity building for sustainable economic growth. Hence, policymakers and development practitioners would formulate effective policies and strategies that promote sustainable and inclusive economic growth.

Furthermore, this study's findings would also contribute to the pool of existing literature, thereby being relevant to future researchers who seek to do research in this field of study. The results of this study also help to highlight areas for further research. For instance, future researchers could employ the results of this study and tweak the different variables employed to acquire more accurate results and develop new theories and frameworks in the field of development economics.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

In theory, FDI contributes to the economy of the recipient country through enhanced productivity, innovation, and managerial expertise. Generally, FDI is essential in advancing the economy of the host country and boosting its growth (Njeru, 2013). However, there has been conflicting empirical evidence on FDI and economic growth. The recent global challenges like the recession, particularly for developing nations, have led them to regard various FDIs favorably because it is anticipated that they will contribute favorably to the host country's economy. Therefore, this study focused on further exploring the manner in which FDI affected the economic growth of the host country, Kenya.

2.2 Theoretical Review

The magnitude of attention and deliberate measures that many economies globally are doing to leverage inward FDI makes it apparent that FDI inflows influence both the host and recipient economies. The intricate nature of FDI's relationship with economic growth has not been settled, yet. A background study of theories that have sought to articulate the FDI phenomena was necessary to better understand the economic system, reasons to venture abroad, and the ultimate impact of FDI on domestic economies.

2.2.1 Endogenous Growth Theory

Paul Romer devised the endogenous growth theory in 1986 to address weaknesses of the Solow-Swan neoclassical growth model (Romer, 1994). The theory proposed that internal factors like innovation, research and development, and human capital were

essential for fostering long-term economic growth, rather than external factors like natural resources or external shocks (Borensztein et al., 1998). It suggested that sustained economic growth could be realized through policies that promote investment in human capital, technology, and innovation, creating a positive feedback loop in which productivity gains spur innovation and growth.

Endogenous growth theory has received some criticism despite its contributions to the field of economics. One criticism of the theory was that it ignores the effects of distributional shifts in output and employment, and aggregate demand (Cornwall & Cornwall, 1994). For instance, a study by De Long and Summers (1991) found that the distribution of income (through machine and equipment investment) had significant effects on economic growth. Therefore, research strategies that allow reasonable measures of the policy effects on economic growth rates must be introduced.

This theory suggests that FDI has the capability to accelerate economic growth by boosting innovation and improving productivity and competitiveness. Additionally, the benefits of FDI may be greater for countries with higher institutional quality levels and human capital, as they are able to better absorb and make use of foreign investment (Pack, 1994).

2.2.2 Neoclassical Growth Theory

Robert Solow and Trevor Swan came up with the neoclassical growth theory in 1956 (Solow, 1956). According to the theory, capital accumulation has diminishing returns because economic growth is fueled by exogenous factors like population growth and

technological advancement. It implies that over time, the rate of technical advancement, which is driven by factors like research and development and information access, will ultimately determine the degree of economic growth (Njeru, 2013). Neoclassical growth theory holds that markets are efficient and people behave rationally; as a result, policies that support free markets, low taxes, and little government interference are viewed as the most effective ways to promote economic growth. In summary, neoclassical growth theory places a strong emphasis on the contribution of markets and technological progress to economic growth.

The main criticism of this theory was that it attributes economic growth rates to exogenous determinants like technology and human capital (Cornwall & Cornwall, 1994). The argument demonstrates that neoclassical growth theory oversimplifies the complicated reality of economic growth and ignores crucial aspects that are unique to the economic system. Acemoglu et al. (2001) found that institutions, not exogenous factors like physical capital or technology, were the primary catalysts of economic growth.

Predicated on the neoclassical growth theory, FDI and economic growth would be positively correlated. Nevertheless, according to Bengoa and Sanchez-Robles (2003), host countries still need to meet a certain degree of human capital, fiscal stability, and free markets to gain from the longevity of FDI inflows. FDI can introduce new managerial know-how, access to international markets, and new technology, which can open up new business prospects for domestic companies and promote economic growth.

2.2.3 Dependency Theory

Raúl Prebisch and Hans Singer proposed the dependency theory in 1950 (Prebisch, 1950). According to this theory, FDI has the potential to harm economic growth in developing nations by creating a situation of dependency, where the host nation relies too heavily on foreign investment and becomes vulnerable to outside economic shocks. The theory also argues that FDI can lead to neo-colonialism, where developed nations use their investments to control the economies of developing nations, resulting in the exploitation of local industries, suppression of natural resources, and persistent underdevelopment in the host nation (Kabonga, 2016).

Xu (2000) contends that the theory oversimplifies the intricate relationship between developed and developing nations by overlooking domestic factors that contribute to economic development, such as corruption and weak institutions. For Borensztein et al. (1998), the theory neglects the probable benefits of FDI for economic growth. Their study showed that the influence of FDI on economic growth in developing countries was positive , contingent upon the nation’s degree of human capital.

Pursuant to the dependency theory, there may eventually be a negative FDI-economic growth nexus, as the FDI inflow may lead to economic dependency and neo-colonialism, which can suppress domestic industries and exploit natural resources. Demands for policy changes and structural adjustments that serve the interests of developed countries can also lead to negative impacts on economic growth in developing nations.

2.3 Determinants of Economic Growth

For policymakers and scholars to advance sustainable and equitable economic development, they must have a complete grasp of the complex and varied factors that determine economic growth. In this section, we looked at some variables, that affect Kenya's economic growth. To gain insight into the economy's strengths and weaknesses and to identify the strategies and techniques that could support long-term, inclusive economic development we explored the factors that influence economic growth in Kenya.

2.3.1 Interest Rate

Interest rate is worthy of mention in any nation's economic growth rate, as an increase in interest rate tends to decrease the country's GDP (Udoka et al.,2012). Some empirical studies have pointed to the negative correlation between interest rates and economic growth. For instance, Hidayat and Kaluge (2014) found that if the Central Bank of Indonesia decreased the interest rate, the investment increased thereby increasing the economic growth. Hatmanu et al. (2020) deduced that economic growth was positively influenced by lower interest rates in the short run as a result of increased investments. Nonetheless, in the long run, lower interest rates discouraged savings in Romania.

2.3.2 Trade Openness

Trade enacts an essential role in determining economic growth, according to empirical studies. It alludes to the total amount of a nation's imports and exports in proportion to its GDP. Nations partaking in international trade typically have heightened economic growth rates. For example, research by Frankel and Romer (1999) and Dollar and Kraay (2004) showed that openness to trade was positively related to

economic growth across a diverse set of countries. According to Sakyi et al. (2015), trade openness boosts economic growth because it promotes division of labour and specialization in production. This enhances productivity and improves the economy's trade prospects as well as the more effective use of domestic resources.

2.3.3 Exchange Rate

The exchange rate is an essential factor in determining economic growth and its competitiveness, according to empirical studies. Countries that participate in international trade tend to be highly affected by the exchange rate since it determines the value of both imports and exports (Sibanda et al., 2013). In the short run, Hatmanu et al. (2020) and Khan (2021) found that the exchange rate positively influenced economic growth in Romania and Bangladesh, respectively. Nonetheless, over time, real exchange rates may negatively affect economic growth if undervalued since it will not be sustainable (Sibanda et al., 2013).

2.3.4. Inflation Rate

A country’s inflation rate has the potential to substantially enhance or impair the economy's growth and productivity. This is because high inflation rates may harm the economy while moderate inflation rates boost economic growth (Hossin, 2015). Hwang and Wu (2011) found that beyond the 2.5% inflation rate threshold, every percentage increase in the inflation rate slowed down China’s economic growth by 0.61%. However, below the 2.5% threshold, each percentage increase in the inflation rate improved the country’s economic growth by 0.53%. Moreover, Khoza et al. (2016) confirmed a 5.4% inflation rate threshold above which South Africa’s economic growth would be hampered. In light of this, they suggested an optimal

inflation rate threshold of between 3% to 6% for better economic growth. Therefore, the influence of inflation on economic growth is contingent upon its magnitude.

