

**EFFECTS OF FOREIGN DIRECT INVESTMENT ON ECONOMIC  
GROWTH IN KENYA**

**BY**

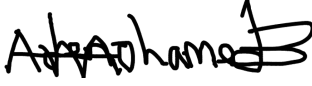
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NAIROBI.**

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## DECLARATION

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

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Prof Cyrus Iraya

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## **DEDICATION**

This thesis is dedicated to: My great teacher and messenger, Mohammed (May Allah bless and grant him), who taught us the purpose of life. The University of Nairobi; my second magnificent home; My great parents, who never stop giving of themselves in countless ways,

My fiancée, who leads me through the valley of darkness with light of hope and support. My beloved brother and sisters; particularly my dearest sister, Yustur, who stands by me. My friends who encourage and support me. All the people in my life who touch my heart, I dedicate this research

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## ABSTRACT

The objective of the study was to determine the effect of foreign direct investments on economic growth in Kenya. This study was necessitated by the fact that Kenya has in the past been the country of choice for most foreign investors targeting the East African Region. However, this situation might have changed, with Tanzania, Uganda and Rwanda developing policies that have attracted massive foreign investments. However, Kenya has increased corruption political risks among other factors that might have led to decrease in FDI inflows. This study therefore was expected to enlighten on whether attracting FDI had effect on economic growth in Kenya. The study collected time series quarterly data for the period 2001 to 2020, for the study variables that comprised of FDI, inflation rate, exchange rate fluctuations as well as interest rates. The study adopted the use of Ordinary Least Squares (OLS) where regression analysis was used as the model to determine the effect of the independent variables on the dependent variable. The regression model that was formulated indicated that the model was a strong model as it predicted 66.7% of the changes in economic growth. Only 33.3% of the changes in economic growth was predicted by other factors outside the model. The regression analysis undertaken indicates that there was significant positive effect of FDI on economic growth as the p value of the F distribution was below 0.05 that led to the rejection of the null hypothesis. The correlation analysis that was undertaken by the use of Spearman's correlation indicated that there was positive significant correlation between FDI and economic growth, as well as between exchange rate fluctuations and economic growth. There was, however, negative significant correlations between inflation rate and economic growth as well as between interest rates and economic growth. The study recommends that government should ensure that it develops policies that would ensure that FDI improves significantly. 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.

## ABBREVIATIONS AND ACRONYMS

<b>CBK</b>	Central Bank of Kenya
<b>CBK</b>	Central Bank of Kenya
<b>CEE</b>	Central and Eastern European
<b>CMA</b>	Capital Markets Authority
<b>CPI</b>	Consumer Price Index
<b>EAC</b>	East African Countries
<b>EG</b>	Economic Growth
<b>ERV</b>	Exchange Rate Volatility
<b>FDI</b>	Foreign Direct Investments
<b>GDP</b>	Gross Domestic Product
<b>IMF</b>	International Monetary Fund
<b>IRA</b>	Insurance Regulatory Authority
<b>KNBS</b>	Kenya National Bureau of Statistics
<b>MNC</b>	Multi-National Corporations
<b>RBA</b>	Retirement Benefits Authority
<b>R&amp;D</b>	Research and Development
<b>TFP</b>	Total Factor Production
<b>UNCTAD</b>	United Nations Conference on Trade and Development.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

There are general and similar characteristics that manifest in developing countries. According to Todaro (1977) issues such as low living standards, high population growth rate, increased disparity between the rich and the poor, low labour productivity level, high unemployment levels, over dependence on agricultural sector, among others. The relative effect on economic growth is reduced and low per capita income. The rate at which they turn resources into national wealth decreases with such poor economic statistics. The investments that exist in such countries is wanting as there is poor access to credit by the private sector, while the government over borrows internally and externally. These governments have poor credit rating and they usually attract funding at high interest rates from the international market. The only way available, is to enhance productive capacities in the country, increase technological capacity and ensure that there is an enabling environment to attract foreign trade. However, there still exists challenges on the amount of foreign direct investment the countries might attract, due to increased social ills, over protection of domestic industries, increased bias towards a closed economy rather than an open economy among others (Akerlof, 1970).

This study will be anchored on a theoretical foundation that involves different theories with varied relationship and effect on the study variables. The gravity model of international trade is one of the key theories that 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). The other theory is the internalization theory that focuses on imperfections in intermediate product markets. Knowledge flows that is able to link R&D (Research and Development) to production as well as flows of raw materials as well as other components are the two main types of intermediate product. Disparity in knowledge flow is the main cause of imperfection, where FDI increases with increase in the level of information gap. The multinational companies protect this special knowledge through secrecy instead of licensing

their knowledge to independent local producers (Buckley & Casson, 1976). Internalization theory is linked to eclectic paradigm (OLI model) proposed by John Harry Dunning where he referred this special knowledge as an ownership advantage, which was vital in any multinational firm. The study scrutinizes propositions of Mundell (1957) in regard to Capital Theory. The theory suggested that firms were only interested in investing abroad if they were assured of higher rates of returns. It therefore suggested that multi-national firms were only concerned with the rates of returns they would obtain by undertaking the extra international risks of investing abroad. The extra returns were therefore sufficient in rationalizing foreign direct investment.

Kenya is one of the developing countries that has been earmarked for posterity and growth (Akerlof, 1970). According to Reuters (2018) the Kenyan GDP in 1963 all the way to 1973 grew by an average of 6.6%. The growth also improved in 1970s at an average of 7.2%. However, global recession and events of attempted coup reduced the GDP growth to an average of 4.2% in the years 1974 – 1990. Increased political atmosphere that resulted from advent of multi-party politics declined the economic growth further to a low of 2.2% before the growth resuscitated in 1994 and 1996 at 4%. Despite the growth that averaged 5.7% from 2015-2018 concern has been raised over increasing Kenya's debt sustainability, revenue growth and current account deficit. The year 2020 has been curbed with locust invasion in the beginning of the year and a global pandemic of COVID-19 that have declined economic growth to 1.5% (World Bank, 2020). Similarly, increased political activity in the country, since 2017 when the opposition endeared to work with the government and started to popularize a constitutional amendment initiative dubbed, "BBI (Building Bridges Initiative)". While at the same time the deputy president's working relationship with his boss was severed, aggravating political risks in the country. All these political activities affect and perhaps influence economic growth, as well as FDI depending on the policies adopted and popularized by the government (IMF, 2020).

### **1.1.1 Foreign Direct Investment in Kenya**

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. 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 among the steadiest global capital movements, FDI tops in the rankings. It is therefore defined as the investments undertaken by the parent company in a foreign nation. It is also expressed as the long-term relationship enjoined through an investment undertaking from an investor resident in an economy other than the economy of the investor. World Bank (2010) on the other hand defines FDI as the equity flows from one economy to the other, where a resident entity controls more than 10% of an entity domiciled in another economy other than the economy where the investor is resident. The concept of FDI may therefore be said to be undertaken by Multi-National Corporations (MNCs) which brings about new technological background, new tastes and innovations, modern managerial practices among others. On the other hand, they take advantage of cross-border supply chains, which enable them exploit comparative advantages of the resident economy.

Multinational corporations are not charitable organizations but they are profit driven. This means that they would only invest in foreign economies if the rate of return for investments guarantees positive NPVs even after taking into consideration political risks, exchange rate risks among other risks. FDI therefore would only be realized in a country, when investment conditions are favorable to ensure that they guarantee positive NPV to the multi-national companies. Cheaper production costs, availability of raw materials as well as proximity to the market are some of the issues that have been highlighted (Rutto et al., 2019; Wanjiku, 2016; & Gachunga, 2019). 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 56<sup>th</sup> worldwide. This was an improvement from 2019 ranking, where the country was ranked 61<sup>st</sup>. 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). There are however prevailing conditions such as Covid-19 global pandemic, high external debts,

inflationary pressure, increased political risks, as well as increased exchange rate fluctuations. These risks have adverse effect on FDI and as such the status of FDI may vary different from one period to the other.

Abala (2014) augments FDI as domestic capital that facilitates movement of technology and trade across borders, skills development to domestic labour, and upgrades technical and managerial capacities. He therefore proposed to determine FDI as a ratio of FDI to GDP. Similarly, Mwega (2009) sees FDI as impacting positively on the profit and productivity prospects of private domestic investment through provision of investable financial resources, new technologies and efficiency. He also proposed to measure FDI by determining the percentage of total inflow FDI to GNP. This study identifies the three broad categories that determine the total FDI in a country: export oriented FDI, which tends to take advantage of factors of production that may be easily available in the host country such as cheap labour, etc. On the other hand, import oriented FDI aims to replace economic imports by establishing a basis in the host country. The other category is the government oriented FDI, that seeks to offer incentives to foreign investors (Abala, 2014). This suggests that FDI has a direct impact on total goods produced in an economy and therefore the definition of FDI as a ratio of total FDI to total GDP would suffice for this study.

