THE RELATIONSHIP BETWEEN FOREIGN DIRECT INVESTMENT AND ECONOMIC GROWTH IN KENYA

SAHRA ABDIKARIM SHEIK HASSAN

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN FINANCE, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI.

NOVEMBER 2021

DECLARATION

This project is my original work and has not been presented for the grant of degree in any other University or for any other award.

Signature ……Date 10th NOVEMBER 2021

Sahra Abdikarim Sheik Hassan Reg Number: D63/19553/2019

This Research Project has been submitted for examination with my approval as University Supervisor

Signature Date 10/11/2021

PROF. J.O ADUDA

PROFESSOR OF FINANCE

UNIVERSITY OF NAIROBI

ACKNOWLEDGEMENT

I owe my appreciation to Allah, who has guided me throughout this project. My supervisor, prof. Josiah Aduda, and my moderator, Dr. Herick ondingo deserve special gratitude for their vital treasured instruction, feedback and motivation during my work.

I would want to express my gratitude to my wonderful parents and siblings, especially my mother and father, without you my goal wouldn’t have come true, your unwavering support inspires me to complete this task every day.

Also, I'd want to express my gratefulness to my employer, who was contributory in my current success and provided me with this fantastic opportunity to study in another country, thank you so much for your help. My thanks also extend to the School of Business's Department of Finance and Accounting for creating an environment favorable to academic success.

I'd want to express my appreciation to my dear friends Amal Abdulkadir, Abdi Shakur, Salim, Issa, Mohamed, Ismail and said for their support and encouragement.

Lastly and not least, am also indebted to my MSC Finance colleagues and friends and all those who assisted me in one way or another throughout this period of study and though I may not name each one of you individually, your contribution is recognized and appreciated immensely. I owe you, my gratitude. To you all, God bless

DEDICATION

This work is specially dedicated to my beloved mother and Father, Deka Abdullahi, And Abdikarim Sheik who have been a constant source of support, love and encouragement during the challenges of graduate school and life. I am truly grateful for having you in my life.

This work is also dedicated to my siblings who have always loved me unconditionally and whose good examples have taught me to work hard for the things that I aspire to achieve.

Table of Contents

DECLARATION ..... **ii**

ACKNOWLEDGEMENT ..... **iii**

DEDICATION ..... **iv**

LIST OF FIGURES ..... **viii**

LIST OF TABLES ..... **ix**

ABBREVIATIONS AND ACRONYMS ..... **x**

ABSTRACT ..... **xi**

CHAPTER ONE: INTRODUCTION **12**

1.1 Background of the Study 12

1.1.1 Foreign Direct Investment 14

1.1.2 Economic Growth 16

1.1.3 Foreign Direct Investment and Economic Growth 18

1.2 Research Problem 19

1.3 Objective of the Study 22

1.4 Value of the Study 23

CHAPTER TWO **24**

LITERATURE REVIEW **24**

2.1 Introduction 24

2.2 Theoretical Review 24

2.2.1 Harrold Domar Theory 24

2.2.2 Gravity Model of International Trade 25

2.2.3 The Balassa-Samuelson Theory 26

2.3 Determinants of Economic Growth 28

2.3.1 Foreign Direct Investment 28

2.3.2 Inflation 28
2.5 Summary of Literature Review and Knowledge Gap.....36
CHAPTER THREE 39
RESEARCH METHODOLOGY 39
3.1 Introduction 39
3.2 Research Design 39
3.3 Data Collection.....39
3.4 Data analysis and Presentation 40
3.5 Diagnostic Tests 41
3.5.1 Linearity Test 41
3.5.2 Normality Test 41
3.5.3 Multi-collinearity Test.....41
3.5.4 Autocorrelations Test 42
3.5.5 Stationarity Tests.....42
3.5.6 Optimal Lag Test.....42
3.6 Tests of Significance.....43
CHAPTER FOUR.....44
DATA ANALYSIS AND DISCUSSION OF FINDINGS 44
4.1 Introduction 44
4.2 Descriptive Statistics.....44
4.3 Diagnostic Tests 46
4.3.1 Linearity Test 46
4.3.2 Normality Test 47
4.3.3 Homoscedasticity Test.....48
4.3.4 Multi-Collinearity Test.....50
4.3.5 Test for Autocorrelations.....50
4.3.6 Stationarity Test 51
4.4 Correlation Analysis 52
4.5 Regression Analysis.....53
4.5.1 Regression Summary.....53
4.5.2 ANOVA.....54
4.5.3 Regression Coefficients.....55

4.6 Discussion and Interpretation of Findings 56
CHAPTER FIVE.....59
SUMMARY CONCLUSIONS AND RECOMMENDATIONS 59
5.1 Introduction 59
5.2 Summary 59
5.3 Conclusion.....60
5.4 Recommendations.....62
5.5 Limitations of the Study.....63
5.6 Suggestion for Further Research 64
REFERENCES.....65
APPENDICES.....69
APPENDIX 1: DATA COLLECTION FORM 69
APPENDIX II: DATA USED.....69

LIST OF FIGURES

Figure 2. 1: Conceptual Framework 38
Figure 4. 1: Normal P-P Plot 47
Figure 4. 2: Scatterplot 49

LIST OF TABLES

Table 4. 1: Descriptive Statistics 44
Table 4. 2: Normality Test 47
Table 4. 3: Breusch-Pagan Test 48
Table 4. 4: Collinearity Test 50
Table 4. 5: Autocorrelation Test 50
Table 4. 6: Correlation Table 52
Table 4. 7: Regression Summary Model 53
Table 4. 8: ANOVA 54
Table 4. 9: Coefficient Table 55

ABBREVIATIONS AND ACRONYMS

CBK	Central Bank of Kenya
CEE	Central and Eastern European
CPI	Consumer Price Index
EG	Economic Growth
ERV	Exchange Rate Volatility
FDI	Foreign Direct Investments
FMOLS	Fully Modified Ordinary Least Squares
GDP	Gross Domestic Product
IMF	International Monetary Fund
KLB	Kravis-Lipsey-Bhagwati
KNBS	Kenya National Bureau of Statistics
MNC	Multi-National Company
REER	Real Effective Exchange Rate
RER	Real Exchange Rate
TFP	Total Factor Production

ABSTRACT

This study focused at identifying the relationship between foreign direct investment and economic growth in Kenya. This proposed study sought to ensure that it also investigated on the relationship of other macroeconomic factors such as inflation rate lending interest rates and exchange rate fluctuations on economic growth in Kenya. Panel secondary data for the variables was collected for the period 2001 to 2020 where quarterly data was collected and assessed by the study through the use of a multiple linear regression model. This was undertaken in accordance with the study objectives. FDI had positive significant correlation with economic growth while other variables had insignificant correlations with economic growth. Inflation rate and interest rates had negative correlation with economic growth that means that an increase in inflation rate and increase in interest rates would lead to a decrease in economic growth. Exchange rate fluctuations had a positive but weak correlation with economic growth. The regression analysis that was undertaken on the other hand showed a weak model where the coefficient of determination was found to be 10.8%, indicating that the model was only able to explain 10.8% of the changes in economic growth. On the other hand, the significance was marginally greater than 0.05 that indicated that there was no significant relationship of FDI and economic growth in Kenya. The p value was 0.069 and therefore the study concluded that at 5% significance level, FDI had an insignificant relationship with economic growth in Kenya. The study therefore recommends that government should ensure that it develops policies that would ensure that FDI improves significantly. This means that the study would recommend that factors that adversely affect FDI such as increased political tensions, and increased corruption should be lowered. It should also develop policies that would control inflation and put policies that would make commercial banks' lending rates are low.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The financial sector in an economy plays major role in not only contributing directly to the economy, but also helping other sectors in their financial transactions and providing the much-needed capital in form of credit. Research indicates that a well-functioning financial system is a major factor in enhancing economic factors that lead to economic growth (Levine, 2005; Rajan & Zingales, 1998). According to Desbordes and Wei (2017) several researchers have identified a positive relationship between foreign direct investment (FDI) and economic growth. Countries have sought to increase foreign direct investment (FDI) since they believe that multinational companies would go a long way in boosting the economic growth as well as ensure provision of unique goods and services that may otherwise not be easily accessible. The studies that have focused on the relationship between these study-variables, indicate different effects of FDI and economic growth (Desbordes & Wei, 2017). Multinational companies are profit seeking firms that are established in foreign countries and which seek to exploit cheap labor, availability of raw materials, availability of land among other factors that are available in these foreign economies. These firms are also associated with provision of employment opportunities in the host nation, increased production of goods and services in the host county that increases GDP and therefore boosts economic growth and importation of modern and new technology. However, they are also associated with offering unhealthy competition to local firms and industries, repatriation of profits, and increase in environmental degradation through increased carbon emissions and pollution of environment.

This study has an altercation of a theoretical foundation with different theories that provide for a varied relationship and effect on the study variables. The Harold Domar Theory is the anchoring theory of the study that suggest that capital as well as labor are found to be important factors in determining economic growth. The rate at which capital is substituted with labor to develop another level of economic growth is critical. It therefore suggests that factors that would affect cost of labor as well as capital are critical components that would determine and influence economic growth of a nation. The theory therefore suggests a positive relationship between FDI (a factor that influences both labor costs and capital availability) and economic growth and the direct association between these study variables is a key factor on enhancing the theory as the anchoring theory of the study. The other theory is gravity model of international suggest that bilateral trade can be predicted based on the economic sizes and distance between the two units. The theory suggests that trade decreases with increase in distance between the two units (Isard, 1954). It therefore follows that it would be possible to predict FDI based on the distance between the country and the parent company of the MNC (Multi-National Companies) as well as the state of the economic development in the country. The study will also consider The Balasa-Samuelson Theory. The theory proposes that countries that obtain high economic growth also obtain high wage growth, increased wage growth is an inhibiting factor to FDI as MNCs would find it difficult to invest in a country with increased operational costs. However, increase in wage rate without corresponding increase in real GDP would result to inflation. This is usually significant in developing countries than in developed countries where wage-led inflation is low.

The Kenya's economy has been highly dependent on the regime shifts that have dictated the economic growth and patterns in the country. After independence in 1963, the exchange rate in Kenya was pegged to the dollar in what is referred as the fixed exchange rate system (Ngugi &

Ngige, 2011). Kenya has undertaken crucial initiatives in political, structural as well as economic reforms that have consequently led to a sustained economic growth, political and social development (Musyoki, et al, 2012). The continued political goodwill that led to promulgation of a new constitution brought in new dispensation where the national economic resources were decentralized in the counties established by the new constitution. According to King'ola (2018) decentralization of some government functions has elicited sparks in economic growth in the country as counties establish infrastructural development which have enabled the country open to production of goods and services. However, glaring challenges pose as a threat to future economic growth; these challenges include effects of climate change, poverty, diminished private sector investment, corruption, and inequality. The country is also an open economy under which it is highly susceptible to internal and external economic shocks (Wandeda, 2017). Economic growth and FDI in Kenya are however affected by other macroeconomic policies such as money supply, and interest rates. Trade balance in a country is not the only macroeconomic factor that influences economic growth. Exchange rate volatility acts as a pointer as well as a policy that helps determine the FDI in a nation. The effect therefore of FDI on economic growth is still one of the uncharted waters that need more exploration in the Kenyan context (Dornbusch, 1974).