2.4 Empirical Studies

Njeru (2013) sought to evaluate how FDI affected economic growth in Kenya. Descriptive, inferential, and trend analysis of data from 1982 to 2012 unveiled a significant positive correlation between FDI and economic growth. The limitation of the study to examine various FDI effects across sectors restricts the generalizability of the findings on the drivers of Kenya's economic growth. Koskei et al. (2013) evaluated the effect of openness, FDI, and gross capital formation on economic growth in Kenya. They used multiple linear regression, the Barro growth model, and the ordinary least squares method on data from the period of 1960 to 2010. Their findings pointed out that neither FDI nor gross capital formation had any major influence on the GDP growth rate, and the effectiveness of FDI was reliant on the ability of the country to absorb foreign capital. The study stressed the significance of attracting FDI and encouraging capital creation as crucial factors in economic growth.

To examine data spanning from 1980 to 2015 for the research project on the effect of FDI on economic growth in Kenya, Wanjiku (2016) opted for the ordinary least squares method. The finding was that FDI on its own had minimal influence on economic growth in Kenya and it should have combined with infrastructural development and economic openness to produce the desired influence on economic growth. The study highlighted the significance of additional efforts to make sure that FDI generates favorable spillovers and contributes to the nation's goals for long-term growth. Kimotho (2010) studied the correlation between FDI and economic growth in

Kenya during the years 2000 to 2009. Based on the research, a significant and strong positive relationship existed between FDI and Kenya's economic growth. Besides, he indicated that variations in growth and foreign direct investment could be partially explained by both inflation and trade terms. From the study, it was apparent that increasing the level of FDI and enhancing the terms of trade for foreign investors would significantly boost economic growth in Kenya.

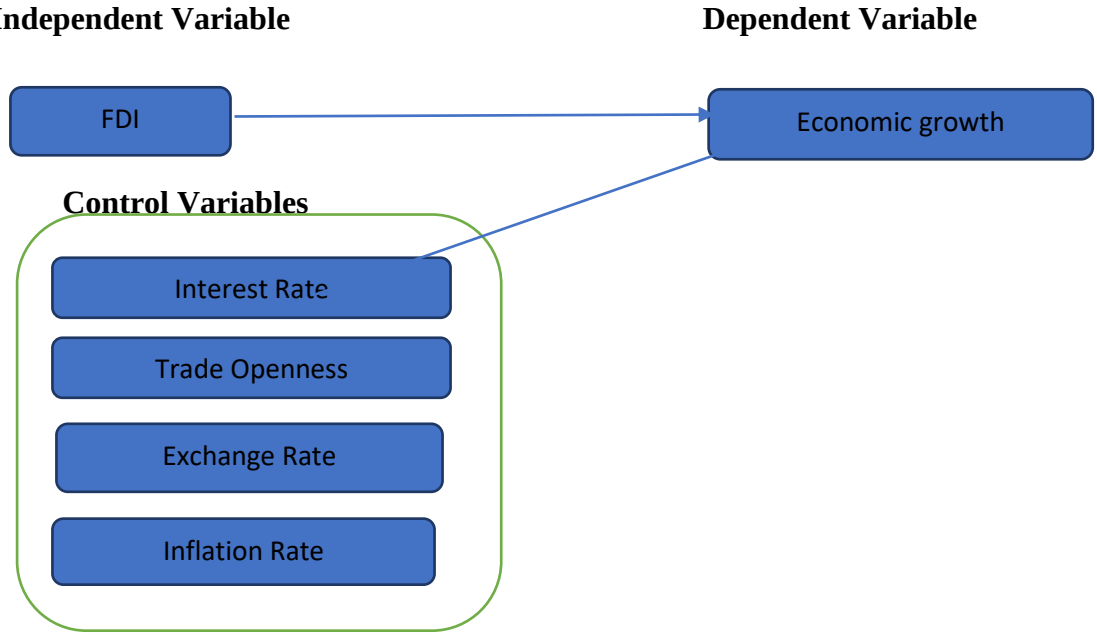
Deploying the bounds-testing approach, Ngeny and Mutuku (2013) sought to explore how FDI volatility affected Kenya's economic growth between 1970 and 2011. The study's results showed that FDI volatility hurt Kenya's long-term economic growth, while FDI itself had a positive effect. It was interesting to note that although the study found that FDI boosted Kenya's economy, its impact on economic growth could not be considered significant. Therefore, this was a clear indication that more research was needed in this study. Falki (2009) evaluated the influence of FDI on economic growth in Pakistan from 1980 to 2006. Taking into account labour, trade, and domestic capital, the study used the production function based on endogenous growth theory to evaluate the association between FDI and economic growth. The findings revealed a negative and insignificant connection between FDI inflows and GDP in Pakistan. Based on these findings, the Pakistani government should have implemented FDI-attracting policies that would have boosted rather than retarded economic growth.

Kunle et al. (2014) sought to examine FDI's influence on economic growth in Nigeria between 1999 and 2013, through regression analysis of ordinary least squares. The findings showed a direct relationship between economic growth and FDI, suggesting that FDI was an engine of economic growth, but a stable political and economic

environment was necessary for its success. A limitation of this study was that its analysis was reliant on one econometric model (ordinary least squares), and thus could be unreliable. Athukorala (2003) analysed the effect of FDI on economic growth in Sri Lanka between 1959 and 2002 through regression analysis. The results revealed no significant support for a strong correlation between FDI inflows and economic growth in Sri Lanka, leading Athukorala to suggest reduced confidence in the idea that FDI had an autonomous growth effect in the country. This study did not provide a detailed discussion about the potential ways that FDI may impact economic growth in Sri Lanka.

Ray (2012) examined the impact of FDI on economic growth in India, based on data from 1990 to 2011 and a cointegration approach. According to the study, FDI made an insignificant contribution to economic growth during the period under study. This research study presented a well-researched analysis of the relationship between FDI and economic growth in India. Antwi et al. (2013) investigated the relationship between foreign direct investment (FDI) and economic growth in Ghana using time series data spanning 1980 to 2010. The study showed a positive and significant relationship between FDI and economic growth using empirical analysis and simple ordinary least squares regression. Remarkably, the study recommended protecting domestic producers to avoid monopolistic foreign investors in the market, irrespective of the favourable implications of FDI on economic growth.

2.5 Conceptual Framework



Heightened investment, technological transfer, and increased productivity are all ways that FDI can enable the economy to thrive. Nevertheless, the influence of FDI on economic growth could be enhanced by the presence of certain determinants of absorptive capacity, like the exchange rate, the level of trade openness, interest rate, and inflation. Trade openness can enhance a country's productivity, trade prospects, and efficient use of domestic resources (Sakyi et al., 2015), while the exchange rate can appreciate or depreciate the value of imports and exports of the country (Sibanda et al., 2013). Lower interest rates boost economic growth through increased investments (Hatmanu et al., 2020), while the inflation rate if in moderation, can promote economic growth. Therefore, the presence of these determinants enhances the connection between FDI and economic growth.

2.6 Summary of Literature Review

Previous studies have displayed differing findings on the FDI-economic growth nexus. Kimotho (2010), Njeru (2013), Kunle et al. (2014) and Antwi et al. (2013)

exhibited a positive and significant relationship while some scholars like Athukorala (2003) and Wanjiku (2016) found no significant relationship between the two variables. Therefore, countries must exercise caution when choosing their FDI acquisition strategies because this relationship differs from nation to nation.

As FDI is a component of everything that affects economic growth, we cannot generalize and isolate FDI's effects on growth from other factors in the National Accounts. As a result, studies about FDI-induced growth should, in theory, broaden their focus beyond the literal acknowledgment of FDI to include the broader growth implications of aspects such as the current macroeconomic environment, governance, legal, and policy regimes, as well as other interventions aimed at boosting economic growth.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This study applied a quantitative research methodology to analyse how FDI influences economic growth in Kenya. This approach involved collecting quantitative data and subjecting it to rigorous analysis to draw inferences about the population. This methodology falls under the category of inferential research, where the characteristics of a sample are examined to deduce traits about the entire population. This approach was suitable for the study given that it empirically analysed the quantitative effects of FDI on economic growth in Kenya. The study illustrated the findings through graphs and tables, followed by an in-depth analysis of the data.