### **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). 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.

According to Kimenyi and Ndung'u (2005) the increasing young population in Kenya is an opportunity that places it ahead of nations with a higher old population size than the young population. The country is also located strategically and has a port that can serve five landlocked countries namely, Uganda, South Sudan, Ethiopia, Rwanda and Burundi. With more investment in the railway and transport network, then the port revenue would be a major contributor of economic growth. The exploration of oil in the country has been a major boost as the country has discovered oil fields that may be commercialized making it one of the oil exporters in Africa. Despite the multiple opportunities that promises a robust economic growth in Kenya, there are gleaming challenges that threaten this economic growth. Despite the change in governance structure in Kenya that culminated with the adoption of the new constitution in 2010 which focused on devolved government system, corruption has become even deeper rooted in the system, threatening the very gains that have been developed by devolution. Similarly, political instability has also been a great factor that destabilizes the economy and discourages international trade as presidential campaigns becomes robust and very divisive on tribal lines. Terrorism has also been major threat that adversely affects Kenyan economy, with Somali based terror group; Alshabaab, planning and executing several attacks in the country. The far-reaching effect of widening gap between the poor and the rich, unemployment, instability of interest rates, increased national debts with decreased revenue sources are some of economic threats that adversely affect the rate of economic growth in Kenya. The economic depression in the international markets, international shocks, the effect of international pandemics such as Covid-19 and increasing inflation rate are factors that adversely affect economic growth in Kenya (Gachunga, 2019).

Gachunga (2019) determined economic growth by use of total gross domestic products (GDP). This refers to the total monetary value of all goods and services which have been produced inside the borders of a country within a specific period usually a period of one year. It is therefore an



efficient score card to determine the economic health of a given country. The same measure of GDP was used to determine economic growth of a country in a study conducted by Rutto et al. (2019). Saddimbah (2014) on the other hand determined economic growth as the actual GDP per capita in a specific year. This is a metric that determines the economic output of a certain country on the basis of each person in the country. In order to determine the economic growth GDP of a country in a specific year is divided by its population to obtain the value of goods and services produced in a country by each individual. This therefore is an appropriate measure of economic growth for this study. This is because instead of obtaining an absolute value of good and services produced in the entire country in one year, the value is reduced to obtain the amount produced by each individual in a country. This study will therefore use GDP per capita as a measure of economic growth.

### **1.1.3 Foreign Direct Investment and Economic Growth**

There is a contentious approach towards the actual contributions of FDI and its purpose in enhancing economic growth. There are those who opine that there is increased efficiency in the production of goods and services with increased FDI. Domestic industries are challenged to improve their throughput processes and enhance effectiveness in order to offer competition and create a competitive environment. Similarly, FDI enhances the savings gap and increases the tendency of adopting modern systems in business operations, that result in efficiency and effectiveness (Todaro, 1977). O'connel et al. (2010) on the other hand argues that FDI increases credit risk and business risk across borders. Despite the fact that MNCs are associated with introduction of improved technology, superior skills base, provide employment to citizens of the host nation as well as improved innovative techniques of business operations, they are also responsible for undermining macro-economic stability as domestic markets are highly exposed to external volatility (Blomström 1986). According to Schnitzer (2002) FDI was not a favorite tool among African countries as it was associated with 'loss or dilution of political sovereignty.' They also believed that it would have grievous effects on domestic companies as well as degrading environmental resources and enhance climate change.

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.

#### **1.1.4 FDI and Economic Growth in Kenya**

The Kenyan economy has resonated with the Africa rising narrative since early 2000. This followed a resurgence in economic growth in Africa that was highly based on new millennium development goals, reinstatement of strong institutes that were meant to help fight against corruption, poverty and political instability (Robertson, 2013). The increased economic growth in Africa was therefore attributed to improved government fiscal policies that was mainly focused on reduced non-negotiated loans, increased government expenditures dedicated towards economic growth, increased commodity exports, FDIs, new mineral explorations, improved use of telecoms and better education system with minimal political instability.

According to Reuters (2018) the Kenyan GDP in 1963 all the way to 1973 grew by an average of 6.6%. The growth also improved in 1970s at an average of 7.2%. However, global recession and events of attempted coup reduced the GDP growth to an average of 4.2% in the years 1974 – 1990. Increased political atmosphere that resulted from advent of multi-party politics declined the economic growth further to a low of 2.2% before the growth resuscitated in 1994 and 1996 at 4%. The economic growth stagnated all through to the end of President Moi regime as IMF and World bank suspended lending to the country since major governance reforms had not been met as expected. Improved economic growth was experienced in Mwai Kibaki's regime from 2003 when government made structural reforms in governance that helped it to grow relevant infrastructure and increase revenue collection by the government. The economy grew from 2% in 2003 to 7% by end of 2007 before the economic growth declined to a low of 1% as a result of post-election violence in 2008. In the year 2013 when Jubilee Party government took over, the economy had averaged 5%. Economic growth under Jubilee government has averaged above 5% with much of this growth being credited to growth in small businesses in the country. Despite the growth that

averaged 5.7% from 2015-2018 concern has been raised over increasing Kenya's debt sustainability, revenue growth and current account deficit. The year 2020 has been curbed with locust invasion in the beginning of the year and a global pandemic of COVID-19 that have declined economic growth to 1.5% (World Bank, 2020).

Kenya has made tremendous steps in improving on its commitment to foreign direct investment (FDI). Financial deepening as well as financial inclusion. They have contributed to improving the economic development with the mobile phone based financial services, M-pesa obtaining a world-wide recognition due to its ability to transform mobile financial services as traditionally recognized. Horticultural products have been produced in the economy for exports in major economies in the European Union as well as other foreign markets. The increased quality of horticultural products as well as subsidized inputs in the sector have made the products competitive in the international arena. This has become an important foreign exchange earner that has also promoted economic growth (Njuguna et al., 2016).

## **1.2. Research Problem**

The fact that there is divided opinion in regard to the contribution of FDI on economic growth makes it difficult to predict with certainty the overall impact of FDI on economic growth. The proponents of FDI argue on the benefits that would accrue from an enhanced FDI to the economic growth. The decrease in unemployment rate for instance, enhance superior technical advancement in the country, promotes skills level, reduces the savings gap as well as management gap. It therefore implies that FDI would help to promote all these factors that would improve economic growth in the country. In the contrary, FDI exposes domestic markets, as it is exposed to international market fluctuations, exposes the market to external shocks such as effects of world pandemics, international conflicts, as well as crowding out of domestic savings (O'Connell et al, 2010). The state of FDI has a direct impact on economic growth, the nature of impact is however dependent on the factors affecting FDI now. Impacts such as increased skill level, increased technological advancement, reduction of savings gap as well as management gap would lead to an improved economic growth. However, an impact on FDI that causes crowding out effect on investments, adverse effect on local industries, adverse exposure to external economic pressures among other adverse effect of FDI would equally bring down the level of economic growth. The

resultant effect of the two opposite pressures would determine the overall effect of FDI on economic growth.

There have been a number of significant political as well as economic reforms in the past decade in Kenya. This has contributed to sustained economic growth, social development as well as political stability gains. However, the country still faces enormous challenges in the levels of poverty, inequality as there is great disparity between the rich and the poor, deteriorating climate change, weak private sector investment, as well as the vulnerability of the state of the economy to internal as well as external shocks (The World Bank, 2021). The promulgation of the new constitution in the year 2010 introduced a bicameral house, constitutionally tenured electoral body as well as judiciary and a devolved county government. In the period 2015-2019 the economic growth of Kenya averaged 5.7%, that made it among the fastest growing economies in Sub-Saharan Africa. This could be attributed to stable macroeconomic environment, positive investor confidence as well as resilient services sector. However, the advent of the COVID-19 shock hit the economy through demand and supply shocks from both external and domestic fronts (Rutto, et al., 2019).

After 2017 presidential elections in Kenya, the political risks increased as the supreme court nullified the presidential results. The opposition boycotted the repeat elections, where the rising political atmosphere culminated in the swearing in of the opposition leader as the people's president. However, the president in order to ensure that the country's development agenda has been aligned to the attainment of Vision 2030, as well as address the "Big Four" agenda that the government wanted to achieve, entered into a political agreement with the leader of the opposition that culminated into proposition to change the constitution in a move dubbed, Building Bridges Initiatives (BBI). The political pressure decreased considerably, but the popularization of BBI took center stage. According to UNCTAD (2020) the political temperatures were not favourable to enhance economic growth. The locust invasion in the country coupled with the announcement of COVID-19 pandemic made significant and elaborate disruptions to economic growth as well as the world order as we currently know it.

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 forms the main study gap that would be addressed by this study. 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. 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 are studies that are time cautious as, different times have different prevailing conditions. 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 no another study that has attempted to assess the effect of FDI on economic growth in the midst of 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 effect of FDI on economic growth in Kenya?