1.1.1 Foreign Direct Investment

Foreign direct investment (FDI) refers to the investment that is undertaken by a company from one country into a business that is located in another country. It therefore means that FDI is realized when a foreigner establishes a business investment or acquires controlling interest in an existing business in the foreign country (Desbordes & Wei, 2017). According to Moran (2011) in order to

attract foreign investors to make significant investment in the country, a number of factors must be conducive to entice the investor to undertake the extra international risk that he would incur instead of making investment in the home country. The foreign investor must ensure that the target country operates on open economy basis, and therefore there are less stringent conditions or rules in undertaking the investment in the country, as well as the investment must guarantee more than average returns which could be easily attained from undertaking investments in home country. UNCTAD (2009) argues that FDI is the greatest steady form of global capital movements. These are investments that are made by the parent company in a foreign country.

The level of FDI in Kenya has been weak in consideration to the size of her economy and the level of her development. However, it still maintains to be one of the largest recipients of FDI in Africa as the country has mostly operated under open economy system. The increase in FDI, has increased since the year 2010 but a report from UNCTAD (2020) indicates that FDI inflows in Kenya decreased by 18% to US$ 1.3billion in 2019, in comparison to US$ 1.6 billion in 2018, as shown in table 1.1. The arrival of fiber optics in 2009-2010 has enabled the country to attract most FDI in the ICT sector, the other sectors in the country that have also attracted FDIs are banking, tourism, infrastructure and extractive industries. The year 2020 was grossly affected by COVID-19 pandemic that the FDI flows into Kenya fell significantly as investments were hard hit by budget cuts as well as dwindling business climate. As a matter of fact, the report by UNCTAD indicates that FDI flows to Sub-Saharan Africa decreased by 11% to an overall estimate of US$ 28 billion. The main investors in Kenya are mostly from the UK (United Kingdom), the Netherlands, China, Belgium and South Africa (UNCTAD, 2020). Desbordes and Wei (2017) together with Moran (2011) measured FDI as the total direct inflows the host country is able to attract in a certain period of

time. Similar measurement will be adopted in the study as it relates the total investments undertaken in the host country by foreigners.

Kenya has undertaken unprecedented efforts in the undertaking reforms that would attract more FDI. The ease of doing business according to the World Bank ranking that was published in the year 2020, the country was ranked 56th worldwide. This was an improvement from 2019 ranking, where the country was ranked 61st. Other improvements are evident in enhancing more transparency in construction permits, enhanced electricity connectivity and modernizing the existing infrastructure. Other areas include: property registration, protection of minority investors, tax payment, obtaining credit, tax payment as well as resolving insolvency (UNCTAD, 2020).

1.1.2 Economic Growth

Economic Growth indicates the rate of increase in the production of goods and services in an economy. When an economy is able to produce increased goods and services it provides extra power in the economy which if harnessed by different aspects of the economy provides better facilities that improves the livelihoods and the quality of life for billions of people that depend on the economy. However, the power of the economy has slowed down in the recent past, with negative consequences that poor economic growth, few business opportunities, high unemployment rate, increased inflation, lack of projects with positive NPVs among others. This has therefore affected the manner in which the government is able to apply fiscal policies such as government expenditure and monetary policies such as decrease in interest rates to help curtail the adverse effect of poor economic growth (IMF, 2019).

It is estimated that, if total factors of growth in the world economy continued before the economic crises set in, today the world economic growth would be higher by over 5 percent. This means that

the global economy would have improved by the introduction of more goods and services that would have improved the way of life of people as well as help to alleviate poverty in developing nations. The current economic projections, however, indicate that if economic crises continue for another decade, then global living standards will highly be undermined. The social and economic stability of most countries will be greatly affected as inflation and unemployment rate surge to records high in most countries. Most countries with public debt would find it difficult to service the debt as well as able to manage their economic obligations and commitments (International Monetary Fund, 2019).

Technological improvements in most countries and sectors have been followed by job losses as improved technology has rendered most jobs redundant. However, the use of improved technology on the other hand has contributed to the increased production of quality goods and services and therefore increased economic growth. However, there are some entrenched economic as well as social problems in some countries due to disadvantaged regions that bring about economic inequality that is characterized by widening economic gaps between the rich and the poor in most countries. Belcerowicz (2015) emphasizes that economic growth arises from efficient use and utilization of available resources. Each country is endowed in the production of some goods and services more than another country and it therefore obtains absolute or and comparative advantage over the other country in the production of that good. International trade enables a country to efficiently produce what it is best endowed to produce while importing other goods and services that other countries are best endowed to produce. It therefore facilitates specialization and increase in production of quality goods and services that require minimum efforts from a country to produce maximum outputs. Increase in economic growth of a country helps to address issues of unemployment, inflation, poverty and interest rates (Belcerowicz, 2015). Studies have measured

economic growth by undertaking GDP per capita, while others have used percentage changes in GDP from one year to the other, or the GNP (Muli et al., 2017). This study will adopt the use of GDP per capita as the measure does not only consider the total GDP produced in an economy, but it also considers the number of people in the country who contributes to the GDP. It therefore provides the total contribution of a citizen to the increase or decrease in GDP.

1.1.3 Foreign Direct Investment and Economic Growth

There is divided opinion in regard to the actual contribution of Foreign Direct Investments towards economic growth. Proponents believe in efficiency and benefit of free market mechanism of FDI and argue that FDI fills the savings gap, foreign exchange gap, revenue gap and management gap (Todaro, 1977). Others opine that FDI promotes credit and risk sharing across borders (O'Connel et al, 2010) and bring with them superior technology and skills base, promote skill upgrading, provide employment and enhanced innovation and thus can be said to enhance productivity and growth (Blomström 1986). Opponents on the other hand argue that FDI undermine macro-economic stability by exposing domestic markets to external volatility and sharpening the trade-offs between competing objectives of monetary policy, widens the said gaps, increase dependency, and crowds out domestic savings (O'Connel et al, 2010). Hence, according to (Schnitzer, 2002), many economies in Africa until late 1980s, did not assign a great value to FDI as many leaders feared for "loss or dilution of political sovereignty", adverse effects on domestic firms such as bankruptcy and general deterioration of the environmental resources, especially if foreign investments were directed to the natural resource sector.

It is therefore difficult to determine with accuracy the effect of FDI on economic growth. According to Schnitzer (2002) FDI influences quite a number of macroeconomic factors such as

foreign exchange volatility, BOP position, as well as inflationary pressure. Similarly, FDI is dependent on a number of macro-economic factors that increases the ease of doing business in a country or increases risks that makes investment in the country impossible. These factors include, increase in corruption activities, increase in cost of production, increase in political risks among other factors. The degree to which all these factors interact against each other in a country would determine the effect of FDI on economic growth. It would also determine the levels of FDI in a country at each specific point in time.

1.2 Research Problem

Governments are concerned on the welfare of their citizens. One of the key issues that determine the status, and the welfare of citizens is the economic growth of a country. Developed countries experience high economic growths as they have available infrastructure to produce goods and services. Developing economies on the other hand are challenged in the level of infrastructure as well as vices such as corruption that inhibit economic growth (Abala, 2014). It is therefore the mandate of government of the day to boost economic growth through enhancing favorable economic policies in the economy. According to Muli and Aduda (2017) the low levels of national savings in developing economies means that one of the few available options is to attract foreign investments as a way of increasing economic growth. Foreign investors also rely on a well-established financial sector that would help them make their investments in the capital markets. It follows that inadequate regulatory framework, rudimentary processes in the capital and the money market would be a set-back for the foreign investors. According to Moran (2011), to attract foreign investors to make significant investment in the country, a number of factors must be conducive to entice the investor to undertake the extra international risk that he would incur instead of making investment in the home country. The foreign investor must ensure that the target country operates

on open economy basis, and therefore there are less stringent conditions or rules in undertaking the investment. Similarly, the investment must guarantee more than average returns that would compensate for the extra risks undertaken. FDI is also affected by the type of diplomatic international relations held by a country (Lu & Yu, 1999).

Kenya as a developing nation that seeks the middle-income generating status, and a signatory to various international bodies that advocate for globalization and international trade enhancement, FDI becomes an integral part that should be enhanced by favorable policies. However, the country is susceptible to international economic shocks that means that FDI would likely shift according to the law of demand and supply which can only be addressed through adoption of government policies. The government through the central bank may use its foreign exchange reserves to elicit a certain response in the market that helps the exchange rate respond in the direction desired by the government (Pugel, 2007). Economic growth on the other hand is a subject that is at the heart of every government. This is basically because it touches on the maxims under which governments are established such as alleviating poverty, reducing unemployment, control of inflation rate, protecting lives and livelihoods of the citizens among others. The government attains economic growth in the process of addressing these challenges. However, care and enough controls must be established in addressing them since focus on one issue may mean detrimental consequences on the other (Morina et al. 2020). Similarly, the resources available to address all the challenges are scarce and should only be used to address the most pressing challenges or those challenges where the most impact is expected should be prioritized. The government must therefore be engaged in the process of making decisions that help it move towards the desired goal of established and sustained economic growth and general improvement of living standards and welfare of its citizens (Chirchir et al. 2015).

Empirical studies have been undertaken in order to establish the extent to which FDI influences economic growth. FDI in Kenya in the recent past has weakened in consideration to the size of her economy and the level of her development. However, it still maintains to be one of the largest recipients of FDI in Africa as the country has mostly operated under open economy system. The increase in FDI, has increased since the year 2010 but a report from UNCTAD (2020) indicates that FDI inflows in Kenya decreased by 18% to US$ 1.3billion in 2019, in comparison to US$ 1.6 billion in 2018. The arrival of fiber optics in 2009-2010 has enabled the country to attract most FDI in the ICT sector, the other sectors in the country that have also attracted FDIs are banking, tourism, infrastructure and extractive industries.

Different studies have been undertaken by different researchers as they seek to address the effect of FDI on economic growth. Saddimbah (2014) assessed the contribution of FDI inflow on Kenya's GDP, BOP as well as exports. The researcher found a positive relationship between FDI and GDP, but the researcher disqualified the findings that it was dependent on the host country's types of investment, operational policies as well as the period of the study. The study therefore postulated that different periods of study would provide and indicate different results which adds to the conceptual gap where different concepts were investigated in the study. Muli and Aduda (2017) had a methodological as well as a conceptual gap in their study that focused on the moderating effect of economic growth on the relationship between economic integration and foreign direct investment. A related study was undertaken by Muli et al (2017) who studied the mediating effect of ease of doing business on the relationship between economic integration and FDI. Similarly, Gachunga (2019) investigated the impact of FDI inflow, particularly on the infrastructural sector on economic growth in Kenya. The FDI in infrastructure sector had positive and significant impact on economic growth. FDI on agriculture and manufacturing sector had

positive but insignificant impact. This study therefore focused mainly on FDI in the infrastructural sector. Wanjiku (2016) on the other hand undertook a similar study where the study concluded that FDI as a factor had insignificant effect on economic growth, and it required to be coupled with infrastructure development as well as openness of the economy to indicate a significant effect. The study used pure regression model that formed a methodological gap for the study. Rutto et al. (2019) however found divergent result in their study as they found that manufacturing sector had positive and significant impact on economic growth. These studies might have similar or almost similar objectives. However, FDI and economic growth depend on government policies that are adopted from time to time, it includes the rate of integration, and the business ties the government of the day undertakes with its trade partners. A study undertaken in a different period is likely to have significant different findings from a study undertaken in another period. This study therefore focuses on the understanding the effect of FDI on economic growth at a time where there is increased political risks as well as in the middle of COVID-19 global pandemic that have affected nations across the world. This is the major study gap that warrants undertaking this study at such a time. There is however no study that has attempted to assess the effect of FDI on economic growth during COVID-19 pandemic, increased political risks as well as increased national debt level. The study therefore will address the study gap by answering the research question: What is the relationship between FDI and economic growth kin Kenya?