3.2 Research Design

The principal focus of research design is to offer a conceptual framework for conducting research. Its preparation seeks to maximize the effectiveness of research by ensuring the collection of relevant data with minimal time, money, and effort spent. The two primary variables for this study, FDI and economic growth in Kenya, were compared using the descriptive research approach. This research strategy was selected because it made it feasible to identify and describe time series data and their trends. The study's primary focus was to examine the connection between the level of FDI inflow and economic growth in Kenya.

3.5 Data Collection

This study utilized secondary data sources. The data was collected from the World Bank's *World Development Indicators*, the International Monetary Fund's

International Financial Statistics, and the Central Bank of Kenya's *Statistical Bulletin*, covering the period from 1981 to 2021.

3.6 Data Analysis

Data analysis involved statistical methods, such as time series analysis, regression analysis, and hypothesis testing. Collecting and cleaning the data in the first step ensured that it was accurate and error-free. The data was then examined to find patterns and links between the relevant variables. To dissect the relationship between FDI and economic growth, we applied regression analysis while considering other relevant variables like inflation rate, interest rate, foreign exchange rate, and trade openness. The statistical significance of the association between FDI and economic growth, alongside other hypotheses concerning the study objectives, were assessed by hypothesis testing. The findings of the data analysis gave insight on how FDI affects Kenya's economic growth and sought to guide policy decisions.

3.6.1 Diagnostic Tests

To make sure that the data was suitable for analysis, a number of diagnostic tests were carried out including normality, multicollinearity, independence, heteroscedasticity, and stationarity tests. The normality test establishes if the model residuals are distributed normally. As most statistical tests presume that the data is regularly distributed, the normality test was required. A common technique for determining normality is the Shapiro-Wilk test, where a p-value of less than 0.05 is required to reject the null hypothesis. The null hypothesis for this test posited that the error terms had a normal distribution.

The multicollinearity test was used to measure whether the independent variables in the model had a high degree of correlation. The estimations of the regression coefficients may become unreliable due to multicollinearity. Multicollinearity was assessed using the variance inflation factor (VIF) test; a VIF value of more than 10 led to the null hypothesis being rejected. The null hypothesis asserted that there was no multicollinearity among the independent variables.

A major issue associated with time series data is the lack of independence of observation over time. Therefore, to ascertain that the variables were stationary, we employed the Augmented Dickey-Fuller Test. While the alternative hypothesis presupposed stationarity, the null hypothesis proposed non-stationarity. Next, the test statistic and t-critical were contrasted. The non-stationarity null hypothesis was rejected if the test statistic was smaller than the t-critical. In contrast, the non-stationarity null hypothesis was accepted if the test statistic was higher than the t-critical.

Model specification tests to establish autocorrelation and heteroscedasticity were employed. The autocorrelation test checks whether there is a periodic correlation between the residuals in the data. Estimates of the regression coefficients may be biased and inefficient as a result of autocorrelation. A p-value of less than or equal to 0.05 was needed to reject the null hypothesis for the Breusch-Godfrey LM test, which was used to check for autocorrelation. Conversely, the heteroscedasticity test evaluates whether the variance of the data's errors remains constant over time. It can cause bias and inaccuracy in the estimates of the regression coefficients. The study used the Breusch-Pagan test, which bases the null hypothesis rejection criterion on a

p-value of less than 0.05, to examine heteroscedasticity. The null hypothesis implied a constant variance of the error term.

3.6.2 Analytical Model

A multiple regression model served as the analytical framework to investigate how FDI affects economic growth in Kenya. While accounting for other pertinent variables that might have affected growth, it attempted to determine the relationship between FDI and economic growth.

$Y=\alpha+\beta_1X_1+\beta_2X_2+ \beta_3X_3 +\beta_4X_4+\beta_5X_5+ \varepsilon$

So, $GDP=\alpha+\beta_1FDI+\beta_2INF+ \beta_3ER +\beta_4IR+\beta_5 TO+ \varepsilon$

Where:

Y= Economic growth rate (measured using GDP growth rate)

X_1 = Foreign Direct Investment (measured using Natural log of FDI inflows)

X_2 = Inflation Rate (Measured using Consumer Price Index)

X_3 = Exchange Rate. US dollar ($) versus the Kenyan shilling exchange rate was used.

X_4 = Interest Rate. (Measured using Lending Interest Rate)

X_5 = Trade Openness (Measured as the sum of exports and imports as a % of GDP)

ε = Stochastic error term

α = Intercept; expected GDP growth rate when all independent variables are equal to zero.

$\beta1$, $\beta2$, $\beta3$, $\beta4$, $\beta5$ = Slope of the regression equation; coefficients of the independent variables.

3.6.3 Significance Tests

Regression analysis and ANOVA testing were utilized to explore how FDI had affected Kenya's economic growth. Regression analysis serves as an important technique to assess the significance of the relationship between one or more independent variables and a dependent variable. The relationship between FDI inflows and economic growth in this study was examined through regression analysis, while controlling for other factors such as inflation rate, interest rate, exchange rate, and trade openness. On the other hand, ANOVA is used to determine whether differences between the means of two or more groups are statistically significant. It was used to determine the levels of variability within the regression model and the statistical significance of the whole regression model using the p-value. Additionally, measures like the t-statistic and R^2 were utilized to evaluate the sensibility of the independent variables concerning their impact on economic growth in Kenya.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

The focus of this study was to ascertain how FDI affected economic growth in Kenya. The quantitative raw data was collected from the World Bank's World Development Indicators and correlated with data from the International Monetary Fund and Central Bank of Kenya for the years 1981 to 2021. The data was obtained with a focus on the variables of the study, that is, FDI, economic growth rate, interest rate, exchange rate, inflation rate, and trade openness.

Annual data was available from 1981 to 2021 for each of the study variables. Since the foreign exchange rate fluctuates daily throughout the year, an average figure was computed annually. STATA was used for data analysis. Therefore, this chapter provides comprehensive empirical evidence of the study variables such as descriptive statistics, and diagnostic tests to enable us to establish the real influence of FDI on economic growth in Kenya.

4.2 Descriptive Statistics

Descriptive statistics of the GDP growth rate, log of FDI inflows, inflation rate, foreign exchange rate, trade openness, and interest rate are displayed in Table 4.1 as follows.

Table 4.1 Summary Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
FDI Inflows (log)	41	7.897158	0.794589	5.595971	9.16151
GDP Growth Rate (%)	41	3.719295	2.286216	-0.799494	8.058474

Exchange Rate (KShs/$1)	41	61.68239	31.79438	9.047498	109.6377
Interest Rate (%)	41	18.00639	6.320694	11.99578	36.24
Inflation Rate (%)	41	11.45912	8.513332	1.554328	45.97888
Trade Openness (%)	41	51.99699	10.58051	27.23635	72.85848