### **1.3. Research Objectives**

The objective of the study will be to investigate the effect of foreign direct investment (FDI) on 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 regarding 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 chapter captures the theoretical review that explains the theories related to the study. It also contains other factors that affect economic growth. The chapter then discusses empirical literature where local and international studies are assessed. Conceptual framework is then discussed and a summary of literature review concludes the chapter.

#### **2.2 Theoretical Review**

In this section, theories that are relevant to the study are explained where the originator of the theory is identified, the key propositions of the theory are thereby explained as well as the criticism for each theory. The relevance of the theory is then discussed as the expected relationship between the variables is spelt out as predicted by the theory. The gravity model of international trade, the internalization theory as well as capital theory will be discussed in this study.

##### **2.2.1 The Gravity Model of International Trade Theory**

The gravity model of international trade theory was first proposed by Walter Isard in 1954. He suggested that the model in its traditional form is able to 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 gravity 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 take into account 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 predict the factors that affect trade flows between countries. Trade flows between countries therefore represent 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.

### **2.2.2 The Internalization Theory**

Internalization theory was first proposed by Rugman (1981) mostly influenced by the contributions made by Buckley and Casson (1976). The theory simply indicates that FDI takes place only when the benefits of undertaking investment in foreign country outweighs the costs involved. This implies that MNCs are purely driven by profits or the returns, rather than other objectives such as humanitarian aspects, or other similar objectives. Rugman (1981) further suggests that MNC according to the theory is concerned with entry mode choices in foreign markets that is based on transaction cost analysis. The failure to obtain enough information in regard the foreign market is a central construct that increases risk exposure to the firm and it would respond by limiting its resource commitment that he referred to as the stage models of internationalization or increase the control modes in the host country (Rugman & Verbeke, 2008).

One of the major aspects for criticism of the internalization theory is on the concept of commitment. This is usually exhibited by researchers through measurable indicators; and forms the tangible commitment by the foreign investors. The presence of tangible commitment means that there exists intangible commitment which perhaps may be connected to the concept of psychic distance according to the internalization model. The theory therefore only suggests that multinational corporations engage in foreign invests as benefits outweighs costs. However, this may not hold all the times as there are a number of foreign investment firms that specialize in



undertaking humanitarian services across different countries, in total disregard of the benefits that would accrue to them. The theory therefore trivialized the concept of costs and returns and from which OLI eclectic paradigm model was formed (Knight & Cavusgil, 1996).

The theory is relevant to the study as it stipulates that the reason as to why MNCs would invest in a foreign country is when the benefits outweigh the cost. It implies that the returns the MNCs will obtain supersedes the cost incurred in the process. Therefore, a country that intends to attract foreign investors need to have an enabling environment that would facilitate investors undertake their investments without being subjected to very high external risks that would result to losses. Therefore, in order to attract FDI, a nation intends to deal with macroeconomic factors such as inflationary risks, huge volatility among others. The theory therefore envisages that with increase in FDI, you would only expect an increase in economic growth as foreign investors would only be attracted to countries that have prospects of growth.

### **2.2.3 Capital Theory**

Capital theory was proposed by Mundell (1957) where he proposed that an economy develops over time and it can be modelled to determine the economic changes that are occasioned by current economic decisions as well existing levels of output. It also tries to explain how parts of economic theory; such as production, demand, distribution among others would interact with each other to produce a resultant effect in economic growth. The theory is further divided between modern as well as traditional capital theory. The traditional capital theory relates to the study of factors that influence rate of interest, relationship that exist between rate of interest as well as stock of capital, as well as the kind of development that would be expected from the capitalist system, for the case in point that there did not exist technical change (Knight & Cavusgil, 1996). On the other hand, modern capital theory introduces technical change into these capital models as a way of elucidating historical statistics as it analyses and promotes economic growth (Rugman & Verbeke, 2008).

The capital theory faces a number of criticisms, top in the list includes the casual manner in which they suggest a model that would explain economic development, based on current economic decisions as well as existing outputs may only apply in a controlled environment. The criticism therefore is based on the reality of the theory to suit into real world situations. The critiques further find that there are a number of complex issues that may govern, influence as well as affect

economic relations between countries. One factor may be suitable if undertaken or absorbed in a set of countries, while if the same measures were used in a different set of countries, such measures would not be feasible (Alfaro, 2003).

The theory is nevertheless applicable to the study as it stipulates that in order to enhance economic development in a country, then the prevailing conditions, decisions that are made by policy makers as well as existing levels of output, would play a vital role in the determination of economic growth. This theory therefore suggests that in order to enhance economic growth, it will be influenced by economic decisions undertaken and would therefore impact FDI positively or negatively, the existing levels of output in the country, as well as the interaction between the prevailing economic conditions.

## **2.3 Determinants of Economic Growth**

FDI has been singled out as one of the factors that would influence economic growth, either positively or negatively. There are also other factors that may influence economic growth in a country. These factors include inflationary pressures, political risks, interest rates, and exchange rate fluctuations.

### **2.3.1 Inflationary Pressures**

Inflationary pressures have been explained by Riley (2011) as the factors that bring about demand as well as supply-side pressures that end up in the rise in the general price level. The cost-push inflationary pressure results when cost-related items such as increase in wages, increase in import prices as well as increase in the cost of raw materials or fuel among other components used in production, result in increase in general prices. 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).

### **2.3.2 Political Risks**

Political risks refer to the risk which faces investors, companies as well as governments, where political decisions are likely to affect scheduled events, or prevailing conditions will significantly influence the profitability of a venture, or the expected value of a given economic action. The only way investors would eradicate or avoid political risks is to ensure that they have a sharp and critical foresight that would be able to predict any negative political risk and therefore undertake a reasoned investment as well as undertake mitigation measures far much in advance. The complications that are likely to be encountered or faced by investors as a result of political decisions is referred to as political risks. The risks may vary from increase in financial loss, strategic altercations where a political decision is made to increase tax or discontinue a certain kind of investment which the firm was engaged in among others (Ahiabor & Amoah, 2019). Foreign investors assess political climate of the host country and assesses whether political risk is at a manageable level where political decisions would have few if any interference in the smooth running of the MNC. High political risks therefore would lead to a reduction in both FDI as well as a reduction in economic growth (Wanjiku, 2016).

### **2.3.3 Bank's Lending Rates**

The rate at which lending rates are influenced by changes in economic policies reflects the response rate of the monetary policy to changes in economic conditions. The interest rates charged by commercial banks to borrowers of funds is a good indicator for the marginal cost of short-term external funding in an economy. Interest rates also is a good indicator of the average cost of borrowing either in the short run or in the long run. The interest rates also act as an impulse through which impulses created by changes in monetary policy are transmitted to the rest of the economy. As a result, economies with widening lending spreads in countries with restructuring of balance sheets, tend to raise concerns over increased interest rates. Increased rates have an adverse impact in access to credit as well as inhibiting domestic investments. The government may use the Central Bank in undertaking policies that controls interest rates. However, increased domestic borrowing by governments crowds out investment and may have counter-productive effects on economic growth (Mutana et al., 2018).

### **2.3.4 Exchange Rate Fluctuations**

As stated by Williamson (1985) exchange rate volatility is a measure of the movements of fundamentals of economic situations such as inflation rates, interest rates, and balance of trade positions that cause unexpected movements in the exchange rate. It therefore entails the unexpected movement in the percentage changes in the exchange rate. Exchange rate volatility has largely been attributed to increase uncertainty in profits. It has also been associated with restriction in the movement of capital internationally by reducing both direct investment in financial portfolio investment and foreign operating facilities. Fixed exchange rate system is meant to remain unchanged for a long period of time and it therefore has low volatility. However, governments through their respective central banks were required to adopt a floating exchange rate which is controlled by the demand and the supply of foreign currency. The floating exchange rate therefore changes from time to time and it becomes very cumbersome to accurately predict the exchange rate in a future period (Ayse, 2015).

The floating exchange rate is very sensitive to changes in macroeconomic policies. These changes that respond to changes in macroeconomic policies may however be as much predictable as the change in these policies. Economic shocks are unpredictable and therefore they influence the exchange rate system by increasing volatility. The floating exchange rate system when affected by economic shocks or unexpected movements in economic factors, lead to unexpected shifts and movements in exchange rate fluctuations. These unexpected changes are costly to international traders as it intensifies domestic impact of disturbances that arises from foreign markets which exacerbates fluctuations in domestic growth and unemployment. Unexpected changes in exchange rate increases volatility in exchange rate which may be difficult to predict by the use of economic models. This therefore implies that such unpredictable changes would be costly to traders and investors in international trade which may extend to domestic traders and investors (International Monetary Fund, 2019).