1.3 Objective of the Study

To investigate the relationship between foreign direct investment (FDI) and economic growth in Kenya.

1.4 Value of the Study

The study will be of value to different individuals, institutions as well as policy makers. The study will provide an informed effect of FDI on economic growth during times of COVID-19 shocks, increased national debt as well as increased political risks. It would therefore inform government and policy makers the effect of FDI on economic growth when externalities and world shocks are at play. It will provide an opinion where relevant policies would be deployed by policy makers during the period of world shocks as well as externalities that might adversely affect economic growth as well as FDI.

Policy decisions will also be informed as far as investments are concerned. Investment is a function of savings, consumption and disposable income. With outbreak of a pandemic the disposable income for households is greatly affected. The response of decreased disposable income would most likely be on reduced savings, as well as reduced consumption patterns. Policy makers would find the study valuable as it would inform on critical areas to prioritize on making policies to enhance economic stimuli during a pandemic, or other world externalities.

Future researchers and academicians will also find this study to be important as it will guide them in undertaking their literature review. It will provide a basis for establishing their research gap and help them in either supporting or critiquing findings of their studies. This study will provide guidance on financial development and FDI in Kenya that it will open up research topics which can be undertaken by future researchers to provide information in regard to these variables in Kenya. The study will also provide necessary literature that either supports or critique existing theories on financial development and FDI.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section recapitulates the previous literature that is already in existence concerning exchange rate volatility and economic growth. Significant theories and empirical evidence is revised in this chapter.

2.2 Theoretical Review

The study will be guided by several theories that provides a theoretical background on real exchange and the effect it has on economic growth. The theories are Harold Domar Theory, Gravity model of international trade, and Balassa-Samuelson Theory as discussed below.

2.2.1 Harrold Domar Theory

The theory is a Keynesian model theory which relates to economic growth, and which was developed by Roy F. Harrold (1939). The theory is used in development economics which is used to describe the economic growth by use of both savings level and capital. The theory acts as an extension of Keynes analysis of employment as well as income theory. Capital as well as labor are found to be important factors in determining economic growth. The rate at which capital is substituted with labor to develop another level of economic growth.

The model provides for necessary requirements that enhances economic growth using capital and labor. The accumulation of capital as well as increase in labor hours helps to increase the level of production of goods and services that leads to economic growth. The theory is therefore relevant to this study as it theorizes factors that contribute to economic growth. This study will be of great

significance in determining whether other macroeconomic factors other than capital and labor are significant in enhancing economic growth. Capital and labor units (Thong & Hao, 2019).

Harrod-Domar model is criticized on the basis that it focused on industrialized countries and therefore the model may not be applicable to developing countries. Developing countries that are struggling with food would rather use their income to obtain food rather than increase savings to provide capital. The model is also critiqued for failure to recognize labor productivity, technological innovations, and levels of corruption. Harrold himself later found the model with broad generalization that would not be applicable in the real world. However, the great contribution of Harrod-Domar model on economic growth and use of factors of production of labor and capital may not be watered down (Pettinger, 2019). This study therefore seeks to understand the contributions of capital and labor through the exchange rate volatility on economic growth.

2.2.2 Gravity Model of International Trade

The gravity model of international trade theory was first proposed by Walter Isard in 1954. He suggested that the model in its traditional form can predict bilateral trade flows which are based on the size of the economy as well as distance between the two economies. The model suggests that there is existing overwhelming evidence that suggests that international trade tends to decrease with increase in distance (Isard, 1954). The model has been used by economists in the determination of economic dimensions that affect bilateral trade between countries such as common borders, common legal systems, common currencies, colonial legacies among others (Head & Mayer, 2014).

One of the major criticisms of the theory is that it does not consider the principles of comparative advantage. This means that it is easier for countries with complementary patterns of comparative

advantage to involve in trade than those countries with similar patterns. Comparative advantage suggests that countries that are better endowed to produce certain type of goods are allowed to specialize in production of those goods after which they will optimize production and international trade will allow each country to obtain goods that it is less endowed to produce from other countries. This is a concept that the gravity model of international trade failed to consider in the model (Mele & Baistrocchi, 2012).

The theory is relevant to the study as it seeks to predicts the factors that affect trade flows between countries. Trade flows between countries therefore represents the FDI from the point of view of a specific country. The model suggests that countries that have similar factors such as common boundaries, similar colonial legacies, among others are likely to have more trade flows between each other. From this argument it therefore follows, countries that would have similar levels of economic growth, would likely have increased FDI that insinuates that the higher the FDI inflows the higher the economic growth.

2.2.3 The Balassa-Samuelson Theory

The Balassa-Samuelson Theory was proposed by economists Bela Balassa and Paul Samuelson in 1963. The theory proposes that countries that obtain high economic growth also obtain high wage growth, increased wage growth is an inhibiting factor to FDI as MNCs would find it difficult to invest in a country with increased operational costs. The theory suggests that an increase in wage rate due to increase in tradable goods, for a developing economy will also lead to increase in wages in the non-tradable sector of the economy. It therefore follows that increase in wage-led inflation is higher in developing economies since they also experience higher economic growth as opposed to slow growing developed economies. The Balassa-Samuelson effect highlights those developing

countries have higher opportunities to efficiently use land, labor, and capital to enhance their economic growth than their developed capacities. This may be because of increased capacity to produce goods and services that enhances economic growth (Egert, 2002).

The BS theory as opposed to the HD model considered developing nations. The theory truly suggested that developing economies have greater growth opportunities than their developed counterparts. The theory insinuates that developing countries would attract FDI than developed counterparts that are likely to have higher wage rates. The theory is therefore applicable in this study and would therefore provide a useful guide in making conclusions based on the findings of the study.

In criticism to the theory, Lothian and Taylor (2008) looks at the BS effect for the sterling/dollar real exchange rate for significantly bigger timelines. Their exploration contributes for the view that the BS model isn't extremely fruitful in clarifying the real exchange rate developments besides in the very long run. The researchers locate that 40% of the developments in the real exchange rate are represented by the BS impact in a sample of 180 years. The rest is contended to be brought about by the nominal elements. In any case, when the BS impact is inspected inside more limited time horizons going from one year to ten years, its effect is lesser. As per the paper, the BS effect clarifies just as meager as 0.1 percent of the real exchange rate developments in a one-year timeline and arrives at its most extreme at 9 percent in a seven-year timeline.

In another paper that can be viewed as an augmentation of the one above, Berka, Devereux, and Engel (2014) look at the BS effect for a gathering of Eurozone nations. Their beginning stage is the contention that the nominal exchange rate variances ruin a genuine assessment of the BS effect, in the same alignment of Conzoneri et.al. (1999). In this manner, they pick a sample where the

nominal exchange rate variances are basically non-existent. A further significant development set forward by the researchers is to incorporate unit work costs in the study to control for factors that sway on factor costs other than sectorial productivities and terms of exchange contrasts. They find that the profitability increments in the tradable area comparative with the non-tradable area is positively related to real exchange rates improvements, lending critical support to the Balassa-Samuelson hypothesis.

2.3 Determinants of Economic Growth

There are various economic factors that affect economic growth. This study will therefore focus on various economic factors that are expected to influence economic growth. These factors include FDI, inflation, interest rates as well as political stability as discussed below.

2.3.1 Foreign Direct Investment

Developing nations are keen to ensure that they attract foreign investments in the country. They are therefore keen to develop conducive policies that would make it appealing to foreign investors to undertake investments in their specific countries. This is led by the belief that FDIs are crucial in bringing new improved technology, decrease unemployment as well as support in provision of capital-intensive projects that local firms would not afford or would lack capacity to enforce. These factors are therefore considered to be crucial in enhancing and leading to production of increased goods and services and therefore improve GDP (Desbordes & Wei, 2017).

2.3.2 Inflation

A country's rate of productivity is generally affected by the price levels. If the price levels are high, then economic growth is low and vice versa. The government, therefore, through the central

bank of Kenya (CBK), ensures that inflation is at its lowest level possible to promote economic growth. Demand-pull inflationary pressure is at its maximum when actual GDP exceeds potential GDP causing a positive output gap. On the other hand, cost push inflationary pressure would arise when wages increase, that would increase import prices that would lead to an increase in the prices of raw materials. The increase in general price level would on the other hand increase the real disposable income as consumers fail to afford a basket of goods that was affordable before the inflationary pressure. With a reduction in consumption, production decreases and therefore a decrease in economic growth would be envisioned (Riley, 2011).

2.3.3 Interest Rate Fluctuations

The Central Bank routinely increment financing costs when inflation is anticipated to transcend their objective expansion. Higher financing costs will in general regulate the economy's growth. Higher loan fees decrease disposable income, increment the expense of obtaining loans and along these lines limit the growth in consumer spending. Higher financing costs will in general diminish inflationary weights and cause an appreciation of the exchange rate (Terborgh, 1926).

2.3.4 Exchange Rate Fluctuations

Exchange rates are in constant fluctuation as they freely float against one another. Exchange rate fluctuations depend on the changes in demand and supply of the foreign currency, interest rates differentials between the two countries are important in determining the effective exchange rate fluctuations. Exchange rate fluctuations affect investments or transactions that are undertaken in foreign currency as these transactions or investments are prone to exchange rate risks. Increase in exchange rate fluctuations translates to increased risk exposure that would adversely affect performance of any international business undertaken by foreign and local firms in the country.

The study therefore envisions that an increased exchange rate fluctuation would lead to a decrease in economic growth as factors such as FDI, international business involving both imports and exports would be adversely affected (Rose & Yellen, 1989).

2.4 Empirical Review

Sukar, Ahmed and Hassan (2005) investigated the effects of FDI on economic growth in Sub-Sahara African countries. The study adopted the augmented endogenous growth model as the preferred methodology that would help in achieving the study objectives. The study collected panel data for the period 1975-1999 where analysis of the model was undertaken, and the findings indicated that FDI had marginally significant positive effect on economic growth. However, there are some significant economic factors considered in the study that had significant effect on economic growth, including the macroeconomic policy adopted, openness as well as domestic investment. There exists a methodological gap, where the study preferred the use of augmented endogenous growth model. However, this study advocates the use of OLS linear model as there is a linear expectation of the relationship between the study variables.