4.2.1 FDI Inflows and GDP Growth Rate

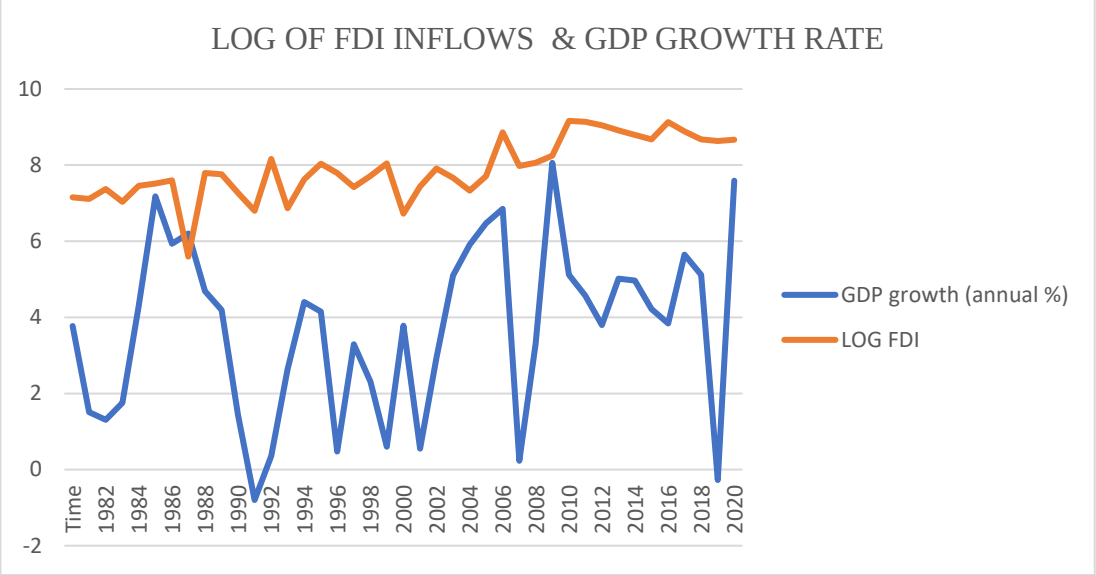


Figure 4.1 Trend in Log of FDI Inflows & GDP Growth Rate

Figure 4.1 shows the trends in FDI inflows (log) and GDP growth rate in Kenya from 1981 to 2021. It shows that with either an uptick or decline in FDI inflows ,there was a subsequent rise or fall in the economic growth rate respectively within a span of two years. This implies the prospect of a correlation or lag effect between FDI inflows and economic growth in the study. The lowest GDP growth rate was -0.799% in 1992 while the highest growth rate was 8.058% in 2010. This represented a GDP growth rate increase of 8.857% over 18 years which could be attributed to the political stability that ensued after the clamour for multi-party politics in 1992 which had put a strain on the economy.

The highest value of FDI inflow (log) was 9.16 representing $1.45 billion received in 2011 while the lowest value was 5.59 which stood for $394,430 that was received in 1988. On average, Kenya received $282 million (shown by log value 7.897) through FDI inflows over the forty years, as shown in Table 4.1. Additionally, the high standard deviation of the log of FDI inflows from 1981 to 2021 of 0.794 ($417 million) points toward the variations in the annual FDI inflows into Kenya. Nonetheless, Figure 4.1 highlights that there were higher FDI inflows from 2008-2021 as compared to 1981-2007. This could be attributed to some of the government's strategies to increase FDI inflows such as the Kenya Vision 2030 programme that was launched in 2008.

4.2.2 Inflation Rate, Exchange Rate, Interest Rate, and Trade Openness

These fluctuations in inflation rate were quite significant and this was depicted by the high standard deviation of 8.5% in Table 4.1. The lowest and highest annual average inflation rates were 1.55% in 1995 and 45.98% in 1993 respectively. The significant rise in inflation rate in 1993 was linked with an influx in supply of money, decreased overall consumer demand, the weakening of the Kenyan shilling, and low confidence among investors as a result of the shift to multi-party politics.

The lowest average exchange rate was KShs 9.05/$1 in 1981 while the highest average exchange rate was KShs 109.64/$1 in 2021. The volatility of the KSh/$1 exchange rate was demonstrated by its standard deviation of KShs 31.79/$1 during the 41 years under study. The general continuous rise in Kenya's foreign exchange rate denoted the weakening of the Kenyan Shilling in comparison to the US Dollar over 41 years.

The least interest rate was 11.99% in 2020 while the largest interest rate was 36.24% in 1994. There were slight annual variations over the 41 years with a standard deviation of 6.32%. The lowest and highest levels of trade openness were 27.24% in 2020 and 72.86% in 1993. Moreover, there were significant variations in trade openness between 1981 and 2021 and this is evidenced by the standard deviation of 10.58%. The low levels of trade openness sharp in 2020 could be attributed to the COVID-19 pandemic which led to the temporary shutdown of some industries, thereby reducing the volume of exports and imports during that year.

4.3 Correlational Analysis

Correlation analysis is a technique that pertains to determining the significance of the relationship between two or more variables. Therefore, analyses were carried out to assess the correlations between the GDP growth rate and FDI inflows, inflation rate, foreign exchange rate, interest rate, and trade openness. The results are presented in the subsequent correlation matrix.

Table 4.2 Correlation Matrix

	GDP Growth Rate	**FDI Inflows (log)**	**Trade Openness**	**Interest Rate**	**Inflation Rate**	**Exchange Rate**
GDP Growth Rate	1.0000					
FDI Inflows(log)	0.2160	1.0000				
Trade Openness	-0.1783	-0.5001*	1.0000			
Interest Rate	-0.3639*	-0.1921	0.4578*	1.0000		
Inflation Rate	-0.4490*	-0.2487	0.5045*	0.3236*	1.0000	

Exchange Rate	0.1460	0.7073*	-0.5463*	-0.0902	-0.3149*	1.0000

*. Correlation is significant at the 0.05 level (2-tailed)

Studying correlation matrices helps us recognize trends and relationships between multiple variables. Positive correlation coefficients suggest positive relationships between the variables whereas negative correlation coefficients values demonstrate negative relationships. The correlation is stronger the closer the value is to 1 (positive or negative). From Table 4.2, it is quite apparent that the GDP growth rate exhibited positive relationships with FDI and foreign exchange rate due to the positive values. However, the GDP growth rate had negative relationships with trade openness, interest rate, and inflation rate.

Furthermore, FDI was negatively correlated to trade openness, interest rate, and inflation rate. However, the correlation value of 0.7073 between FDI and exchange rate reflected a strong positive and significant relationship at a 5% level of significance. Although trade openness had positive correlations with interest rate and inflation rate, it was correlated negatively with the exchange rate. The interest rate was positively and significantly related to the inflation rate at a 5% level of significance but negatively affected by the exchange rate. Additionally, there was a significant negative correlation found between the exchange rate and the inflation rate at the 5% level of significance.

4.4 Diagnostic Tests

Performing diagnostic tests in time series data allows researchers to evaluate a model's adherence to its assumptions while probing instances when an observation or set of observations is not adequately represented by the model. The assumptions of a

multiple linear regression model include normality, homoscedasticity, linearity, independence of errors, and independence of the independent variables. With the aid of various diagnostic tests, we assessed whether the model satisfied these assumptions and accurately captured the study's data without any undue influence.

4.4.1 Test for Heteroscedasticity

Homoscedasticity is an important assumption when dealing with a multiple linear regression model. It translates to an equal variance of the residuals for every fitted value and the predictors. Therefore, homoscedasticity was required to compute precise standard errors for the parameter estimates. We employed the Breusch-Pagan test and the results are shown in Table 4.3 below.

Table 4.3 Heteroscedasticity Test

Breusch-Pagan / Cook-Weisberg Test for Heteroskedasticity
Ho: Constant Variance
Variables: Fitted Values of GDP Growth Rate
chi2(1) = 0.00
Prob > chi2 = 0.9688

The null hypothesis assumed homoscedasticity while the alternative hypothesis proposed heteroscedasticity. The test statistic's p-value had to be less than the relevant significance level of 0.05 in order to reject the null hypothesis. Because the p-value of 0.9688 was more than 0.05, we failed to reject the null hypothesis based on the data shown in Table 4.3. Hence, the standard errors for the fitted values had constant variance (homoscedastic) and were fit for further analysis.

4.4.2 Test for Multicollinearity

The assumption of no multicollinearity denotes that every predictor variable uniquely contributes to explaining the outcome. Additionally, it means non-redundancy in the independent variables in that a significant amount of information found in one predictor is not found in other predictors. Multicollinearity increases the standard errors. In our study, we used the Variance Inflation Factors. The calculation of VIF values was as shown below and the results are presented in Table 4.4.