### **2.4 Empirical Studies**

Baiashvili and Gattini (2020) assessed the impact of FDI on economic growth and specifically assessed the role of country income levels as well as the institutional strength in the relationship between the variables. The study classified the countries into three different classes comprised of

low, middle, as well as high-income level countries. The study focused on a perspective that sought to investigate the FDI effects on growth as mediated by institutional quality, and countries were classified as per their income levels. The study investigated a total of 111 countries, which were varied from developing to developed countries. The study made use of GMM model where the study period was from 1980 to 2018. They were alive to the fact that their study technique was robust to sample size, instrument proliferation and endogeneity concerns were addressed. The findings of the study indicated that FDI did not have benefits that accrued mechanically, neither were the benefits evenly distributed among the countries. They also found a U-shaped relationship that existed between countries income levels as well as size of FDI impact on growth. However, institutional factors were found to have a mediating positive effect on FDI and economic growth. The study however fell short in stating the direct relationship between FDI and economic growth for each country they investigated. This comprises part of the study gap that would be addressed by the study.

Islam et al (2020) investigated the impact of financial development on Foreign Direct Investment with role of quality institutions being a moderating variable for the relationship. The study used a sample of 79 countries who were partners for Belt and Road Initiative (BRI). The countries were in mutual agreement in undertaking foreign trade and mutual development. The study used conventional and robust estimators to determine the relationships between the variables where the study found that the financial development of BRI host countries significantly attracts FDI. The institutional quality was found to have a significant moderating effect on the relationship. The study therefore concluded that developed financial institutions had more impact than financial markets in enhancing FDI. The paper is crucial in determining the impact of financial development on FDI; however, the study's main concern is on the effect of FDI on economic growth and not financial development which are two distinct variables.

Desbordes and Wei (2017) also studied the effects of financial development on FDI for both source and destination countries. The aim of the study was to determine causality by looking into country-specific financial development and sector-specific financial vulnerability. The methodology adopted by the study was to investigate the detailed databases on real manufacturing FDI projects worldwide. The study found that both source and destination financial development had a large positive influence on greenfield, expansion as well as on mergers and acquisitions (MA) FDI. The

study concluded that the impact of sector financial development and destination financial development were similar though their direct as well as indirect effects varied across margins and types of FDI. The paper also investigates the effect of financial development as the dependent variable while FDI is the dependent variable. This study similarly sought to investigate the effect of FDI on financial development which may not have the same results as a study that investigates the effect of FDI on economic growth.

Alfaro (2003) investigated the gains made by host countries as a result of FDI on economic growth. The study was influenced by the fact that it is easily argued that FDI would benefit the host country by enhancing economic growth. However, the study sought to understand whether that would be the results if the economic sector where the foreign investors choose to invest would have an impact on the economic growth recognized or failure to recognize the economic growth. The study was conducted across different number of countries (OECD) for the period 1981-1999. Regression equations were used by the study to determine the effect of FDI on economic growth for the sample. The findings indicated that FDI investments had an ambiguous effect on growth, while it also found that FDI on primary sector tended to have a negative effect on growth while FDI in manufacturing sector intended to have a positive effect on growth. FDI in the service sector indicated ambiguous results. Although the focus of the study was on FDI and economic growth, it was very specific in regard to determining the sector of FDI. This study will only focus on the entire FDI regardless of the economic sector of the FDI, on economic growth. Perhaps the study will be biased on the prevailing conditions that include high political risks as well as COVID-19 pandemic.

Rutto et al. (2019) sought to estimate the effects of FDI on Kenya's manufactured exports to regional trading blocs that included Common Markets for East and Southern Africa (COMESA) as well as East African Community (EAC). The study relied on the gravity model where a correlational study design was preferred in the study. Panel data unit root tests were undertaken by the use of IM-Pesaran and Shim, as well as undertaking of Levin-Li-Chu tests. The choice between the random as well as fixed effects was determined by the use of Hausmann Taylor method. The study found that FDI had a positive effect on manufacturing exports. The other sectors had insignificant effect on exports. The study therefore recommended the government on encouraging foreign investments in manufacturing sector as it promoted exports significantly. The study

therefore focused impact of FDI on exports and particularly zeroed in on the sectors in which FDI took place. There exist slight differences between the studies, but this study would be biased not on the specific sector of FDI, but on the impact of the entire FDI on overall economic growth, given the prevailing circumstances of increased political tensions as well as the prevalence of a global pandemic-COVID-19.

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.

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.

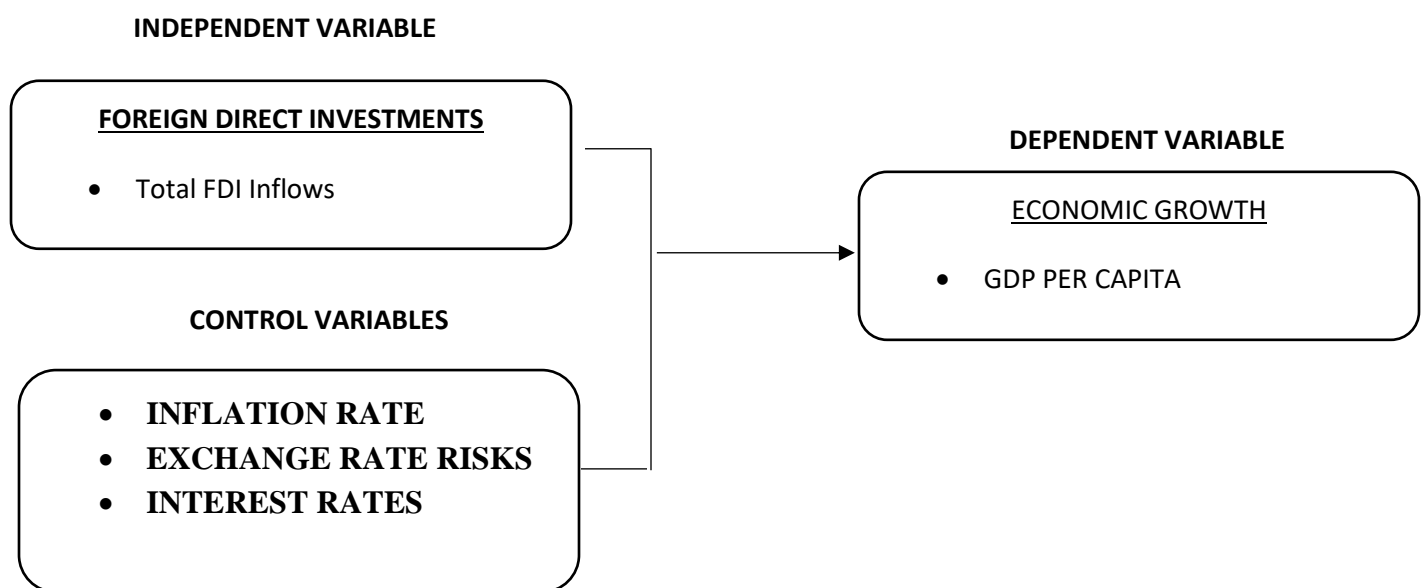
Kuso (2019) investigated the impact of FDI on economic growth in Kenya by undertaking an empirical analysis. The study also adopted a time series analysis of data that was undertaken for the period 1980 to 2015 where a log linear regression analysis was undertaken. The study found a positive and statistically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

## **2.5 Conceptual Framework**

Conceptual framework refers to the relationship as well as the interactions of study concepts which are represented in a diagrammatic format. This helps in clear understanding of the relationship that exists between the study variables as indicated in the figure 2.1.



**Figure 2. 1: Conceptual Framework**



SOURCE: Author, (2021)

The conceptual framework indicates that the independent variables are foreign direct investments (FDI) measured by total FDI inflows, Inflationary pressure that will be determined by the inflation rate, Political Risks that will be determined by the political factor index generated by World Bank, and Interest rates that will be determined by the banks' lending rates. The independent factors are considered to influence the dependent variable which is the economic growth that will be determined by total GDP.

## **2.6 Summary of Literature Review**

The study undertakes an elaborate review of literature that one focuses on the theoretical framework. The study will review theories that include the gravity model of international trade,

which focuses on determining the factors that would influence trade between countries. The theory suggests that with an increase in distance between the countries then trade decreases. It also suggests that trade between countries increases with the level of similarity between the countries. The internalization theory on the other hand suggest that foreign investors only consider to invest in a country when the benefits of investments outweigh the cost. It therefore suggests that a country must have the right conditions in place to ensure that FDI inflows are on the increase and therefore increase in economic growth. Capital theory has almost similar proposition that at the end insinuates that FDI is affected by prevailing factors in the host country that either attracts or drives foreign investors away. The general conclusion is that an increase in FDI would result to increase in economic growth of the country.