Palmgren and Ylander (2015) assessed the impact of FDI on market efficiency in six African countries that consisted of Nigeria, Tunisia, Morocco, Kenya, Botswana and Mauritius. The study therefore sought to find out whether the capital injections as well as contributions by foreign multinationals affected market efficiency of these six major frontier stock markets in Africa. The study undertook two variance ratio tests: Chow Denning test and the multiple versions of Wright's sign test. These tests were applied in the study to obtain measures of time-varying market efficiency and multiple panel regression analysis was undertaken. The study was categorical in identifying six macroeconomic factors that was likely to affect market efficiency and as such both

Chow Denning test and Wright's sign test were used as independent variables in the panel regression analysis. The study found that FDI had no impact on the level of market efficiency, though the study further reduced the number of countries to assess the impact on only four countries (Kenya, Mauritius, Morocco and Tunisia). In this new analysis, FDI was found to be significant and as such increase in FDI in these countries was followed by a significant increase in market efficiency. The study therefore advocated those African countries ought to implement measures that increased FDI such as relaxing regulations on multinational companies to boost their market efficiency. Despite the study assessing the variables FDI and market efficiency, it only assessed the relationship of the variables where FDI was the independent variable, and financial efficiency as the dependent. This study however proposes to investigate the effect of FDI on economic growth in Kenya and not on market efficiency.

Mahmood et al. (2019) examined the relationship between FDI flows and institutional stability in Canada. The study chose to focus on Canada as it was one of the countries that was least affected by the global financial crisis and as such it was plausible to investigate the optimal level of institutional development necessary to attract more FDI. The study used auto-regressive distributive lag (ARDL) approach in the study analysis of the study variables. Other controlled variables included GNP, inflation and exports. Annual series data was collected for the period 1981 to 2014. The Augmented Dicky-Fuller (ADF) test was conducted to see if there were any unit roots and to identify the order of integration for each variable. Further tests were undertaken by the use of Phillips-Perron (PP). The study found that FDI and institutional stability were cointegrated in the long run with the error correction model of ARDL shedding light on institutional stability being exogenous variable while FDI was the endogenous variable. Institutional stability was therefore found to affect FDI. The study therefore recommended that the

policy makers should develop policies that helped to strengthen and stabilizes institutions as this helped in attracting more FDI. The study focused on institutions and FDI while the researcher will focus on stability of financial sector and its effect on FDI.

Ahiabor and Amoah (2019) examined real effective exchange rate volatility and the effect it had on economic growth in Ghana for the period 1980-2015. The study therefore set out to determine the annual time series of data for the study period through an economic approach which employed Fully Modified Ordinary Least Squares (FMOLS). The regression findings indicated that REER volatility had positive and statistically significant effect on economic growth in Ghana. The study was based in Ghana, and therefore the findings of this study may not be exactly similar to findings in the Kenyan case. Similarly, the method of analysis used is quite distinct and it would be only fair to understand whether similar findings would be recorded if a different method is employed.

Baker et al. (n.d.) set out to understand the impact of stock market valuations on FDI, they undertook empirical study by scrutiny of various empirical literature where the basic evidence of imperfect integration across world capital markets signified existing roles for cross-border arbitrage by multinationals. The study found evidence to support the sharp increase in FDI flows with source country stock market valuations. The findings indicated that there was cheap financial capital channel, where multinational used relatively cheap financial capital that was available in the overvalued parents in the source country. This study therefore was keen to understand the effect of market efficiency in the FDI source country, rather than destination country. The researcher is therefore focused to establish the relationship of destination market efficiency with inflow FDIs.

Morina et al. (2020) studied effect of real effective exchange rate volatility on economic growth in fourteen Central and Eastern European (CEE) countries. The study therefore studies effect by

use of three channels expected to influence economic growth and which dependent on different measures of exchange rate volatility. The study used fixed effects estimation for panel data that indicated that the volatility of real exchange rate had significant effect on real economic growth. The study therefore was undertaken on 14 CEE countries and although the study was focused on the influence of economic growth, it did not focus on effect of FDI on economic growth in Kenya.

Abala (2014) investigated main drivers of real GDP growth as well as those factors that drive FDI in Kenya. The purpose of the study was to identify whether the commonly held notion that FDI is important to host country's economic growth was essentially true or not. The study used panel data collected from the World Bank for the study period 1970-2010. The study undertook estimation tests to ensure that the data was not non-stationary given the time series nature of the data, and therefore avoid spurious regression results. Stationary tests were therefore conducted by the use of Augmented Dickens Fuller (ADF) test. Regression tests were therefore undertaken to determine the solutions to the study objectives. The study findings indicated that FDIs in Kenya were mostly market-seeking which needed growing GDPs, political stability as well as good infrastructure, market size and low corruption levels. The study therefore recommended that policy makers should focus on improving political stability, development of good infrastructure as well as growing country's GDP. The study also recommended that attempts to fight corruption should be increased across the nation to reduce corruption levels. The study as much as it focuses on the underlying or existing conditions in the country and how FDI and effect on GDP is influenced by these conditions, the study was undertaken in a period where there was no global pandemic, as well as different political orientations, and infrastructural growth rate. This study will therefore improve on this study as it will bring out the current prevailing conditions and their impact on FDI and economic growth.

Wanjiku (2016) studied the impact of FDI on economic growth in Kenya. The study was categorically concerned over the economic growth since the open of borders in a country to foreign investors exposes the local firms from unfair competition that may affect their performance. This may in the long run be detrimental to the GDP of the economy if the FDIs cripple the local industries. The study adopted time series for data collected from 1980-2015 and OLS method to estimate the impact of the study variables. FDI was however found to be insignificant in impacting economic growth in Kenya, and only required to be coupled with infrastructural development to gain significance. This study although it was undertaken in Kenya did consider the impact of FDI on economic growth. The timelines of the study indicate that the study was not in position to capture the current prevailing conditions that may have significant impact on the effect of FDI on GDP.

Njane (2017) was inspired by the theoretical knowledge regarding causal effect of FDI on development of stock market in undertaking the study to prove this theoretical bearing. The knowledge suggests that FDI inflows in a country would lead to technological improvement, increase production of goods, decrease unemployment among other economic benefits that led to increase in stock market (Adam & Tweneboah, 2009). The study collected secondary data for thirty years (1987-2016). A descriptive research design was adopted by the study, where a multiple linear regression model was used in analyzing the relationship between the variables. The study findings indicated that 35.7% of the stock development could be directly explained by the study variables. The F statistic was found to be significant and therefore there was significant effect of FDI on stock market development. The researcher as much as intends to study the variables as suggested in this study, a reverse relationship is envisioned, where the researcher intends to find

out whether financial development in form of market efficiency affects or contributes to FDI in Kenya.

Muli and Aduda (2017) sought to establish the mediating effect of ease of doing business on the relationship between economic integration and FDI. Explanatory research design was employed by the study where the unit of analysis consisted of East Africa Community. Path analysis was used for analysis of time series data collected for the period 2001-2015. The findings of the study indicated that formation of an economic bloc enhanced FDI into a region. The study indicates a conceptual gap where the study is focused on the mediating effect of ease of doing business while the researcher seeks to understand the relationship that exists between FDI and economic growth.

Muli et al (2017) also seeks to determine the moderating effect of economic growth on the relationship between economic integration and FDI in the Eastern in the East African Community. The study employed an explanatory research design where hierarchical regression analysis was employed by the study in the analysis of data collected for the period 2001-2015. The findings of the study indicated that economic growth enhanced the capacity for economic integration in attracting FDI. The study also had a methodological gap as well as conceptual gap. The study focused on economic integration rather than the relationship between FDI and economic growth.

Kuso (2019) investigated the impact of FDI on economic growth in Kenya by undertaking an empirical analysis. The study also adopted a time series analysis of data that was undertaken for the period 1980 to 2015 where a log linear regression analysis was undertaken. The study found a positive and statistically significant relationship between FDI and GDP growth. The study that was conducted in Kenya contradicts with findings undertaken in a similar study by Wanjiku (2016).

The study was also undertaken for a period where current and prevailing conditions such as COVID-19 pandemic were not in the picture.

Gachunga (2019) on the other hand considered the impact of FDI inflows in the infrastructure sector, manufacturing sector as well as agricultural sector had on economic growth in Kenya. Secondary data was collected from World Bank as well as from KNBS for the study period 2007 to 2017 where Augmented Solow Model (Mankiv, 1992) was used to determine growth within the country, Growth model was used where regression analysis was undertaken by the study to find solutions for the study objectives. The findings of the study indicated that FDI in the infrastructural sector had a positive significant effect on economic growth. FDI on manufacturing sector had positive but insignificant effect. FDI on agricultural sector was inconsequential as total FDI in the sector was relatively small. The key interest for the study was on impact of FDI in different sectors of the economy to the economic growth. The study is clear of prevailing conditions which makes a study gap for this study.

2.5 Summary of Literature Review and Knowledge Gap

The literature review section assesses theoretical framework that will be adopted by the study, and which will guide the study in analysis and relating findings of the study to these theories. The theories that the study found relevant and critical include Harold Domar Theory, gravity model of international trade as well as The Balasa-Samuelson Theory. These theories indirectly provide that a positive relationship is envisioned between FDI and economic growth. However, gravity model of international trade tends to suggest that the distance or similar factors between the host and the foreign country is a key determinant of motivating foreign investments. The theory suggests that MNCs tend to undertake investments in countries that they feel they have things in common and

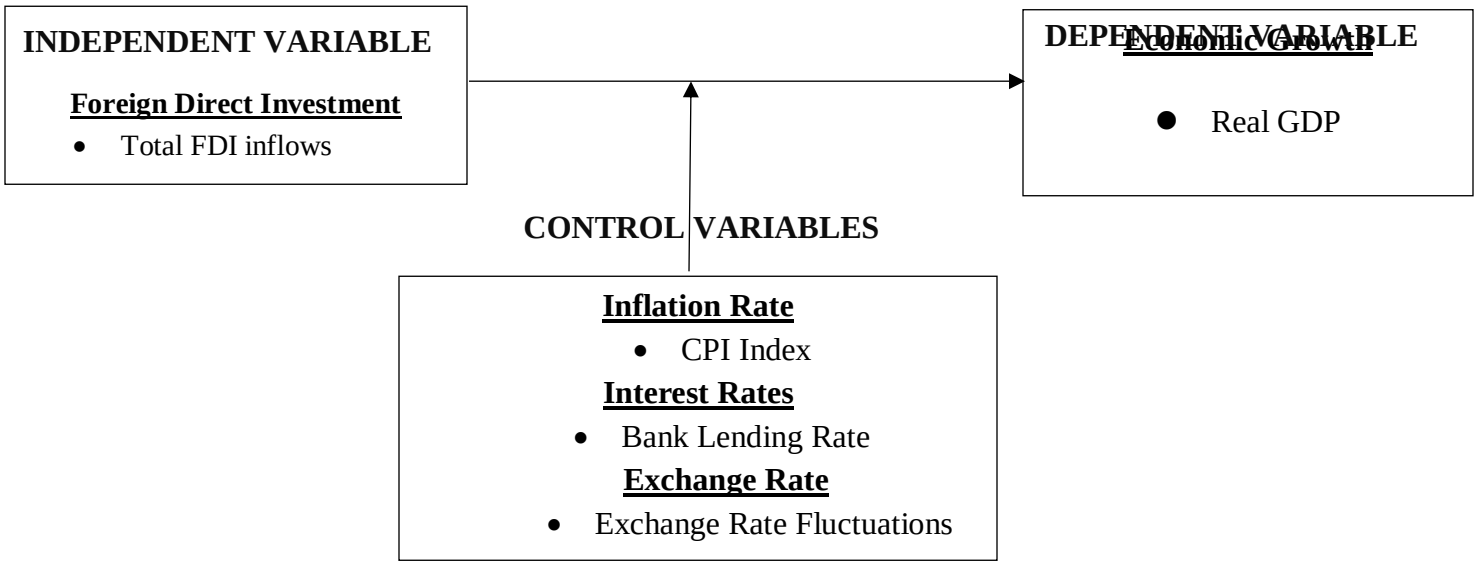
therefore they can easily relate. These factors include a common language, cultural system, religion and perhaps racial factors. The theories therefore fail to agree that FDI leads to a higher economic growth.