$VIF = 1 / (1-R^2)$

Where VIF= Variance Inflation Factor

R^2 = Coefficient of Determination

1/VIF = Tolerance

Table 4.4 Multicollinearity Test

Variable	**VIF**	**1/VIF**
Exchange Rate	2.37	0.421382
Trade Openness	2.13	0.470146
FDI (log)	2.11	0.474376
Interest Rate	1.37	0.731058
Inflation Rate	1.38	0.726848
Mean VIF	**1.87**	

The null hypothesis was that the independent variables did not exhibit multicollinearity whereas the alternative hypothesis was that multicollinearity existed among the independent variables. Multicollinearity is present when the VIF values are

more than 10. As a result, when the VIF values are higher than 10, the null hypothesis is usually rejected. Based on Table 4.4, it is apparent that all the VIF values were below 10. Consequently, we failed to reject the null hypothesis. As such, we concluded that our analysis could proceed as the independent variables were not displaying multicollinearity.

4.4.3 Normality Test

The normality assumption assures the normal distribution of the model residuals. To estimate precise standard errors for the model parameter estimates, normally distributed residuals were necessary. To be certain that the error terms were normally distributed, we run the Shapiro- Wilk test. The findings of the test are displayed in Table 4.5 below.

Table 4.5 Normality Test

Variable	Obs	W	V	Z	Prob>z
Residual	41	0.98709	0.520	-1.378	0.91584

The null hypothesis postulated that the error terms followed a normal distribution whereas the alternative hypothesis assumed that the error terms did not conform to a normal distribution. In case the p-value was less than the pre-established significance level of 0.05, it was necessary to reject the null hypothesis. Given that the p-value of 0.91584 was more than 0.05, we failed to reject the null hypothesis based on the data presented in Table 4.5. As a result, we demonstrated that the error terms were normally distributed and the data was fit for analysis.

4.4.4 Test for Autocorrelation

When dealing with a linear regression model, we assume that there are no correlations between the residuals. Since our study data was time series data, it was important to ensure that there was no periodic correlation among the residuals in the data. The presence of autocorrelation in the residuals would mean that our model was unsound and the subsequent results would be invalid. The Breusch-Godfrey LM test was applied to determine if there was a periodic correlation among the residuals in the data. Table 4.6 below shows the test findings.

Table 4.6 Autocorrelation Test

lags(p)	chi2	Df	Prob > chi2
1	0.548	1	0.4593

The test statistic has p degrees of freedom and a Chi-square distribution. The alternative hypothesis assumed that there was serial correlation among the data residuals, in contrast to the null hypothesis, which proposed no serial correlation. The p-value required to be less than a predefined significance level of 0.05 in order to reject the null hypothesis. We failed to reject the null hypothesis because the p-value of 0.4593 was more than 0.05, leading us to conclude that the residuals in the data did not exhibit autocorrelation. Hence, the data at this point was valid for further analysis.

4.4.5 Test for Stationarity

Stationarity guarantees that a variable has no unit root. The presence of unit roots causes spurious regression. Therefore, the Augmented Dickey-Fuller test was

conducted on each of the study variables to ascertain the presence or absence of unit roots. The results are presented in Table 4.7.

Table 4.7 Stationarity Test

Variable	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
GDPGrowth Rate	-3.743	-3.655	-2.961	-2.613
Log FDI	-1.989	-3.655	-2.961	-2.613
Trade Openness	-1.149	-3.655	-2.961	-2.613
Interest Rate	-1.392	-3.655	-2.961	-2.613
Inflation Rate	-3.339	-3.655	-2.961	-2.613
Exchange Rate	-0.810	-3.655	-2.961	-2.613

The non-stationarity of the variables served as the null hypothesis while the stationarity of the variables provided for the alternative hypothesis. It would only be necessary to reject the null hypothesis if the test statistic's absolute value was greater than the 5% critical value. Given that the test statistic absolute values for GDP growth rate (3.743) and inflation rate (3.339) were greater than the absolute value of the 5% critical level (2.961), we rejected the null hypothesis. Hence, regression analysis could be performed because the GDP growth rate and inflation rate were stationary.

On the contrary, the test statistic absolute values for the log of FDI (1.989), trade openness (1.149), interest rate (1.392), and the exchange rate (0.810) were all less than the absolute value of the 5% critical level (2.961). Consequently, we failed to reject the null hypothesis and concluded that FDI, trade openness, interest rate, and exchange rate were not stationary. Besides, these variables were unfit for regression

analysis in their raw state. To correct this, we differenced the variables and retook them through the Augmented Dickey-Fuller test. The findings are presented in Table 4.8.

Table 4.8 Stationarity Test - First Difference

Variable	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
dLogFDI	-8.378	-3.662	-2.964	-2.614
dTradeOpenness	-5.108	-3.662	-2.964	-2.614
dInterestRate	-3.696	-3.662	-2.964	-2.614
dExchangeRate	-4.492	-3.662	-2.964	-2.614

The null and alternative hypotheses were as earlier indicated; that is non-stationarity for the null hypothesis and stationarity for the alternative hypothesis. Table 4.8 indicates that all the variables (log of FDI, trade openness, interest rate, exchange rate) were stationary after the first differentiation. This was because the absolute values of their test statistic exceeded their 5% critical absolute values. Thus, we rejected the null hypothesis of non-stationarity and demonstrated the variables as fit for regression analysis.

4.5 Inferential Statistics

The inferential analysis involves drawing conclusions about the population based on the analysis and observations from a sample of the population. To ascertain the association between FDI and economic growth in Kenya, the study performed multiple linear regression analyses on the stationary variables using data from 1981-2021. This was the regression model:

$Y=\alpha+\beta_1X_1+\beta_2X_2+ \beta_3X_3 +\beta_4X_4+\beta_5X_5+ \varepsilon$

Where:

Y= Economic growth rate X_1 = Foreign Direct Investment

X_2 = Inflation Rate X_3 = Exchange Rate

X_4 = Interest Rate. X_5 = Trade Openness

ε = Stochastic error term

α = Intercept

$\beta1$, $\beta2$, $\beta3$, $\beta4$, $\beta5$ = coefficients of the independent variables.

The study used STATA to code and compute the multiple regression findings which are displayed in the subsequent tables.

Table 4.9 Model Summary

R-Squared	**Adjusted R-Squared**	**Root Mean Squared Error**	**F value**	**Prob > F**
0.3628	0.2691	1.9795	3.87	0.0070

The null hypothesis for the model was that the independent variables (FDI, inflation rate, exchange rate, interest rate, and trade openness) did not jointly influence the economic growth in Kenya. On the contrary, the alternative hypothesis suggested that the independent variables jointly influenced economic growth in Kenya. The p-value had to be less than or equal to the predefined significance level of 0.05 in order to reject the null hypothesis. The probability of obtaining the estimated F-statistics or greater is expressed as Prob>F. We rejected the null hypothesis as the p-value of 0.0070 was a value below 0.05, and this indicated that our model was statistically

significant. Moreover, it pointed out that the independent variables jointly influence Kenya's economic growth.

The coefficient of determination (R^2) indicates the degree to which the variations in the independent variables - FDI, interest rate, foreign exchange rate, trade openness and inflation rate – can account for changes in the dependent variable (economic growth). Given the R^2 of 0.3628, the five independent variables collectively explained 36.28% of the variations observed in the economic growth rate of Kenya over the research period. This suggests that 63.72% of the variations in Kenya's economic growth were caused by variables other than those included in this study. Thus, further research should be conducted to study those other variables to ascertain how they affect economic growth in Kenya.