The empirical literature on the other hand, shows different and contradictory findings. This would perhaps be explained by the fact that the studies were undertaken in different periods of time with different countries being considered with different methodology being applied. However, the study picks out that the impact of FDI on economic growth depends on the prevailing circumstances of the host nations as well as existing economic conditions in the host country. Therefore, there is no single study that has been undertaken that seeks to determine the effect of FDI on economic growth in Kenya during the COVID-19 pandemic and during a period of immense political uncertainty. This therefore forms the study gap that the study will address.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The methodology adopted in this study was depicted in this chapter. It involved the description of the research design, the population of the study, the sample design, data collection as well as data analysis.

#### **3.2 Research Design**

The design adopted a descriptive research design of how foreign direct investment would affect economic development in Kenya. The study obtained detailed data from World, Kenya National Bureau Services (KNBS) and Central Bank of Kenya (CBK). 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**

Quantitative and secondary data collection method was employed in the study. This means that the study relied on published data that would be accessed in the World Bank's website as well as in the KNBS website in collecting quarterly data in regard to FDI, economic growth, inflation rate, interest rates, and exchange rate fluctuations. Quarterly data for the last 20 years was therefore collected, which means that the study period was 2001-2020.

#### **3.4 Data Analysis**

Data collected was assessed for completeness and consistency. Data cleaning was then undertaken to ensure that only relevant and valid data is used in the study analysis. SPSS version 23 was employed in undertaking data analysis. Diagnostic tests were undertaken, before the analytical model used to undertake the analysis.

### **3.4.1 Diagnostic Tests**

The study undertook diagnostic tests that assesses whether data complies with assumptions of the analysis being undertaken. This study used the gravity model to form regression equation that comprised the analytical model of the study. The implication was therefore that data had to be suitable and comply with the assumptions in regression analysis.

#### **3.4.1.1 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.

#### **3.4.1.2 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.

#### **3.4.1.3 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.

#### **3.4.1.4 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).

#### **3.4.1.5 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 was undertaken (Zivot & Andrews, 1992).

#### **3.4.1.6 Test on Model Specification**

Specification tests are undertaken to verify one specification at a time. It is therefore used to determine whether the model is valid to test the scenario or it's not applicable. This study employed the use of Cox-Pesaran-Deaton or simply put as CPD test, that allows one to determine the truth whether there exists a non-linear and a multivariate regression model. In the circumstance that there is a non-nested alternative hypothesis, the latter should not be true and need not be a hypothesis to be tested. A modern model strategy will therefore be deployed to determine whether the model is supported by any form of economic theory. The use of F test was undertaken where R squared will be used to rank different models and arrive at a model with the highest coefficient of determination (Zivot & Andrews, 1992).

#### **3.4.1.7 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 employed the AIC model to determine the optimal lag-period selection. However, a modified AIC model referred as MAIC may be preferred (Serena & Perron, 2001).

### **3.4.2 Analytical Model**

Data was analyzed by use of ordinary least Squares method that was regressed to determine the relationship between the variables.

The multiple regression model took the form;

$$Y = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where;

$\alpha_0$  and  $\varepsilon$  are regression constants

Y represents Economic Development (GDP per Capita)

$X_1$  represents FDI inflows per GDP

$X_2$  represents – inflation rate

$X_3$  represents exchange rate fluctuations (Ksh to USD)

$X_4$  represents interest rates

$\beta_1$ ,  $\beta_2$ ,  $\beta_3$ , and  $\beta_4$  are the coefficients of  $X_1$ ,  $X_2$ ,  $X_3$ , and  $X_4$  respectively.

### **3.4.3 Significance Test**

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

## CHAPTER FOUR

### DATA ANALYSIS, RESULTS, AND INTERPRETATION OF FINDINGS

#### 4.1 Introduction

In this section, the findings of data analysis are reviewed. The chapter discusses descriptive statistics of the data collected. These descriptive statistics give a clear picture of the data collected and help in understanding some features of the variables being studied. The descriptive statistics discussed are those of central tendency and those related with variability of the data. Specifically, mean, standard deviation, minimum and maximum values are determined. The chapter also discusses the results of the several data validity tests done and finally discusses the results of regression analysis undertaken.

#### 4.2 Descriptive Statistics

Descriptive statistics is undertaken in order to understand the form of data collected, as measures of central tendency of mean, standard deviation, the minimum and the maximum value for each variable is determined.

**Table 4. 1: Descriptive Statistics**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Y= Economic Growth	80	7.5965	42.7961	25.977820	14.8261070
X1 = FDI	80	5.1981	545.3534	117.727652	120.8447880
X2 = Inflation Rate	80	1.9600	29.3000	8.693250	5.6862525
X3 = Exchange Rate	80	62.4744	109.1718	85.906256	12.6336074
X4 = Interest Rates	80	11.7500	20.3400	15.074250	2.4799172
Valid N (listwise)	80				

Source: Author, (2021)

The dependent variable, denoted as Y was a measure of economic growth that was determined by GDP in thousands Ksh per population size. The mean economic growth was 25.98 with a high standard deviation of 14.83 with the highest economic growth being recorded at 42.8 while the least being recorded at 7.6.

The first independent variable was FDI that was measured by the ratio of total FDI inflows per GDP. The mean of this ratio was 117.73 that meant that in average, there were US\$ 117.73 of FDI inflows per every Ksh. 1 million of GDP in the study period. The standard deviation was 120.84 with the lowest value at 5.2 while the largest value was at 545.35.

Inflation rate was also determined as an independent variable for the study. The mean of inflation was at 8.69% with a significantly high standard deviation of 5.68%. This variation can be observed in the fact that the largest inflation rate in the study period was recorded at 29.3% while the lowest was recorded at 1.96%.

The exchange rate fluctuation was determined by the spot exchange rate for Ksh to USD within the study period. It therefore stipulated the amount at which USD exchanged with Ksh at a point in time within the study period. In average the USD exchanged for Ksh. 85.91 within the study period with a standard deviation of Ksh 12.63. The maximum value that the dollar exchanged for Ksh was Ksh. 109.17, while the lowest amount was Ksh. 62.47.

The interest rates were determined by the commercial banks' lending rates, or simply stated as the average market rates at which loans were advanced to borrowers. Within the study period, the average interest rates charged on loans advanced was 15.07% with a standard deviation of 2.48% while loans were charged at a maximum rate of 20.34% and a minimum rate of 11.75% within the study period.

### **4.3 Diagnostic Tests**

Diagnostic tests are undertaken in the study in order to ensure that data is aligned to the required format and standards required to undertake analysis. It therefore represents the pre-analysis data modification that would ensure that the results of the study are not biased and are neither compromised by inconsistencies that might be overlooked in the analysis.