Similarly, the empirical literature review brings out methodological study gap where the studies used different methods from the method proposed in this study. This study will use GARCH models in the analysis of data. Similarly conceptual gap was presented in the empirical literature as studies focused on slightly different concepts rather than the concepts of economic growth and FDI. A study focused on effect of exchange rate volatility on economic growth, effect of FDI on efficiency moderating effect of ease of doing business on the relationship between FDI and economic growth, as well as the mediating effect of economic growth on the relationship between economic integration and FDI. Contextual gap has also been realized where studies have been undertaken in other countries, developed as well as developing countries in Africa and outside Africa.

2.5 Conceptual Framework

Conceptual Framework is an analytical tool with expansive ideas and standards taken from various fields of enquiry and used to structure presentation (Smith, 2004). A conceptual framework of the current study shows the effect of FDI on economic growth in Kenya. Figure 2.1 below conceptualizes independent variables of FDI, inflation rate, interest rate fluctuations and political stability while economic growth as the dependent variable.

Figure 2. 1: Conceptual Framework



Source: Author (2021)

The conceptual framework indicates that the independent variables are comprised of FDI which would be determined by the total FDI inflows. The other independent variable of the study is the inflation which will be measured using CPI index. Interest rates is also an independent variable that will be determined by the banks' lending rates or rate for advancing loans in commercial banks. Political Stability is also another independent variable that will be determined by the political index that exists in the country. The relationship between these factors and economic growth that forms the independent variable of the study. Economic growth will be determined by real GDP.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter is critical in determining the methodology that was adopted in this study. The research design, data collection, data analysis and procedures used in the study.

3.2 Research Design

The design adopted in the study is a descriptive design of effect of FDI on economic growth in Kenya. The researcher looked into data from various Kenyan government institutions such as KNBS (Kenya National Bureau of Statistics) among other economic survey websites. According to Creswell (2008) descriptive research design gathers data that helps to explain an existing condition or explain the factors that influence the condition. It is used to describe some features for study population to make inferences from cause and effect. A descriptive research design is able to explain the study variables and be in position to describe the relationship that exists between the study variables.

3.3 Data Collection

Secondary data collection method was employed. This was obtained from central bank, treasury, International Monetary Fund and Kenya National Bureau of Statistics where quarterly data for the last twenty years (2001-2020) was collected by the study. The time series data collected was cleaned and assessed for completeness before undertaking data analysis.

3.4 Data analysis and Presentation

Data was analyzed by use of GARCH models to determine the relationship between the variables. The model treated economic growth as the dependent variable while independent variables comprised of FDI, inflation rate, banks' lending rates and political stability.

The economic model employed in the study took the form

$$\sigma_t^2 = \alpha_o + \sum^q_{i=1} \alpha_i \varepsilon^2_{t-1} + \sum^p_{j=1} \beta_j \sigma^2_{t-j}$$

Where;

$\alpha_o > 0$; $\alpha_i \geq 0, i=1,\ldots\ldots\ldots,q$

$\beta_j \geq 0$, $j=1,\ldots\ldots\ldots\ldots\ldots,p$; $\sum^q_{i=1} \alpha_i + \sum^p_{j=1} \beta_j < 1$ for ensuring (σ^2_t) as weak stationary.

The Analytical model will therefore be transformed to;

$$Y = \alpha_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where;

α_o and ε are regression constants

Y represents Economic Development (Real GDP per Capita)

X_1 represents FDI inflows per GDP

X_2 represents – inflation rate determined by CPI index

X_3 represents interest rates given by banks' lending rates

X_4 represents exchange rate fluctuations given by the fluctuations in exchange rate of USD to Ksh

β_1, β_2, β_3, and β_4 are the coefficients of X_1, X_2, X_3, and X_4 respectively.

3.5 Diagnostic Tests

The study undertook diagnostic tests that assesses whether data complies with assumptions of the analysis being undertaken. This study used multiple regression analytical model.

3.5.1 Linearity Test

Regression analysis assumes that data can be turned into a linear format. It therefore suggests that linear qualities may be used to determine or predict variables in the analytical model. Linearity test is undertaken by undertaking graph plots. In this case the plot would indicate whether data forms linear tendencies or not. If data does not form linear tendencies, then it fails linearity test and there would be need to transform the data in order to ensure that it forms linear tendencies before regression analysis is undertaken.

3.5.2 Normality Test

Normality test indicates whether data forms a bell-shaped distribution format which is called a normal curve. When data is large enough, it tends to take the shape of a normal curve and therefore the data may be used to undertake statistical assumptions. Normality test is undertaken by the use of Shapiro Wilk test. The null hypothesis states that the population from which the data is obtained is normally distributed. The null hypothesis is rejected if the significance (p-value) is below 0.05. Transformation of data is preferred when the null hypothesis is rejected.

3.5.3 Multi-collinearity Test

This is a test that shows whether the independent variable remain independent or they influence each other. Regression analysis assumes that independent variables remain independent and therefore do not influence each other. Multi collinearity test is undertaken by the use of Variation

inflation Factors (VIF) or tolerance levels to determine whether there exists multi-collinearity between variables or not. There exists a multi-collinearity when the VIF values are above 10. In this case the variable with multicollinearity is dropped from the model.

3.5.4 Autocorrelations Test

The test of autocorrelations is the degree of correlation of the same variable between two successive time intervals. It therefore indicates the lagging of the variable after successive time interval and how the new version of the variable is related to the original version. The most common method that is undertaken in the measure of auto correlation is the Durbin-Watson test. The test produces test scores that ranges from 0 to 4. A value that is close to 2 indicates that there is less autocorrelation while values closer to either 0 or 4 indicates that there is either positive or negative autocorrelation respectively (Creswell, 2008).

3.5.5 Stationarity Tests

Stationarity test is undertaken for time series data that tries to determine whether a time series was produced by a stationary process. This is important in any time series data and it can be undertaken by plotting the data and determining by the use of visual effect on whether the data is as a result of a stationary process or not. There are also statistical tests that are undertaken to help find out specific type of stationarity. This study will employ Unit root tests and specifically the Dickey-Fuller test where a test of a unit root will be undertaken (Zivot & Andrews, 1992).

3.5.6 Optimal Lag Test

There is a test of determining the optimal length that should be considered in a time series. This is contingent on the number of observations where AIC and Final Prediction Error (FPE) are

appropriate when observations are less than 60. However, the Hannan-Quin is more efficient when there are over 120 observations. This study will employ the AIC model to determine the optimal lag-period selection. However, a modified AIC model referred as MAIC may be preferred (Serena & Perron, 2001).

3.6 Tests of Significance

The study employed F distribution statistic where F test was undertaken in order to determine the significance of the relationship between FDI and economic growth in Kenya. The significance test was carried out at 5% where if the p-value falls below 0.05 then the null hypothesis was rejected.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction

In this section the data collected will be analyzed and presentation of results undertaken. The findings from the analysis will then be discussed to understand the relationship between FDI and economic growth in Kenya. The chapter will therefore discuss the descriptive statistics of the study variables, diagnostic tests will be undertaken, correlation analysis, regression analysis and summary and discussion of study findings will be undertaken.

4.2 Descriptive Statistics

Descriptive statistics is vital in identifying the characteristics of each variable as per the data collected by the study. It indicates the distribution of the data as well as indicating the mean and standard deviation of each variable. The skewness and kurtosis will also be described for each variable that provides an impression on the distribution of data for each variable.

Table 4. 1: Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Y=Economic Growth	80	-5.70	11.60	4.68	2.72	-1.266	.269	2.780	.532
X1 = FDI	80	5.20	545.35	117.73	120.84	2.222	.269	5.685	.532
X2 = Inflation Rate	80	1.96	29.30	8.69	5.69	1.902	.269	3.878	.532
X3 = Interest Lending Rates	80	11.75	20.34	15.07	2.48	.703	.269	-.753	.532

X4 = Exchange Rate Fluctuations	80	-8.72	13.18	.46	3.37	.572	.269	3.063	.532
Valid N (listwise)	80								

Source: Author, (2021)

The study variables comprise of economic growth that determines the increase or the decrease in GDP in a certain period of time, FDI represents the total inflows of FDI in the country, while inflation rates reflect the percentage changes in CPI index. Interest rates comprises of lending interest rates while exchange rate fluctuations were determined by the rate of change in KSH to USD exchange rates.

Economic growth had a mean of 4.67% with a standard deviation of 2.72% that indicated quite average standard deviation. The minimum economic growth in the study period was -5.7% while the maximum was 11.6%. The variable was negatively skewed with a skewness of -1.27 and a positive kurtosis of 2.78.

FDI that was determined by the percentage of FDI inflows on total GDP of the period. The mean value was 117.72% with a high standard deviation of 120.84%, a minimum value of 5.2% with a maximum value 545.35%. The variable had positive skewness as well as positive kurtosis of 2.22 and 5.69 respectively.

Inflation rate measured the inflation that was experienced in the study period with a mean of 8.69% with a high standard deviation of 5.69%. The minimum inflation level within the study period was 1.96% while the maximum was at 29.3%. The variable had positive skewness and kurtosis of 1.9 and 3.88 respectively.

The interest rates represented the lending interest rates that commercial banks charge for loans issued. The mean interest rate in the period was 15.1% with a small standard deviation of 2.48%.

The maximum lending interest rate was 20.34% while the minimum was 11.75%. Almost a zero skewness of 0.7 and almost zero kurtosis of -0.75.

The exchange rate fluctuation on the other hand represents the increase or decrease in exchange rate, or the percentage change in the amount a dollar exchange for KSh. The mean was 0.46% with a standard deviation of 3.36% a minimum change of -8.7% and maximum of 13.18%. The variable has a low skewness of 0.57 and a kurtosis of 3.06.

4.3 Diagnostic Tests

A diagnostic test is undertaken in order to determine whether the required criteria has been complied with. In data analysis, diagnostic tests are undertaken in order to ensure that the data collected complies with the requirements as well as the assumptions of the mode of analysis adopted by the study.

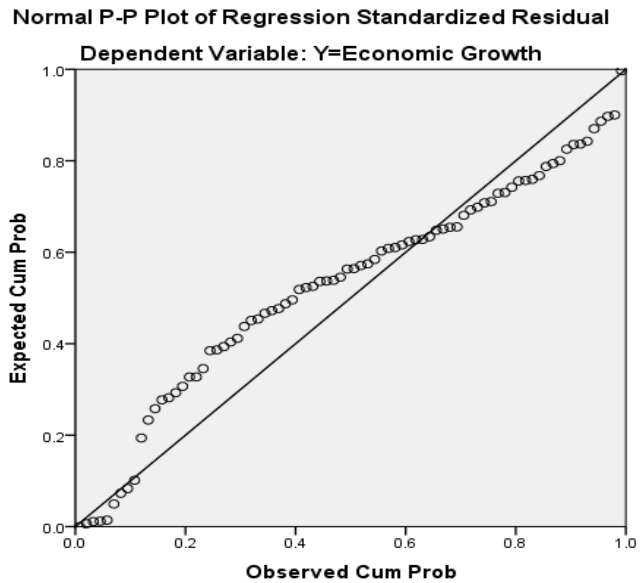
This study seeks to determine the relationship between FDI and economic growth in Kenya, where an OLS model is identified to seek to answer the research question. The assumption of this model therefore requires undertaking linearity test, normality test, homoscedasticity test, test of autocorrelations, multi-collinearity tests, stationary tests, and optimal lag test.