Table 4.10 Multiple Regression Analysis

Dependent Variable: GDP Growth Rate Method: OLS Model Sample: 1981-2021				
Variable	**Coef.**	**Std. Err.**	**T**	**P>t**
Constant	6.373578	0.742976	8.58	0.000
dLogFDI	0.1278289	0.4583862	0.28	0.782
dInflationRate	-0.1982194	0.0586046	-3.38	0.002
dForeignExchangeRate	-0.1137786	0.0724339	-1.57	0.125
dLendingInterestRate	0.3406773	0.1473757	2.31	0.027
dTradeOpenness	0.1200125	0.0632515	1.90	0.066

Based on the regression results above, the equation is as follows:

$Y=6.373578-0.1982194X_2+0.3406773X_4+ \varepsilon$

Where Y is the dependent variable (economic growth), X_2 is Inflation Rate and X_4 is Interest Rate.

The findings show that when FDI, inflation rate, foreign exchange rate, interest rate, and trade openness) were held constant at zero, Kenya's economic growth rate was 6.373578%. Except for the inflation rate and foreign exchange rate, all the other independent variables positively affected economic growth. Each independent variable's null hypothesis was that it was statistically insignificant in affecting economic growth in Kenya. Thus, we rejected the null hypothesis whenever the p-value of an independent variable was less than or equal to the alpha level of 0.05.

From Table 4.10, the first differences of the inflation rate and lending interest rates were individually statistically significant in influencing the first difference of economic growth rate. This was demonstrated by the fact that both of their p-values were less than 0.05, which led to the conclusion that interest rates and inflation, respectively, had significant positive and negative effects on economic growth and the rejection of the null hypothesis. In addition, the first differences of the foreign exchange rate, log of FDI, and trade openness were individually statistically insignificant in influencing the first difference of the economic growth rate. This occurred as a result of their p-values being higher than 0.05, which wound up to the failure to reject the null hypothesis. Hence, FDI, trade openness, and foreign exchange rate were insignificant in impacting the economic growth in Kenya.

4.6 Discussion of Research Findings

The main objective of the study was to evaluate the effect of FDI on economic growth in Kenya using quantitative data from 1981 to 2021. The coefficient of the first difference of the log of FDI inflows was positive but statistically insignificant. This

implies that although FDI inflows boosted the economy by 0.1278289%, this effect could not be considered significant. This was in line with the findings of Ngeny and Mutuku (2013) who concluded that although FDI improved Kenya's economy, the effect was insignificant. Furthermore, Athukorala (2003) and Ray (2012) also suggested reduced confidence that FDI had an autonomous effect on economic growth.

The coefficient of the first difference of the inflation rate was negative and statistically significant. At a specific 5% level of significance, the first difference of inflation would decrease the first difference of GDP growth rate by 0.1982194%. This was consistent with Hossin (2015) and Hwang and Wu (2011) who contended that inflation increases economic growth up to a certain level beyond which the effect becomes negative. As a result, Khoza et al. (2016) suggested an optimal inflation threshold of between 3% to 6% for better economic growth.

For the foreign exchange rate, the coefficient of its first difference was positive but statistically insignificant. This indicates that at a 5% significance level, the first difference of the exchange rate (KShs/$1) decreased the first difference of GDP growth rate by 0.1137786%. However, this result differed with Khan (2021) and Hatmanu et al. (2020) who found that exchange rate positively influenced economic growth.

The study findings reveal that the coefficient of the first difference of the lending interest rate was significant but positive. At a 5% significance level, the interest rate would increase the GDP growth rate by 0.3406773%. Nonetheless, this goes against the findings of Hidayat and Kaluge (2014) and Udoka et al. (2012) who concluded that an increase in interest rate decreases a country's GDP.

Moreover, the coefficient of the first difference of trade openness was positive and insignificant. At a 5% level of significance, trade openness increased the GDP growth rate by 0.1200125%. This concurred with the research by Frankel and Romer (1999) who found that openness to trade positively influenced economic growth. Any improvement in trade openness improved economic growth because it promoted specialization and division of labour in production. This, in turn, improved productivity and enhanced the economy's trade prospects and its effective use of domestic resources (Sakyi et al., 2015).

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

An overview of the statistical findings about the relationship between foreign direct investment and Kenya's economic growth is presented in this chapter. It also includes the conclusion and recommendations. Subsequently, the chapter was organized into a summary of the findings, conclusion, recommendations, and prospects for further research.

5.2 Summary

Chapter One elaborated on the context of this research study by describing what FDI and economic growth entail, their interrelationship, and justification for the study. The second chapter delved into the hypotheses concerning FDI and economic growth. The chapter also provided an overview of the results of previous researchers in this field. Chapter Three provided an overview of the research technique used in this study. This section also included an explanation of the research design. The methodology applied a quantitative research strategy to identify the statistical influence of FDI on economic growth in Kenya. Also, the chapter described the manner in which data analysis was to be carried out.

The results from Chapter Four pointed to a positive but insignificant relationship between FDI and economic growth in Kenya. Foreign exchange rate and trade openness had negative and positive respectively, but insignificant relationships with economic growth. However, the inflation rate-economic growth nexus and interest rate-economic growth nexus proved to be significant even though inflation affected economic growth negatively. Based on these findings, the country needs to reevaluate

its policies involving FDI, trade openness, and foreign exchange rates to significantly boost economic growth in Kenya.

5.3 Conclusion

FDI is crucial for every developing nation because it bridges the gap between local investment and domestic savings and makes it easier to transfer technology and expertise (Borentzein et al., 1998). Research on the exact influence of FDI on economic growth, however, has produced conflicting findings. Furthermore, given that FDI had an insignificant impact on economic growth in Kenya is not an argument against the vitality of FDI in any nation's development strategy (Njeru, 2013). FDI carries the potential to increase investment and productivity in the recipient country, leading to increased output and economic growth (Blomstrom and Kokko, 1998).

Given that the interrelationship between economic growth and FDI is symbiotic, it is essential that policies that encourage economic growth receive are evaluated keenly to increase economic growth and attract FDI (Turkcan & Yetkiner, 2010). Kenya needs to enhance its FDI inflows because it has significantly low levels of foreign direct investment as compared to the 1960s and 1970s (Mosiori, 2014).

5.4 Recommendations

Lessening protectionist rules and/or lowering the level of Kenyan ownership required for foreign investors to be able to conduct business in particular sectors is crucial if Kenya is to draw even more foreign investors. By doing this, investors will be more inclined to make larger investments in industries like agriculture, the backbone of Kenya's economy.

Our study revealed that the rates of inflation and foreign exchange negatively affected economic growth. Therefore, the government ought to take steps to enact solid

monetary and fiscal policies that create a conducive business climate not only for foreign investors but also for local investors. The country's trade openness should also be improved by encouraging mutually beneficial trade agreements with other economies.

International donors and foreign investors should establish a structured framework for the application of aid funds. Foreign investment can indeed have a positive impact when it is deployed within a framework that recognizes the factors that contribute to inclusive and widespread economic growth. Investments with a clear goal will also increase Kenya's ability to reap the benefits of trade openness.

5.5 Limitations of the Study

This study's primary shortcoming was the exclusion of certain key variables that affect economic growth like corruption, as demonstrated by previous studies. Our study variables (FDI, inflation rate, interest rate, foreign exchange rate, and trade openness) only accounted for 36.28% of the variations in Kenya's GDP growth.

Additionally, the study did not conduct optimal lag tests on the research variables. We assumed a lag length of 1. This assumption meant that the effect of each of the independent variables on economic growth in Kenya was felt within one year. However, this may not have completely captured the reality of the economy since the effect of changes in monetary policy may be felt beyond one year.

The study covered a sample of 41 years (1981-2021), therefore it might not be entirely reflective of the current state of affairs. This was because there were significant moments in Kenya during this period that could biasedly influence the variables under study. These moments include the SAPs of the 1980s, the fight for and enactment of multiparty politics in the early 1990s, and the 2007/2008 post-election violence.

5.6 Suggestions for Further Studies

In the future, researchers may examine the effects of variables that were omitted to identify their actual influence on FDI inflows and real GDP, such as the effect of institutional integrity and graft on Kenya's economic growth. Based on our regression model, our study variables accounted for only 36.28% of the change in economic growth in Kenya. Therefore, future researchers should consider the other variables that account for 63.72% of the change in economic growth in Kenya.