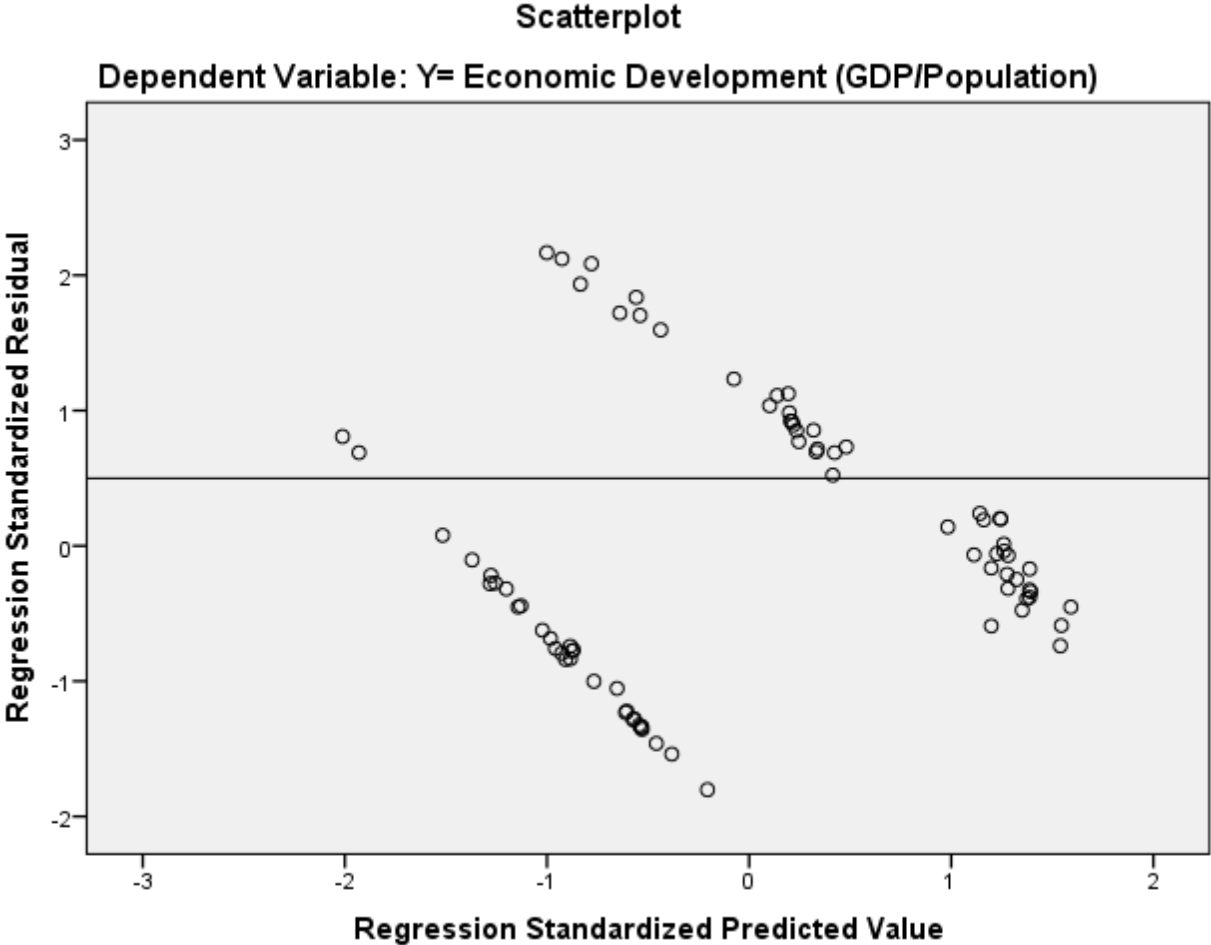
#### **4.3.1 Linearity**

The linearity assumption means that data is capable of being represented in a linearity format. It suggests that the characteristics of data collected from the variables can easily be fitted in a linear format and therefore linear qualities may be assumed to apply in the data. The scatterplot graph was used in the determination of linearity, homoscedasticity as well testing for autocorrelations.



Data is therefore judged to be linear, when the distribution of residuals in the scatterplot graph are randomly distributed such that negative and positive residuals are uniformly distributed and there is no appearance of bias or pattern that suggests that residuals are more positively or negatively aligned.

**Figure 4. 1: Scatterplot Graph**

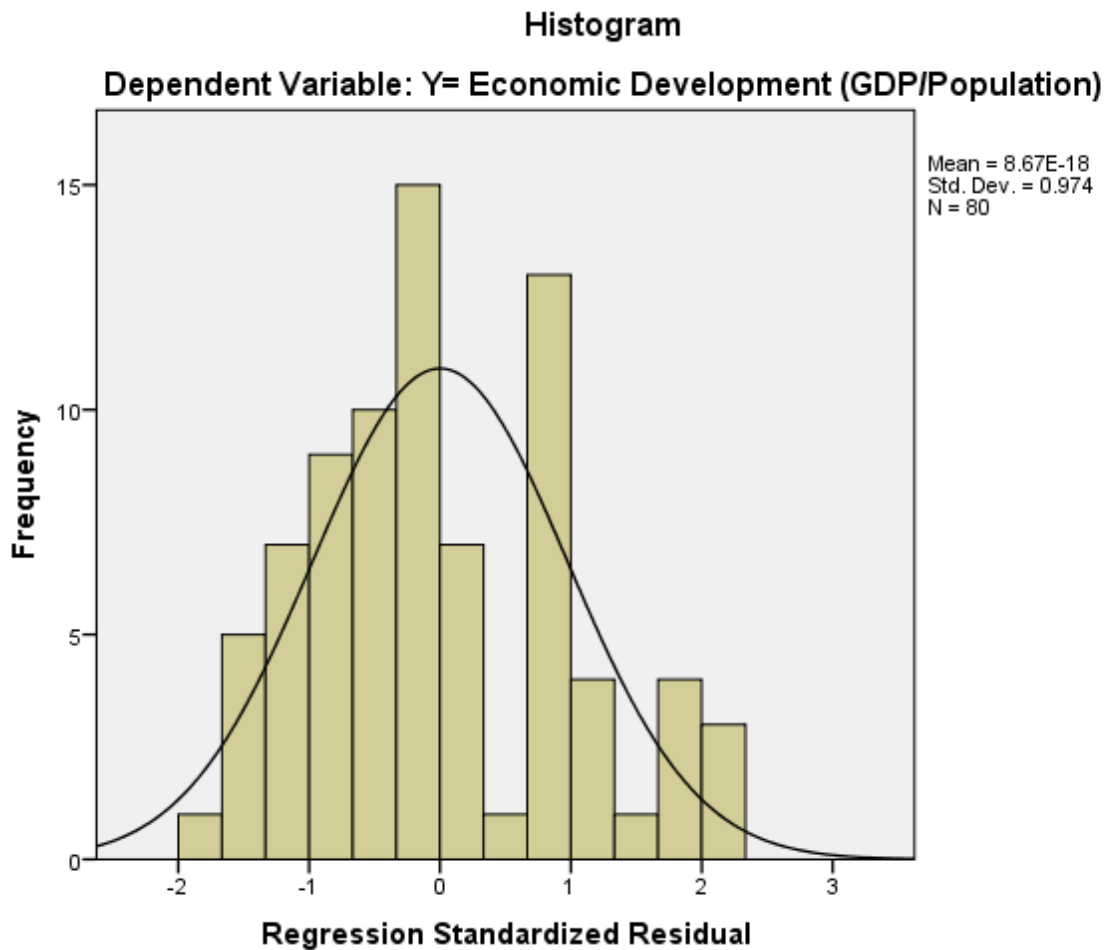


The scatterplot graph indicates that positive and negative residuals do not form a bias of either inclined to positive or to the negative residuals. We therefore conclude that the scatterplot graph indicates fairly randomly distributed residuals that would mean that data is capable of being transformed into a linear format.

### 4.3.2 Normality Test

Normality test is also undertaken in the study to determine whether data collected is normally distributed such that statistical assumptions may be used on the data in analysis of the data. Data that is not normally distributed requires that data is transformed so that it is normalized to ensure analytical concepts are applied to the data. Normality of data is measured by the use of Shapiro Wilk Test, where the significance above 0.05 indicates that normality is assumed, while values below 0.05 indicates that data does not obey normality assumption. Normality may also be tested by plotting the variables in a histogram where distribution of variables should form a normal bell-shaped curve for the data to be adjudged normally distributed.

**Figure 4. 2: Histogram**



The histogram indicates that data is normally distributed.

**Table 4. 2: Test of Normality**

	Tests of Normality					
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Y= Economic Development (GDP/Population)	.278	80	.000	.727	80	.000
X1 = FDI /GDP	.188	80	.000	.743	80	.000
X2 = Inflation Rate	.186	80	.000	.799	80	.000
X3 = Exchange Rate Fluctuations	.155	80	.000	.930	80	.000
X4 = Interest Rates	.184	80	.000	.901	80	.000

a. Lilliefors Significance Correction

However, the use of Shapiro-Wilk test in table 4.2 indicates that all variables had a significance of below 0.05 that indicates that data for all variables failed the normality test. Therefore, data for each variable was transformed by standardizing data for all the variables. Similarly, the study used

### 4.3.3 Heteroscedasticity Test

Heteroscedasticity test is undertaken by regressing the independent variables against the residual. The underlying assumption is that data is homoscedastic if there is no significant effect of independent variables on the residual. The table 4.3 indicates that the p value is less than 0.05 and therefore we reject the null hypothesis that there is homoscedasticity in the data. Data is therefore heteroscedastic and needs transformation in order to comply with the assumption. The transformation of data was undertaken through standardization of data.

**Table 4. 3: Heteroscedasticity Test**

ANOVA <sup>a</sup>					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	227652.212	4	56913.053	11.234	.000 <sup>b</sup>
Residual	379958.917	75	5066.119		
Total	607611.129	79			

a. Dependent Variable: ResSquares

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

#### 4.3.4 Multicollinearity Test

This test indicates whether the independent variables 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.

**Table 4. 4: Multi-Collinearity Test**

Coefficients <sup>a</sup>								
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
1	(Constant)	-63.410	11.606		-5.463	.000		
	X1 = FDI /GDP	.020	.008	.164	2.446	.017	.988	1.012
	X2 = Inflation Rate	-.099	.194	-.038	-.512	.610	.801	1.248
	X3 = Exchange Rate Fluctuations	.938	.087	.799	10.717	.000	.798	1.252
	X4 = Interest Rates	.487	.411	.081	1.186	.239	.939	1.065

a. Dependent Variable: Y= Economic Growth

Table 4.4 indicates that all VIF values are below 10 which denotes that there is no multi-collinearity in the model.

#### 4.3.5 Auto-Correlations Test

Autocorrelation test 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).

**Table 4. 5: Auto-Correlations Test**

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.817 <sup>a</sup>	.667	.649	8.7777285	.278

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

b. Dependent Variable: Y= Economic Development (GDP/Population)

The Durbin-Watson score is 0.278 and indicates that it is closer to zero that indicates presence of autocorrelations. The problem is therefore addressed by transformation of data to use standardized data, while at the same time, non-parametric tests are preferred on the data.