4.3.1 Linearity Test

Linearity test is undertaken in order to determine whether data collected exhibit linear tendency. This is due to the fact that OLS model works under assumption that variables can be associated linearly, and linear properties could therefore be applied to the model. Linearity test could be undertaken using data plots. Linearity test is also undertaken by the use of Normal P-P plots where

if the plots follow and are close to the diagonal line, then data can be judged to be linear as indicated by figure 4.1.

Figure 4. 1: Normal P-P Plot



4.3.2 Normality Test

Normality test is undertaken with the view of identifying whether data collected for the independent variables follow a bell-shaped curve (normal curve). Normality test is carried out through Shapiro-Wilk Test where variables are said to have a normal distribution if significance (p-value) of Shapiro Wilk test is more than 0.05, while normality is not assumed if the value is below 0.05. Table 4.2 displays the results of normality test for the independent variables of the study.

Table 4. 2: Normality Test

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
X1 = FDI	.188	80	.000	.743	80	.000

X2 = Inflation Rate	.186	80	.000	.799	80	.000
X3 = Interest Lending Rates	.184	80	.000	.901	80	.000
X4 = Exchange Rate Fluctuations	.142	80	.000	.933	80	.000

a. Lilliefors Significance Correction

Source: Author, (2021)

Shapiro-Wilk test indicates that all the independent variables had a p-value of less than 0.05 indicating that data failed normality test. The study therefore adopts the use of non-parametric tests instead of parametric tests while in undertaking regression analysis which is a parametric test in itself, the variables are transformed through standardization.

4.3.3 Homoscedasticity Test

Homoscedasticity test is carried out through the use of Breusch-Pagan Test. It tests whether there is a systematic change in the variance of residuals over a range of measured values. The presence of systematic change in the variance of residuals indicates that data is heteroscedastic, while absence indicates that data is homoscedastic. If the Chi-Square test in Breusch-Pagan Test is below 0.05 we reject the null hypothesis that data is homoscedastic.

Table 4. 3: Breusch-Pagan Test

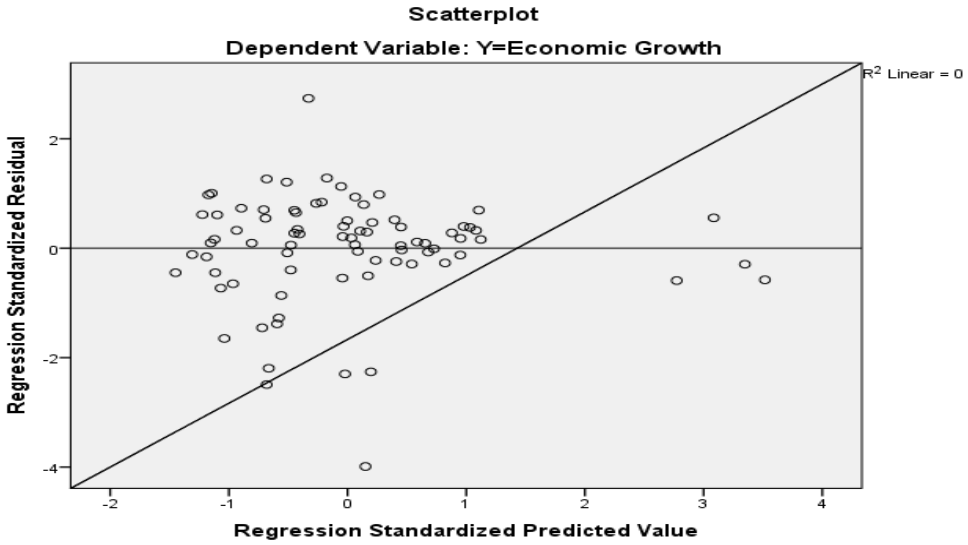
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of YEconomicGrowth

chi2(1) = 2.11
Prob > chi2 = 0.1462

Source: Author, (2021)

The table 4.3 indicates that the significance (p-value) is greater than 0.05 and therefore we fail to reject the null hypothesis that data is homoscedastic. A similar result is obtained as indicated in figure 4.2

Figure 4. 2: Scatterplot



The scatterplot in figure 4.2 indicates that there is an even distribution of plots in both the negative and the positive side and therefore there is no bias in the distribution of the plots. This indicates presence of homoscedasticity in the data.

4.3.4 Multi-Collinearity Test

The test for multicollinearity is used to determine whether independent variables are actually independent or there exist a correlation between them. A correlation between independent variables indicate a weak model. This is tested by use of Variation inflation factors (VIF), where the rule of thumb indicates that a VIF of greater than 10 indicates presence of multi-collinearity.

Table 4. 4: Collinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	X1 = FDI	.961	1.040
	X2 = Inflation Rate	.943	1.060
	X3 = Interest Lending Rates	.968	1.033
	X4 = Exchange Rate Fluctuations	.923	1.083

Source: Author, (2021)

Table 4.4 indicates that all VIF are below 10 indicating that there is no multicollinearity.

4.3.5 Test for Autocorrelations

The result on the autocorrelation test carried out using the Durbin-Watson Statistic is presented on Table 4.5.

Table 4. 5: Autocorrelation Test

Model	Durbin-Watson

1	.898

a. Predictors: (Constant), Exchange Rate Fluctuations, Economic Growth, Lending Interest Rate, Inflation Rate

b. Dependent Variable: Loan Default Rate

Source: Author, (2021)

The Durbin-Watson statistic ranges from point 0 and point 4. If there exist no correlation between variables, a value of 2 is shown. If the values fall under point 0 up to a point less than 2, this is an indication of a positive autocorrelation and on the contrast a negative autocorrelation exist if the value falls under point more than 2 up to 4. As a common rule in statistics, values falling under the range 1.5 to 2.5 are considered relatively normal whereas values that fall out of the range raise a concern. Field (2009) however, opines those values above 3 and less than 1 are a sure reason for concern. Therefore, the data used in this panel is serially autocorrelated since does not meet this threshold having a Durbin-Watson Statistic of 0.898. Transformation of variables was therefore undertaken by standardizing the study variables as a remedy for autocorrelation.

4.3.6 Stationarity Test

Stationarity test was done by the use of Augmented Dickey Fuller test. Stationarity test is done on time series data to indicate whether data is either stationary or non-stationary. Data is stationary if the increase or decrease in the variable is not affected or does not result from the cyclic increase or decrease in data but through a real increase or a decrease in the variable. One of the methods in which stationarity in data is tested is by comparing the R squared with the Durbin Watson Statistic. Data that depicts presence of stationarity has DW statistic being greater than R squared value.

Table 4.5 indicates that DW statistic is 0.898 while R squared is 0.108 that indicates that data is stationary.

4.4 Correlation Analysis

Correlation analysis is used to relate two variables, in this study the correlation is tested between all the independent variables against the dependent variable. It indicates the extent to which the independent variable correlate with the dependent variable. Correlations range from 0 to 1 with 1 indicating perfect correlation while 0 indicates no correlations. A negative correlation indicates an inverse relationship between the variable. The study adopted Spearman's correlation as the study failed on normality test and therefore a non-parametric test is adopted.

Table 4. 6: Correlation Table

			Economic Growth	X1 = FDI	X2 = Inflation Rate	X3 = Interest Rates	Exchange Rate
Spearman's rho	Y=Economic Growth		1.000				
		Sig. (2-tailed)	.				
	X1 = FDI	Correlation Coefficient	.264*	1.000			
		Sig. (2-tailed)	.018	.			
	X2 = Inflation Rate	Correlation Coefficient	-.058	.065	1.000		
		Sig. (2-tailed)	.611	.570	.		
	X3 = Interes Rates	Correlation Coefficient	-.146	-.033	-.068	1.000	
		Sig. (2-tailed)	.195	.771	.546	.	
	X4 = Exchange Rate	Correlation Coefficient	.120	.007	-.008	-.052	1.000
		Sig. (2-tailed)	.288	.953	.946	.644	.
		N	80	80	80	80	80

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

Source: Author, (2021)

The correlation between FDI and economic growth is significant and positive that indicates that increasing FDI would result in increase economic growth. However, the other variables have

insignificant correlations against economic growth. Inflation rate and interest rates on the other hand have negative correlations against economic growth, indicating that an increase in inflation rate and increasing interest rates would lead to a decrease in economic growth.

4.5 Regression Analysis

The regression analysis is an analytical method used to understand the relationship between several explanatory variables and a response variable. The study used the regression model $Y = \alpha_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

Standardized values were adopted as they were transformed to ensure that the variables could be applicable in a parametric model.

4.5.1 Regression Summary

The regression summary indicates the summary of the regression analysis where the coefficient of determination (R squared) is obtained. Similarly, the summary indicates the adjusted R squared which are useful components in indicating the strength of the model and its ability to predict changes in the dependent variable.

Table 4. 7: Regression Summary Model

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.329[a]	.108	.061	2.6349068

a. Predictors: (Constant), Zscore: X4 = Exchange Rate Fluctuations, Zscore: X3 = Interest Lending Rates, Zscore: X1 = FDI, Zscore: X2 = Inflation Rate

b. Dependent Variable: Y=Economic Growth

Table 4.7 indicates that the coefficient of determination is 10.8%. This indicates that the model can be used to explain only 10.8% of the changes in economic growth while 89.2% of the changes in economic growth in Kenya is explained by other factors that are not in the model. The model adopted in the study is therefore a weak model that may not be accurate in predicting changes in the dependent variable as a result of a change in the independent variables.

4.5.2 ANOVA

Analysis of variance on the other hand is used to determine the significance of the relationship between FDI and economic growth in Kenya. When the significance level is less than 0.05, then the null hypothesis is rejected and therefore indicating that there is a significant relationship between FDI and economic growth.

Table 4. 8: ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	63.240	4	15.810	2.277	.069[b]
	Residual	520.705	75	6.943		
	Total	583.945	79			

a. Dependent Variable: Y=Economic Growth

b. Predictors: (Constant), Zscore: X4 = Exchange Rate Fluctuations, Zscore: X3 = Interest Lending Rates, Zscore: X1 = FDI, Zscore: X2 = Inflation Rate

According to table 4.8, the significance level is slightly above 0.05 which indicates that the study fails to reject the null hypothesis that there is no significant relationship between FDI and economic growth in Kenya.

4.5.3 Regression Coefficients

The regression coefficients are used in the study to determine the extent to which a change in one variable would affect the change in independ3ent variable, when all other factors are held constant.