Moreover, a comparable study can be performed in other developing countries to compare findings and to contribute to the repository of literature regarding the relationship between FDI and economic growth. Being that Kenya's FDI inflows have been low as compared to its East African neighbours like Tanzania and Ethiopia, the scope of this research can be widened to incorporate data from these countries using similar variables. This will better inform the Kenyan government on what corrective measures to undertake to reclaim the country's former glory as the hub for FDI in the East African region.

Further studies should incorporate optimal lag tests to ensure that the error term is appropriately specified by using the right lag length. Given that it takes time for people and business entities to alter their behaviour, there is a lag between changes in monetary policy and their impact on economic growth. According to Maturu and Ndirangu (2014), the full impact of monetary policy change in Kenya is felt between a quarter of a year and one and a quarter years. However, for even more accurate results, the right lag length should be determined.

Since our study did not find a statistically significant relationship between FDI and economic growth, further studies could look into the distribution of FDI inflows into

the various industries in Kenya. This would provide more information on how and if all the inflows are effectively absorbed to spur economic growth. Moreover, such studies would guide investors on which industries to further invest in for a better impact on the economy.

The study findings demonstrated that FDI had a positive relationship to economic growth in Kenya. Therefore, future researchers can consider looking in detail into what the benefits of FDI are on the economy and how to better harness these benefits for positive economic growth. Furthermore, the dependency theory suggests that FDI can also have negative effects on the economy because it exposes the host economy to external shocks. Hence, researchers should investigate whether the negative effects balance out the positive ones, and if at all this contributes to the insignificance of FDI's influence on economic growth in Kenya.

REFERENCES

Abala, D. O. (2012). Does foreign direct investment enhance economic growth? Analysis of Kenyan data. *TRADE DISCOURSE IN KENYA*, 83.

Acemoglu, D., Johnson, S., & Robinson, J. A. (2001). The colonial origins of comparative development: An empirical investigation. *American economic review*, *91*(5), 1369-1401.

Antwi, S., Mills, E. F. E. A., Mills, G. A., & Zhao, X. (2013). Impact of foreign direct investment on economic growth: Empirical evidence from Ghana. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, *3*(1), 18-25.

Athukorala, P. P. A. W. (2003, November). The impact of foreign direct investment for economic growth: A case study in Sri Lanka. In *9th International Conference on Sri Lanka Studies* 92(1), 1-21.

Barrell, R., & Pain, N. (1996). An Econometric Analysis of U.S. Foreign Direct Investment. *The Review of Economics and Statistics*, *78*(2), 200–207.

Bengoa, M., & Sanchez-Robles, B. (2003). Foreign direct investment, economic freedom and growth: new evidence from Latin America. *European Journal of political economy*, *19*(3), 529-545.

Blomström, M., & Kokko, A. (1998). Multinational corporations and spillovers. *Journal of Economic Surveys*, *12*(3), 247-277.

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

Carkovic, M., & Levine, R. (2005). Does foreign direct investment accelerate economic growth? *Does foreign direct investment promote development*, *9*(3),195- 220?

Cornwall, J., & Cornwall, W. (1994). Growth Theory and Economic Structure. *Economica*, *61*(242), 237–251.

De Long, J. B., & Summers, L. H. (1991). Equipment investment and economic growth. *The Quarterly Journal of Economics*, *106*(2), 445-502.

De Mello Jr, L. R. (1997). Foreign direct investment in developing countries and growth: A selective survey. *The Journal of development studies*, *34*(1), 1-34.

Dollar, D., & Kraay, A. (2004). Trade, growth, and poverty. *The economic journal*, *114*(493), F22-F49.

Falki, N. (2009). Impact of foreign direct investment on economic growth in Pakistan. *International Review of Business Research Papers*, *5*(5), 110-120.

Franco, C. (2013). Exports and FDI motivations: empirical evidence from US foreign subsidiaries. *International Business Review*, *22*(1), 47-62.

Frankel, J. A., & Romer, D. (1999). Does trade cause growth? *American economic review*, *89*(3), 379-399.

Gertz, G. (2008). Kenya's trade liberalization of the 1980s and 1990s: Policies, impacts, and implications. *Background paper on the impact of Doha Round on Kenya*.

Hanushek, E. A., & Kimko, D. D. (2000). Schooling, labour-force quality, and the growth of nations. *American economic review*, *90*(5), 1184-1208.

Hasan, I., & Tucci, C. L. (2010). The innovation–economic growth nexus: Global evidence. *Research Policy*, *39*(10), 1264-1276.

Hatmanu, M., Cautisanu, C., & Ifrim, M. (2020). The impact of interest rate, exchange rate and European business climate on economic growth in Romania: An ARDL approach with structural breaks. *Sustainability*, *12*(7), 2798.

Hidayat, A. S., Suman, A., & Kaluge, D. (2014). The Effect of Interest Rate, Inflation and Government Expenditure on Economic Growth in Indonesia Period of 2005-2012, *5*(15), 2222-2855.

Hossain, M. A. (2008). Impact of foreign direct investment on Bangladesh's balance of payments: Some policy implications. *Policy Note*, *805*.

Hossin, M. S. (2015). The relationship between inflation and economic growth of Bangladesh: An empirical analysis from 1961 to 2013. *International Journal of Economics, Finance and Management Sciences*, *3*(5), 426-434.

Hwang, J. T., & Wu, M. J. (2011). Inflation and economic growth in China: An empirical analysis. *China & World Economy*, *19*(5), 67-84.

Ivić, M. M. (2015). Economic growth and development. *Journal of Process Management and New Technologies*, *3*(1), 55-62.

Kabonga, I. (2016). Dependency theory and donor aid: a critical analysis. *Africanus*, *46*(2), 29-39.

Khadenje, M. D. (2015). *The Effect of Foreign Direct Investment on Economic Growth in Kenya* (Doctoral dissertation, University of Nairobi).

Khan, M. F. H. (2021). Impact of exchange rate on economic growth of Bangladesh. *European Journal of Business and Management Research*, *6*(3), 173-175.

Khoza, K., Thebe, R., & Phiri, A. (2016). Nonlinear impact of inflation on economic growth in South Africa: A smooth transition regression (STR) analysis.

Kimotho, A. M. (2010). *The Relationship between foreign direct investments (FDIs) and economic growth in Kenya* (Doctoral Dissertation, University of Nairobi, Kenya).

Kiringai, J., & Wanjala, B. (2007). Discussion Paper No. 79 of 2007 on Sources of Economic Growth in Kenya: A Redux.

KNBS. (2021). Economic Survey 2021. https://www.knbs.or.ke/wp-content/uploads/2021/09/Economic-Survey-2021.pdf

Koskei, N. S. I., Buigut, K., & Kibet, J. (2013). Impact of openness, foreign direct investment, gross capital formation on economic growth in Kenya. *Journal of Economics and Sustainable Development*, *4*(14), 130-135.

Kunle, A. M., Olowe, S. O., & Oluwafolakemi, F. O. (2014). Impact of foreign direct investment on Nigeria's economic growth. *International Journal of Academic Research in Business and Social Sciences*, *4*(8), 234.

Levine, R., & Renelt, D. (1992). A Sensitivity Analysis of Cross-Country Growth Regressions. *The American Economic Review*, *82*(4), 942–963.

Mahembe, E., & Odhiambo, N. (2014). Foreign direct investment and economic growth: A theoretical framework. *Journal of Governance and Regulation*, *3*(2).

Maturu, B., & Ndirangu, L. (2014). Monetary policy transmission mechanism in Kenya. *Central Bank of Kenya Publications*.

Maupeu, H. (2021). State, economy and development in Kenya. *Kenya in Motion 2000-2020*, 29.

Mihaylova, S. (2015). Foreign direct investment and income inequality in Central and Eastern Europe. *Theoretical & Applied Economics*, *22*(2).