#### 4.3.6 Stationarity Test

Stationarity in stationarity test is a property of time series data which states that the value of the variable doesn't change with time. This means that time variation does not serve as a factor that brings changes in the variable. The actual impact of a variable in time series is therefore determined if the variable is stationary, if it is non-stationary, then the results will be biased because of the variation brought by the time factor element. Stationary time series data is observed when R squared is less than (<) Durbin Watson Score. In Table 4.5 R squared is greater than Durbin Watson Score that means the data is non-stationary.

Stationarity test was also undertaken by the use of Augmented Dickey-Fuller Test where the test statistic for each variable is compared to the critical value at 5% which is at -3.472. The variables that are stationary and do not have significant constant trends are FDI and inflation rate. All the other variables were nonstationary and were treated by transforming data.

Augmented Dickey-Fuller test for unit root      Number of obs =      78

Variable	----- Interpolated Dickey-Fuller -----				
	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value	
Economic Growth	Z(t)	-1.839	-4.088	-3.472	-3.163
FDI	Z(t)	-3.516	-4.088	-3.472	-3.163
Inflation Rate	Z(t)	-3.646	-4.088	-3.472	-3.163
Exchange Rate	Z(t)	-2.451	-4.088	-3.472	-3.163
Interest Rates	Z(t)	-2.322	-4.088	-3.472	-3.163

Source: Author, (2021).

#### 4.4 Correlations Analysis

The correlation analysis is undertaken to correlate independent variables with the dependent variable. The correlation between two variables varies from 0 to 1 either positively correlated or negatively correlated. A correlation of 0 indicates that there is no correlation between variables while a correlation of 1 indicates a strong correlation. Correlation values close to 0 indicates weak correlation while correlation close to 1 indicates strong correlation.

**Table 4. 6: Correlations Table**

		Correlations				
		Y= Economic Growth	X1 = FDI	X2 = Inflation Rate	X3 = Exchange Rate	X4 = Interest Rates
Spearman's rho	Y= Economic Growth	1.000				
	Correlation Coefficient					
	Sig. (2-tailed)	.				
	X1 = FDI Inflows	.538**	1.000			
	Correlation Coefficient					
	Sig. (2-tailed)	.000	.			
	X2 = Inflation Rate	-.261*	.065	1.000		
	Correlation Coefficient					
	Sig. (2-tailed)	.019	.570	.		
	X3 = Exchange Rate Fluctuations	.804**	.357**	-.386**	1.000	
Correlation Coefficient						
Sig. (2-tailed)	.000	.001	.000	.		
X4 = Interest Rates	-.253*	-.033	-.068	-.092	1.000	
Correlation Coefficient						
Sig. (2-tailed)	.024	.771	.546	.418	.	
N		80	80	80	80	80

\*\* . Correlation is significant at the 0.01 level (2-tailed).

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

Source: Author, (2021)

Spearman’s correlation is used in the study as indicated in table 4.7 since Spearman’s correlation is a non-parametric test. The table indicates all the independent variables have significant strong and positive correlations with independent variable, apart from inflation rate and interest rates that have negative and relatively weak correlations. Exchange rate fluctuations has the strongest positive correlations of 0.804 while FDI has strong positive correlation of 0.538. This indicates that increase in these variables resulted in increase in economic growth while increase in interest rates and inflation rates led to decrease in economic growth.

## 4.5 Regression Analysis

The regression model was used in the study to carry out the analysis of the data collected. The analytical model adopted in the study took the form  $Y = \alpha_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$

### 4.5.1 Regression Model

The regression model summarizes coefficient of determination (R square), which indicates the strength of the model. It shows the extent to which the model can be used to predict changes in the dependent variable. The table 4.7 indicates that the analytical model chosen can predict economic growth up to 66.7% while 33.3% can only be predicted by other factors that are not incorporated into the model. This indicates a strong predictive model. The standard error of the estimate indicates the difference between the actual values of Y and the observed values of Y where 8.78% indicates a small difference.

**Table 4. 7: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.817 <sup>a</sup>	.667	.649	8.7777285

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

b. Dependent Variable: Y= Economic Development (GDP/Population)

Source: Author, (2021)

### 4.5.2 ANOVA

Analysis of variance (ANOVA) is used to determine the significance of the effect of the independent and the dependent variable. P-value of greater than 0.05 indicates that the study fails to reject the null hypothesis while a p-value of less than 0.05 indicates that the null hypothesis would be rejected, and the study would conclude that there exists significant effect of independent variable on the dependent variable.



**Table 4. 8: ANOVA TABLE**

ANOVA <sup>a</sup>						
Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	11586.624	4	2896.656	37.595	.000 <sup>b</sup>
	Residual	5778.639	75	77.049		
	Total	17365.262	79			

a. Dependent Variable: Y= Economic Development (GDP/Population)

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

The table 4.8 indicates that the p value is less than 0.05 and therefore there exist a significant effect of FDI on economic growth in Kenya.

### 4.5.3 Regression Coefficients

The regression coefficient indicates the magnitude with which changes in the dependent variable are expected when an increase of an independent variable is undertaken by one unit.

**Table 4. 9: Regression Coefficients**

Coefficients <sup>a</sup>						
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	25.978	.981		26.471	.000
	Zscore: X1 = FDI /GDP	2.430	.993	.164	2.446	.017
	Zscore: X2 = Inflation Rate	-.565	1.103	-.038	-.512	.610
	Zscore: X3 = Exchange Rate Fluctuations	11.844	1.105	.799	10.717	.000
	Zscore: X4 = Interest Rates	1.208	1.019	.081	1.186	.239

a. Dependent Variable: Y= Economic Growth

Source: Author, (2021).

Table 4.9 indicates that the regression model  $Y = \alpha_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$

Changes to  $Y = 25.98 + 2.43 X_1 - .565 X_2 + 11.84 X_3 + 1.208 X_4 + 0.98$

The findings indicate that if FDI was increased by one unit and all the other factors held constant, then economic growth would increase by 2.43% while increasing inflation rate by one unit, and holding other factors constant, economic growth would decrease by 0.57%. Increasing exchange rate by one unit would result to an increase of economic growth of 11.84% while increasing interest rates would increase economic growth by 1.2%.

#### **4.6 Discussion and Interpretation of Findings**

The study findings indicates that there is a positive significant effect of FDI on economic growth. This means that increasing FDI would result to a positive increase in economic growth of the country. Similarly other independent variables had significant effect on economic growth. Increasing inflation rate would result into a decrease of economic growth. This means that inflation rate had a negative effect on economic growth and government should ensure that policies are adopted that would favor low inflation rates. However, increase in exchange rate increased economic growth significantly. This would be explained by the fact that increasing the exchange rate, cheapened the Kenyan Shilling against the dollar and therefore foreign investors increased foreign investment in the country. The increase in exchange rate also acts to decrease imports into the country as they are more expensive while encourages exports as the value of local goods and services become cheaper in foreign markets. This improves the BOP position therefore increasing economic growth. The interest rates on the other hand had a negative significant correlation against economic growth that means that increasing interest rates decreased economic growth as cost of capital increased and therefore decreased investments. There were few investment opportunities with positive NPVs as the cost of capital was high and therefore decreased the production of goods and services in the country.

The findings of the study are consistent with findings from Rutto et al (2019) who studied effects of FDI on Kenya's manufactured export and found a positive significant effect in the relationship. Although the study found that FDI on other sectors had insignificant effect on economic growth, FDI on manufactured exports had significant and positive effects. Similarly, Kuso (2019) studied the impact of FDI on economic growth and found a positive and significant impact between FDI and economic growth. Gachunga (2019) although found that FDI on manufacturing sector had insignificant effect on economic growth, found that FDI on infrastructural projects had significant

effect on economic growth. Abala (2014) also found that FDI had positive effect on increasing GDP while political risks, and corruption had negative significant effects on economic growth.

The findings of the study however, had contradicting findings to the following studies: study by Baiashvilli and Gattini (2020) investigated the impact of FDI on economic growth and found that FDI did not have any positive mechanical benefits on economic growth. The study found a Y-shaped relationship between countries income levels as well as the institutional strength in the relationship between the variables. Desbordes and Wei (2017) did not find positive significant effect of FDI on financial development in their study where they investigated the impact of FDI on financial development. Alfaro (2003) found that FDI did not have significant effect on growth as FDI on services sector as well as economic sector had ambiguous effect on GDP. Wanjiku (2016) studied the impact of FDI on economic growth in Kenya where the findings indicated that FDI was insignificant on economic growth in Kenya.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

The chapter entails summarizing the content of the study by presenting the study findings and interpretations in summarized form, the conclusions drawn from the findings, and recommendations of the study. The chapter also highlights the limitations that impacted the study and areas that the study suggests that would require further research.