Table 4. 9: Coefficient Table

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.676	.295		15.874	.000
	Zscore: X1 = FDI	.833	.302	.307	2.756	.007
	Zscore: X2 = Inflation Rate	-.301	.305	-.111	-.987	.327
	Zscore: X3 = Interest Lending Rates	-.221	.301	-.081	-.733	.466
	Zscore: X4 = Exchange Rate Fluctuations	.213	.309	.078	.691	.491

a. Dependent Variable: Y=Economic Growth

Source: Author, (2021)

The regression model is transformed to

$$Y= 4.68 + 0.833X1 – 0.301X2 – 0.221X3 + 0.213X4 + 0.295$$

The model indicates that increasing FDI with one unit while holding all other factors constant would result in an increase in economic growth while increasing inflation rate would result to a decrease in economic growth. Similarly, an increase in interest rates and holding other factors constant would result in a decrease in economic growth but an increase in exchange rate fluctuations would result to an increase in economic growth.

4.6 Discussion and Interpretation of Findings

The findings of the study indicates that although there appear to be a positive correlation between FDI and economic growth, that means that increase in FDI results to an improved economic growth, the F statistical test indicates that there is an insignificant relationship between FDI and economic growth. The model was also found to be weak that only explained 10.8% of the changes in economic growth while other changes in economic growth could be explained by other factors that were not included in the model.

The study although indicates an insignificant relationship between FDI and economic growth indicated a significant positive correlation between FDI and economic growth. This suggests that increasing FDI would result to an increase in economic growth. On the other hand, if inflation rate would increase it would result to a decrease in economic growth as it would suggest that disposable income would decrease that would decrease consumption as well as decrease investments. These would therefore decrease economic growth. Similarly, an increase in interest rates would result to a decrease in economic growth as loans would become more expensive and projects with positive NPV would decrease. Increasing exchange rate fluctuations indicated an increase in economic growth. Increased exchange rate fluctuations lead to an increase in exchange rate risks that would perhaps have an effect on discouraging imports as Kenya is a net exporter. It would on the other hand encourage exports and therefore improve economic growth.

The findings of the study are consistent with the findings of the study by Sukrar, Ahmed and Hassan (2005) who found FDI had marginally significant but positive effect on economic growth. It indicates that despite the fact that FDI had positive effect on economic growth the effect was not significant enough. This is similar to the findings as indicated in this study. Mahmood et al. (2019)

found that FDI was inconsequential on affecting institutional stability in Canada. Despite the fact that the study did not find significant effect of FDI on institutional stability in Canada, the study was alive to the fact that FDI brought some positive change to institution stability. However, the change was not significant enough as other factors would contribute more to stability of these institutions rather than FDI. Baker et al (2015) also found a positive effect of FDI on stock market valuations. The study insinuates that there exists a positive effect of FDI and stock market, therefore FDI helps to increase investments in the stock market. This would be explained by the fact that FDI would enhance the capacity of investors by increasing inflow of resources. Abala (2014) found that the government of Kenya needed to improve on political stability and decrease corruption levels to attract FDI as it was vital in enhancing economic growth. He recommends that the importance of FDI in Kenya cannot be assumed. However, there are critical issues such as increased corruption that have adversely affected FDI by imposing unfavourable working conditions. Similarly, Wanjiku (2016) found that FDI affected economic growth in Kenya. Muli and Aduda (2017) found that FDI had a mediating effect on economic integration and ease of doing business for the FDI. They found that FDI was significant in bringing out ease of doing business. This would be explained by the fact that in order to attract FDI, businesses have to ensure that they promote working environment that would ensure that investment in a certain sector is attractive for foreign investors.

However, the study findings were contrary to the findings by Palmgren and Ylander (2015) who found that FDI had no impact on market efficiency of African countries. The researchers did not find any influence of FDI on market efficiency and therefore their finding was contrary to the finding in this study. However, their finding was not far-fetched as FDI in African countries may not be directly related to market efficiency, as foreign investors may not prefer to use local and

inefficient markets that are characteristics of most African stock markets. However, the findings of this study directly contravene the findings by Baker et al (2015). Ahiabor and Amoah (2019) on the other hand found that exchange rate volatility had significant effect on economic growth which was similar to findings by Morina et al. (2019). The findings in this study indicated that exchange rate fluctuations had insignificant effect on economic growth. In fact, the contribution of exchange rate fluctuations in the economic model adopted by the study was found to be inconsequential and therefore the study proposed dropping of the variable from the model.

CHAPTER FIVE

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The overview of the research results, which are represented by the study findings, the summary, conclusions as well as limitations and study recommendations are stipulated in this chapter. The chapter also captures areas where further research is recommended.

5.2 Summary

This study focused at identifying the relationship between foreign direct investment and economic growth in Kenya. This proposed study sought to ensure that it also investigated on the relationship of other macroeconomic factors such as inflation rate lending interest rates and exchange rate fluctuations on economic growth in Kenya. Panel secondary data for the variables was collected for the period 2001 to 2020 where quarterly data was collected and assessed by the study through the use of a multiple linear regression model. This was undertaken in accordance with the study objectives.

Multiple linear regression and correlation analysis was comprehensively applied to achieve the study objectives. However, the study undertook diagnostic test in order to determine whether the data collected complied with the assumptions of multiple regression analysis and where data did not comply with the assumption, the study advocated for treatment of data. The study failed on normality test and therefore advocated treating the data by standardizing the variables. Similarly, the study advocated the use of non-parametric tests instead of parametric tests.

The correlation analysis was undertaken, that correlated the independent variables with economic

growth. FDI had positive significant correlation with economic growth while other variables had insignificant correlations with economic growth. Inflation rate and interest rates had negative correlation with economic growth that means that an increase in inflation rate and increase in interest rates would lead to a decrease in economic growth. Exchange rate fluctuations had a positive but weak correlation with economic growth. The regression analysis that was undertaken on the other hand showed a weak model where the coefficient of determination was found to be 10.8%, indicating that the model was only able to explain 10.8% of the changes in economic growth. On the other hand, the significance was marginally greater than 0.05 that indicated that there was no significant relationship of FDI and economic growth in Kenya. The p value was 0.069 and therefore the study concluded that at 5% significance level, FDI had an insignificant relationship with economic growth in Kenya.

The study therefore concluded that although an increase in FDI resulted to an increase in economic growth, the increase in economic growth was not statistically significant at 5% significance level. The government therefore may not rely on increase in FDI as the only source of improving economic growth as there are other factors that were not considered in this study that influenced or predicted changes in economic growth in Kenya.

5.3 Conclusion

The findings of the study indicates that although there appear to be a positive correlation between FDI and economic growth, that means that increase in FDI results to an improved economic growth, the F statistical test indicates that there is an insignificant relationship between FDI and economic growth. The model was also found to be weak that only explained 10.8% of the changes

in economic growth while other changes in economic growth could be explained by other factors that were not included in the model.

The study although indicates an insignificant relationship between FDI and economic growth indicated a significant positive correlation between FDI and economic growth. This suggests that increasing FDI would result to an increase in economic growth. On the other hand, if inflation rate would increase it would result to a decrease in economic growth as it would suggest that disposable income would decrease that would decrease consumption as well as decrease investments. These would therefore decrease economic growth. Similarly, an increase in interest rates would result to a decrease in economic growth as loans would become more expensive and projects with positive NPV would decrease. Increasing exchange rate fluctuations indicated an increase in economic growth. Increased exchange rate fluctuations lead to an increase in exchange rate risks that would perhaps have an effect on discouraging imports as Kenya is a net exporter. It would on the other hand encourage exports and therefore improve economic growth.

The study also concludes that FDI should be enhanced by facilitating macroeconomic policies in the host country. This means that the government should ensure that it establishes conditions that would attract foreign direct investment. Practices such as corruption should be reduced and curtailed. Similarly, the government should enhance policies that would reduce cost of major inputs such as cost of power.

The study also concludes that interest rates should be reduced to enhance economic growth. The lending rates is a crucial economic factor that enhances borrowers and their ability to undertake investments in projects that they would not otherwise be involved in. The study therefore finds

that increasing interest rates has an effect of reducing economic growth as it makes loans inaccessible. It also makes projects that would have otherwise a positive NPV less desirable.

5.4 Recommendations

The study therefore recommends that government should ensure that it develops policies that would ensure that FDI improves significantly. This means that the study would recommend that factors that adversely affect FDI such as increased political tensions, and increased corruption should be lowered. Similarly, the government should implement incentives that would attract foreign direct investments in the region. Subsidies from the government would also enhance FDI as cost of factors of productions such as capital and labour would be decreased, therefore improving economic growth.

The study also recommends that the government should ensure appropriate policies are adopted that would control inflation. Increased inflation would result into decreased economic growth as the macroeconomic environment would be adversely affected. Therefore, the study recommends that the inflation rate should be checked and brought as low as possible. It does not matter whether inflation is triggered by wages or other factors, but the government should ensure that it develops policies that would counter increases in inflation rate. This is due to the fact that increases in inflation rate leads to decrease in economic growth. Increase in inflation decreases the disposable income, as the cost of a basket of goods and services increases, therefore meaning that an individual with a fixed income would only be able to afford less goods and services due to increased inflation.

The study also recommends the government to ensure that it develops policies that would lower interest lending rates. This is because lower interest rates would imply that local and foreign investors would be in position to borrow significantly from local commercial banks and therefore pursue many projects with positive NPV that would lead to improved economic growth.

5.5 Limitations of the Study

There are limitations that limits the application and use of the recommendations presented in the study. This study uses historical data in the analysis of the study. Although history tends to repeat itself while projections and future predictions are always based on the historical performances, studies have indicated that it is sometimes difficult to rely on past and historical information in predicting the future. The findings, conclusion and recommendations undertaken in the study use historical and past information. This limits the use of the study in predicting the future as future data would have been more impactful in providing future information regarding the study variables.

The study was also undertaken in Kenya context and therefore the findings of the study are therefore limited to Kenya. Even though the study may be used to infer most of the factors for a country of the same economic income level as Kenya, the findings may not be accurate for such a country. Similar factors perhaps would provide different results if undertaken in a larger context such as East African region, Africa or different other parts of the world.

The model adopted by the study was also limiting as it explained variation in the dependent variable to the extent of 10.8%. The rest of the percentage of the variation in the dependent variable is from other factors that were not included in the model. This implies that the analytical model

was limiting enough and would not provide explain variation on the dependent variable to a tune of 100%.

The secondary data was collected for a period from 2001 to 2020 which limits the conclusion made by the study. Perhaps if a longer period was undertaken such that monthly data was undertaken from 1965 to 2020, the study would arrive at a different conclusion. However, the sample chosen by the study was large enough as it was greater than 30 and increasing more data point, would have minimal effect on the accuracy of the results as prescribed in inferential statistics.

5.6 Suggestion for Further Research

The study suggests that further research could be undertaken where more independent variables are undertaken. These variables would include balance of payments, political factors, public debt among others. The findings of such a study would be compared with the findings of the current study.

A similar study would also be undertaken, targeting different and wider regions such as East African countries, entire African region or different countries in the world, where the results and findings of such a study would be compared to findings in this study.

The study would also recommend undertaking a similar study where data is collected in a larger study period and at the same time a different model such as ARDL models are adopted in the study. The findings of such a study would then be correlated with the findings of this study.

REFERENCES

Abala, O., D. (2014). Foreign Direct Investment and Economic Growth: An Empirical Analysis of Kenyan Data. *DBA Africa Management Review, 4* (1), 62-83.

Ahiabor, G. & Amoah, A. (2019). Examining the effect of real effective exchange rate volatility on economic growth: evidence from Ghana, *Journal of Economics and Economic Education Research, 20 (1),* 57-67.