Mistura, F., & Roulet, C. (2019). The determinants of Foreign Direct Investment: Do statutory restrictions matter? *OECD working papers on international investment, 2019*(1)

Mitra, D. (2021). FDI and transition to knowledge economy with special reference to India. In *Comparative Advantage in the Knowledge Economy: A National and Organizational Resource* .151-159

Mosiori, M. (2014). *The relationship between foreign direct investments and economic growth in Kenya* (Doctoral dissertation, University of Nairobi).

Ng'ang'a, W. K. (2013). *The impact of Foreign Direct Investment (FDI) on economic growth in Kenya* (Doctoral dissertation, University of Nairobi).

Ngeny, K. L., & Mutuku, C. (2014). Impact of foreign direct investment volatility on economic growth in Kenya. EGARCH Analysis. *Economics*, *3*(4), 50-61.

Njeru, B. N. (2013). *The impact of foreign direct investment on economic growth in Kenya* (Doctoral dissertation, University of Nairobi).

OECD. (2002). Foreign Direct Investment for Development. https://www.oecd.org/investment/investmentfordevelopment/1959815.pdf

Omri, A., & Sassi-Tmar, A. (2015). Linking FDI Inflows to Economic Growth in North African Countries. *Journal of the Knowledge Economy*, *6*(1), 90-104.

Pack, H. (1994). Endogenous growth theory: intellectual appeal and empirical shortcomings. *Journal of economic perspectives*, *8*(1), 55-72.

Prebisch, R. (1950). Growth, imbalance and disparities: interpretation of the process of economic development. *In: Economic study of Latin America, 1949-E/CN. 12/164/Rev. 1-1950-p. 3-89*.

Ray, S. (2012). Impact of foreign direct investment on economic growth in India: A co-integration analysis. *Advances in Information Technology and Management*, *2*(1), 187-201.

Romer, P. M. (1994). The origins of endogenous growth. *Journal of Economic Perspectives*, *8*(1), 3-22.

Sakyi, D., Commodore, R., & Opoku, E. E. O. (2015). Foreign direct investment, trade openness and economic growth in Ghana: An empirical investigation. *Journal of African Business*, *16*(1-2), 1-15.

Sibanda, K., Ncwadi, R., & Mlambo, C. (2013). Investigating the Impacts of Real Exchange Rates on Economic Growth: A Case Study of South Africa. *Mediterranean Journal of Social Sciences*, *4*(13), 261.

Solow, R. M. (1956). A contribution to the theory of economic growth. *The quarterly journal of economics*, *70*(1), 65-94.

Turkcan, B., & Yetkiner, I. H. (2010). Endogenous determination of FDI growth and economic growth: the OECD case. *International Journal of Public Policy*, *5*(4), 409-429.

Udoka, C., Anyingang, R. A., & Tapang, A. T. (2012). An empirical analysis of the effect of interest rate management policies in Nigeria 1970-2010. *Journal of Business and Management*, *4*(6), 5-10.

Ulku, H. (2004). R&D, innovation, and economic growth: An empirical analysis. *2004*(185).

UNCTAD.(2022).World Investment Report 2022: International Tax Reforms and Sustainable Investment.https://unctad.org/system/files/official-document/wir2022_en.pdf

USAID.(2022,). Economic growth and trade. https://www.usaid.gov/kenya/economic-growth-and-trade

Wanjiku, M. M. (2016). *Impact of foreign direct investment on economic growth in Kenya* (Doctoral dissertation, University of Nairobi).

Wasseja, M. M., & Mwenda, S. N. (2015). Analysis of the determinants of foreign direct investment in Kenya. *Journal of Multidisciplinary Scientific Research*, *3*(4), 16-26.

Xu, B. (2000). Multinational enterprises, technology diffusion, and host country productivity growth. *Journal of development economics*, *62*(2), 477-493.

APPENDICES

APPENDIX 1: STUDY RAW DATA

Time	Trade (% of GDP)	Lending interest rate (%)	Inflation, consumer prices (annual %)	GDP growth (annual %)	Official exchange rate (LCU per US$, period average)	FDI, net inflows (BoP, current US$)
1981	64.28019	12.41667	11.60305	3.773544	9.047498	$ 14,147,557.18
1982	58.21574	14.5	20.66671	1.506478	10.92232	$ 13,000,894.96
1983	54.16271	15.83333	11.39778	1.30905	13.31152	$ 23,738,842.68
1984	58.8039	14.41667	10.2841	1.755217	14.41387	$ 10,753,527.42
1985	55.44543	14	13.00657	4.300562	16.43212	$ 28,845,949.04
1986	55.74139	14	2.534276	7.177555	16.22574	$ 32,725,776.79
1987	47.70277	14	8.637673	5.937107	16.45449	$ 39,381,344.20
1988	49.97498	15	12.26496	6.203184	17.7471	$ 394,430.64
1989	53.15638	17.25	13.78932	4.690349	20.57247	$ 62,189,917.27
1990	57.02091	18.75	17.78181	4.192051	22.91477	$ 57,081,096.18
1991	55.5977	18.9975	20.0845	1.438347	27.50787	$ 18,830,976.84
1992	52.93087	21.0675	27.33236	-0.79949	32.21683	$ 6,363,133.14
1993	72.85848	29.98917	45.97888	0.353197	58.00133	$ 145,655,517.11
1994	71.26613	36.24	28.81439	2.632785	56.05058	$ 7,432,412.60
1995	71.74574	28.79583	1.554328	4.406217	51.42983	$ 42,289,248.46
1996	57.31211	33.78667	8.864087	4.146839	57.11487	$ 108,672,931.62

1997	54.05712	30.245	11.36185	0.474902	58.73184	$ 62,096,809.78
1998	48.89724	29.49	6.722437	3.290214	60.3667	$ 26,548,245.97
1999	48.19227	22.38	5.742001	2.305389	70.32622	$ 51,953,455.95
2000	53.30904	22.33917	9.980025	0.599695	76.17554	$ 110,904,550.40
2001	55.94684	19.66583	5.738598	3.779906	78.5632	$ 5,302,622.94
2002	55.17267	18.45333	1.961308	0.54686	78.74914	$ 27,618,447.06
2003	54.13227	16.57333	9.815691	2.932476	75.93557	$ 81,738,242.64
2004	59.477	12.53167	11.62404	5.1043	79.17388	$ 46,063,931.45
2005	64.47887	12.8825	10.31278	5.906666	75.55411	$ 21,211,685.40
2006	55.23649	13.63553	14.45373	6.472494	72.10084	$ 50,674,725.18
2007	53.89479	13.34034	9.75888	6.85073	67.31764	$ 729,044,146.04
2008	57.5786	14.01694	26.23982	0.232283	69.17532	$ 95,585,680.23
2009	45.94519	14.80454	9.234126	3.30694	77.35201	$ 116,257,608.99
2010	50.39429	14.3715	3.961389	8.058474	79.23315	$ 178,064,606.75
2011	58.40221	15.04676	14.02249	5.121106	88.81077	$ 1,450,474,757.08
2012	51.62369	19.72341	9.377767	4.56868	84.5296	$ 1,380,173,661.94
2013	47.46464	17.31346	5.717494	3.797848	86.12288	$ 1,118,825,000.19
2014	46.17049	16.51393	6.878155	5.020111	87.92216	$ 820,937,598.36
2015	40.32738	16.08661	6.582174	4.967721	98.17845	$ 619,724,465.02
2016	34.86502	16.55963	6.297158	4.213517	101.5044	$ 469,533,310.68
2017	35.99506	13.66757	8.005723	3.837958	103.41	$ 1,346,085,345.22
2018	34.41475	13.06076	4.68982	5.647946	101.3016	$ 767,761,506.73
2019	31.75947	12.44113	5.23586	5.114159	101.9913	$ 469,940,266.78
2020	27.23635	11.99578	5.404815	-0.27277	106.4508	$ 426,305,189.43

2021	30.68928	12.08	6.110909	7.590489	109.6377	$ 463,348,935.68