Ayse, K. (2015). *Power and Global Economic Institutions.* Cambridge, UK: Cambridge University Press.

Balcerowicz, L. (2015). *Puzzles of Economic Growth*, International Bank for Reconstruction and Development, Retrieved < http://dx.doi.org/10.1596/978-1-4648-0325-3>.

Barguellil, A., Ben-Salha, O., & Zmami, M. (2018). Exchange rate volatility and economic growth. *Journal of Economic Integration, 33 (2),* 1302-1336.

Bunting, F. (1939). The Purchasing Power Parity Theory Reexamined. *Southern Economic Journal, 5 (1*), 282-301.

Chirchir, F. K., Muse, M., A., and Jagongo A. (2015). Exchange rate volatility and export performance of tea firms in Kenya, *International Journal of Science and Research, 6 (2),* 2166-2173.

Clark, P., Tamirisa, N., and Shang-Jin, W. (2004). Exchange Rate Volatility and Trade Flows-Some New Evidence. *International Monetary Fund*, Washington D.C.

Creswell, J. W. (2008). *Educational research: planning, conducting and evaluating quantitative and qualitative research* (3rd ed.). Upper Saddle River, NJ: Pearson Education, Inc.

Dornbusch, R. (1974). Tariffs and nontraded goods. *Journal of International Economics, 4 (2),* 177-186.

Egert, B. (2002). Estimating the Balassa-Samuelson effect on inflation and the real exchange rate during the transition. *Economic Systems 26 (1*), 1-16.

Guthrie, G., and Wright, J. (2000). Open mouth operations, *Journal of Monetary Economics, 46 (1),* 489-516.

Himarios, D. (1989). Do devaluations improve the trade balance? The evidence revisited. *Economic Inquiry Journal, 27(1*), 143-168.

International Monetary Fund (2019). *World Economic Outlook: Global Manufacturing Downturn*, Rising Trade Barriers. Washington DC.

Kamau, A. and Ngugi, R. (2011). Exchange rate response to policy news in Kenya, *European Journal of Political Economy, 23 (1),* 146-175.

Levin, Irwin (2005). How consumers are affected by the framing of attribute information before and after consuming the product. Journal of consumer research,15,374-378.

Lothian, J. R. & Taylor, M. P. (2008). Long-run purchasing power parity and real exchange rates: introduction and overview, *Applied Economics Letters, 16 (1),* 1-4.

Lu, D. & Yu, Q. (1999). Hong Kong's exchange rate regime: Lessons from Singapore. *China Economic Review, 10 (2),* 122-140.

Mahmood, N., Shakil, M., H., Akinlaso, I., M., & Tasnia, M. (2019). Foreign direct investment and institutional stability: who drives whom? *Journal of Economics, Finance and Administrative Science, 24*(47), 145-155.

Mboya, K., O. (2017). The effect of exchange rate fluctuations on gross domestic product in Kenya, *Unpublished MBA Project,* University of Nairobi.

McKinnon, R., & Ohno K. (1997). *Dollar and Yen: Resolving Economic Conflict between the United States and Japan*. Cambridge, Mass.: MIT Press.

Morina, F., Hysa, E., Ergun, U., Panait, M. & Voica (2020). The effect of exchange rate volatility on economic growth: Case of the CEE countries. *Journal of Risk and Financial Management, 13 (177),* 1-13.

Muli, W., M., & Aduda, J., O. (2017). The mediating effect of ease of doing business on the relationship between economic integration and foreign direct investment in the East African Community, *Journal of Finance and Investment Analysis, 6*(4), 21-54.

Muli, W., M., Aduda, J., O., Lishenga, J., L., & Abala, D., O. (2017). The moderating effect of economic growth on the relationship between economic integration and foreign direct investment in the East African Community, *Journal of Finance and Investment Analysis, 6*(3), 1-4.

Musyoki, D., Pokhariyal, G. & Pundo, M. (2012). The impact of real exchange rate volatility on economic growth: Kenyan evidence, *Journal of Business and Economic Horizons, 7 (1),* 59-75.

Mwangi, S., C. (2015). An evaluation of effects of exchange rate volatility on Kenya's French Bean Exports, *Unpublished Phd Thesis*, University of Nairobi.

Pettinger, T. (2019). Harrod-Domar Model of Growth and its Limitations. Retrieved 24th November, 2020. < Harrod-Domar Model of Growth and its Limitations - Economics Help >.

Pugel, T. (2007). *International Economics*. Thirteen Edition. McGraw-Hill International Edition.

Rajan, R. G., Zingales, L.,1998. Financial dependence and growth. American Economic Review 88(3),559-86.

Rose, A. & Yellen, J. (1989). Is there a J-Curve? *Journal of Monetary Economics, 24 (1),* 53-68.

Sukar, A., Ahmed, S. & Hassan, S. (2005). The effects of foreign direct investment on economic growth: The case of Sub-Sahara Africa, *Southwestern Economic Review,* 9(3), 1-74.

Terborgh, G. W. (1926). The Purchasing-Power Parity Theory. *Journal of Political Economy, 34 (2),* 197-208.

Thomas, L. B. (1973). Behavior of Flexible Exchange Rates: Additional tests from the Post-World War I Episode, *Southern Economic Journal, 40 (10),* 167-182.

Thong, L. N. & Hao, N. T. (2019). The Harrod-Domar Growth Model and its Implications for Economic Development in Vietnam, *International Journal of Humanities Social Sciences and Education (IJHSSE)*, 6 (4), 11-17.

Wandeda, O. D. (2014). The Impact of Real Exchange Rate Volatility on Economic Growth in Kenya, *Unpublished Master of Arts Economics Research Project*, University of Nairobi.

Williamson, O. E. (1985). *The Economic Institutions of Capitalism.* Free Press: New York.

World Bank (2020). *The World Bank in Kenya*, Retrieved 24th November, 2020 from <Kenya Overview (worldbank.org) >.

APPENDICES

APPENDIX 1: DATA COLLECTION FORM

Period	Real GDP	FDI Inflows	CPI Index	Banks Lending Rate	Exchange rate fluctuations

APPENDIX II: DATA USED

Y=Economic Growth	X1 = FDI	X2 = Inflation Rate	X3 = Interest Lending Rates	X4 = Exchange Rate Fluctuations	Period
2.2	5.198079	7.82	20.19	-1.30	2001-1
6.3	5.198079	7.13	19.26	1.12	2001-2
6.2	5.1981	6.44	19.44	0.41	2001-3
3.2	5.1981	5.74	19.49	-0.33	2001-4
4.7	26.92959	4.79	18.86	-0.80	2002-1
0.2	26.92959	3.84	18.38	0.78	2002-2
-2.5	26.92948	2.89	18.14	0.18	2002-3
0.5	26.92948	1.96	18.34	0.92	2002-4
-1.7	77.42886	3.93	18.49	-3.71	2003-1
4	77.42886	5.9	15.73	-3.74	2003-2
6.9	77.42857	7.8	14.82	5.67	2003-3
5.2	77.42857	9.82	13.47	-2.42	2003-4
6.7	41.52388	10.3	13.12	4.28	2004-1

5	41.52388	10.75	12.17	0.07	2004-2
3.2	41.52373	11.2	12.27	6.29	2004-3
5.3	41.52373	11.62	12.25	-8.27	2004-4
2.5	18.08661	14.15	12.84	-3.01	2005-1
7.4	18.08661	11.91	13.09	1.58	2005-2
7.4	18.08661	4.27	12.83	-2.79	2005-3
5.9	18.08661	7.56	13.16	-2.31	2005-4
4.1	40.55704	19.14	13.33	-0.68	2006-1
6	40.55704	10.93	13.79	2.79	2006-2
5.8	40.55691	13.85	13.54	-1.63	2006-3
5.2	40.55691	15.6	13.74	-4.52	2006-4
6.3	545.3534	5.9	13.56	-0.89	2007-1
8.9	545.3534	11.1	13.14	-3.22	2007-2
6.9	545.3534	11.7	12.87	0.61	2007-3
5.6	545.3518	12	13.32	-6.62	2007-4
-0.6	70.42495	21.8	14.06	0.49	2008-1
3.2	70.42495	29.3	14.06	2.94	2008-2
3.2	70.42474	28.2	13.66	13.18	2008-3
1.8	70.42474	27.7	14.87	6.14	2008-4
3.9	21.76242	14.6	14.87	-0.71	2009-1
2.1	21.93421	8.6	15.09	-2.80	2009-2
1.9	21.76736	6.74	14.74	0.92	2009-3
0.8	21.28405	5.32	14.76	-0.48	2009-4
6.6	31.02916	3.97	14.8	1.84	2010-1
7.6	30.9504	3.49	14.39	3.83	2010-2
7.9	31.00936	3.21	13.98	1.31	2010-3
11.6	29.97732	4.51	13.87	0.18	2010-4
7.5	238.7713	9.19	13.92	1.69	2011-1
6.6	239.2387	14.49	13.91	5.01	2011-2
6.1	239.5581	17.32	14.79	9.87	2011-3
4.4	235.1362	18.93	20.04	-3.51	2011-4
4.2	218.6244	15.61	20.34	-8.72	2012-1
4.3	217.2494	10.05	20.3	1.46	2012-2
5	217.0268	5.32	19.73	-0.19	2012-3
4.7	214.0297	3.2	18.15	1.32	2012-4
6.1	171.1285	4.11	17.73	0.91	2013-1
7.5	168.1554	4.91	16.97	-1.75	2013-2
6.4	169.6481	8.29	16.86	2.58	2013-3
3.5	168.1187	7.15	16.99	-1.18	2013-4
5.2	119.751	6.27	16.91	0.22	2014-1
6	116.5306	7.39	16.36	1.27	2014-2

4.6	118.4559	6.6	16.04	1.21	2014-3
5.6	118.3212	6.02	15.99	1.76	2014-4
5.7	86.26243	6.31	15.46	1.96	2015-1
5.6	83.78847	7.03	16.06	5.66	2015-2
6.1	85.37687	5.97	16.82	7.10	2015-3
5.5	84.78754	8.01	18.3	-1.75	2015-4
5	90.98973	6.45	17.87	-0.30	2016-1
6.1	88.43473	5.8	18.18	-0.73	2016-2
5.2	89.53862	6.34	13.86	0.31	2016-3
7.2	88.62645	6.35	13.66	0.60	2016-4
5.2	161.0782	10.28	13.61	1.34	2017-1
4.4	159.7558	9.21	13.66	0.12	2017-2
4.4	161.8155	7.06	13.69	0.00	2017-3
5.1	159.7681	4.5	13.64	-0.04	2017-4
6.2	196.67	4.18	13.49	-1.72	2018-1
6	193.4834	4.28	13.22	-0.64	2018-2
6.6	197.3819	5.7	12.66	-0.29	2018-3
6.5	193.5089	5.71	12.51	1.40	2018-4
5.5	153.7942	4.35	12.51	-1.47	2019-1
5.3	149.7333	5.7	12.47	1.10	2019-2
5.2	154.3365	3.83	12.47	2.17	2019-3
5.5	151.865	5.82	12.24	-1.38	2019-4
4.9	49.50313	5.84	12.09	2.19	2020-1
-5.7	52.81333	4.59	11.89	1.75	2020-2
-1.1	52.99455	4.2	11.75	1.85	2020-3
-1.4	50.44088	5.62	12.02	0.62	2020-4