#### **5.2 Summary of the Study**

The objective of the study was to determine the effect of foreign direct investments on economic growth in Kenya. This study was necessitated by the fact that Kenya has in the past been the country of choice for most foreign investors targeting the East African Region. However, this situation might have changed, with Tanzania, Uganda and Rwanda developing policies that have attracted massive foreign investments. However, Kenya has increased corruption political risks among other factors that might have led to decrease in FDI inflows. This study therefore was expected to enlighten on whether attracting FDI had effect on economic growth in Kenya. The study collected time series quarterly data for the period 2001 to 2020, for the study variables that comprised of FDI, inflation rate, exchange rate fluctuations as well as interest rates.

The study adopted the use of Ordinary Least Squares (OLS) where regression analysis was used as the model to determine the effect of the independent variables on the dependent variable. The regression model that was formulated indicated that the model was a strong model as it predicted 66.7% of the changes in economic growth. Only 33.3% of the changes in economic growth was predicted by other factors outside the model. The regression analysis undertaken indicates that there was significant positive effect of FDI on economic growth as the p value of the F distribution was below 0.05 that led to the rejection of the null hypothesis. The correlation analysis that was undertaken by the use of Spearman's correlation indicated that there was positive significant correlation between FDI and economic growth, as well as between exchange rate fluctuations and

economic growth. There was, however, negative significant correlations between inflation rate and economic growth as well as between interest rates and economic growth.

The findings of the study are consistent with findings from Rutto et al (2019) who studied effects of FDI on Kenya's manufactured export and found a positive significant effect in the relationship. Although the study found that FDI on other sectors had insignificant effect on economic growth, FDI on manufactured exports had significant and positive effects. Similarly, Kuso (2019) studied the impact of FDI on economic growth and found a positive and significant impact between FDI and economic growth. Gachunga (2019) although found that FDI on manufacturing sector had insignificant effect on economic growth, found that FDI on infrastructural projects had significant effect on economic growth. Abala (2014) also found that FDI had positive effect on increasing GDP while political risks, and corruption had negative significant effects on economic growth.

The findings of the study however, had contradicting findings to the following studies: study by Baiashvilli and Gattini (2020) investigated the impact of FDI on economic growth and found that FDI did not have any positive mechanical benefits on economic growth. The study found a Y-shaped relationship between countries income levels as well as the institutional strength in the relationship between the variables. Desbordes and Wei (2017) did not find positive significant effect of FDI on financial development in their study where they investigated the impact of FDI on financial development. Alfaro (2003) found that FDI did not have significant effect on growth as FDI on services sector as well as economic sector had ambiguous effect on GDP. Wanjiku (2016) studied the impact of FDI on economic growth in Kenya where the findings indicated that FDI was insignificant on economic growth in Kenya.

### **5.3 Conclusion of the Study**

The findings of the study therefore led to the conclusion that there is a direct and positive effect of FDI on economic growth. This implies that increasing FDI would result in improving economic growth in the country. Kenya should therefore find every opportunity to attract FDI as increased FDI would result to improved economic growth. The study also concludes that increased exchange rate fluctuation increases economic growth. This means that the increase in exchange rate implies cheapening of the Kenyan currency against the dollar. It therefore makes it cheaper to invest in the country as the cost of foreign investments are reduced. Similarly, it promotes exports as the local

goods becomes relatively cheaper as compared to goods and services in other countries, while at the same time discouraging exports.

Inflation rates as well as interest rates have negative effects on economic growth. It would therefore be concluded that inflation rate should be kept as low as possible while at the same time lending interest rates should be lowered to ensure that domestic borrowing is encouraged as cost of capital is lowered and therefore most investment opportunities are likely to have positive NPVs.

#### **5.4 Recommendations of the Study**

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 that it does not control exchange rate fluctuations. The market forces of demand and supply should be left to determine the exchange rate of the currency. This means that the study advocates for floating exchange rate regime rather than a fixed exchange rate regime, where exchange rates are controlled by the government. This is because a floating exchange rate regime will be self-correcting where the increase and decrease in exchange rate would be influenced by the demand and supply of currency. The increase in currency valuation would have its merit and demerit and similarly decrease in currency valuation would mean that prices of local goods become affordable.

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 66.7%. 33.3% of the variation in the dependent variable is from other variables 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 GARCH or ARDL models are adopted in the study. The findings of such a study would then be correlated with the findings of this study.



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## LIST OF APPENDICES

### APPENDIX 1: DATA USED

Time	Inflation Rate	GDP KSH Million	Interest Rates Loans	Population	FDI( USD )	Exchange Rate (KSH-USD)
2001	7.82	255028	20.19	32,182,141	1,325,656	77.75
	7.13	255028	19.26	32,404,282	1,325,656	78.62
	6.44	255027	19.44	32,626,423	1,325,656	78.95
	5.74	255027	19.49	32,848,564	1,325,656	78.69
2002	4.79	256395	18.86	33,074,358	6,904,612	78.05
	3.84	256395	18.38	33,300,152	6,904,612	78.7
	2.89	256396	18.14	33,525,945	6,904,612	78.8
	1.96	256396	18.34	33,751,739	6,904,612	79.51
2003	3.93	263914	18.49	33,983,499	20,434,561	76.6
	5.9	263914	15.73	34,215,169	20,434,561	73.75
	7.8	263915	14.82	34,446,839	20,434,561	84.1483
	9.82	263915	13.47	34,678,779	20,434,561	76
2004	10.3	277334	13.12	34,917,902	11,515,983	77.3
	10.75	277334	12.17	35,157,025	11,515,983	79.35
	11.2	277335	12.27	35,396,148	11,515,983	84.3208
	11.62	277335	12.25	35,635,271	11,515,983	77.3444
2005	14.15	293196	12.84	35,882,677	5,302,921	75.0167
	11.91	293196	13.09	36,130,083	5,302,921	76.2056
	4.27	293196	12.83	36,377,489	5,302,921	76.0444
	7.56	293196	13.16	36,624,895	5,302,921	72.3667
2006	19.14	312367	13.33	36,880,930	12,668,681	71.8722
	10.93	312367	13.79	37,136,964	12,668,681	73.88
	13.85	312368	13.54	37,392,998	12,668,681	72.6789
	15.6	312368	13.74	37,649,033	12,668,681	69.3967
2007	5.9	334212	13.56	37,913,258	182,263,667	68.7811
	11.1	334212	13.14	38,177,482	182,263,667	66.5644
	11.7	334212	12.87	38,441,707	182,263,667	66.9711
	12	334213	13.32	38,705,932	182,263,667	62.4744
2008	21.8	339315	14.06	38,977,444	23,896,243	62.8478
	29.3	339315	14.06	39,248,956	23,896,243	64.6944
	28.2	339316	13.66	39,520,468	23,896,243	73.2189
	27.7	339316	14.87	39,791,981	23,896,243	77.7111
2009	14.6	1335552	14.87	40,069,434	29,064,845	80.4306

	8.6	1325092	15.09	40,346,887	29,064,845	77.1578
	6.74	1335249	14.74	40,624,340	29,064,845	74.9994
	5.32	1365569	14.76	40,901,792	29,064,845	75.82
2010	3.97	1434652	14.8	41,184,013	44,516,050	77.3314
	3.49	1438303	14.39	41,466,234	44,516,050	81.9167
	3.21	1435568	13.98	41,748,455	44,516,050	80.7781
	4.51	1484991	13.87	42,030,676	44,516,050	80.7519
2011	9.19	1518671	13.92	42,317,576	362,615,028	82.9889
	14.49	1515704	13.91	42,604,476	362,615,028	89.8639
	17.32	1513683	14.79	42,891,376	362,615,028	99.8319
	18.93	1542149	20.04	43,178,274	362,615,028	85.0681
2012	15.61	1578240	20.34	43,469,572	345,041,790	83.0556
	10.05	1588229	20.3	43,760,870	345,041,790	84.2333
	5.32	1589858	19.73	44,052,168	345,041,790	85.2833
	3.2	1612121	18.15	44,343,467	345,041,790	86.0286
2013	4.11	1634472	17.73	44,637,596	279,704,774	85.6386
	4.91	1663371	16.97	44,931,725	279,704,774	86.0075
	8.29	1648735	16.86	45,225,854	279,704,774	86.6458
	7.15	1663734	16.99	45,519,981	279,704,774	86.3097
2014	6.27	1713837	16.91	45,815,000	205,233,615	86.4414
	7.39	1761200	16.36	46,110,019	205,233,615	87.6269
	6.6	1732574	16.04	46,405,038	205,233,615	89.2794
	6.02	1734546	15.99	46,700,055	205,233,615	90.5978
2015	6.31	1796031	15.46	46,994,625	154,929,991	92.335
	7.03	1849061	16.06	47,289,195	154,929,991	98.6394
	5.97	1814660	16.82	47,583,765	154,929,991	105.2928
	8.01	1827273	18.3	47,878,336	154,929,991	102.3114
2016	6.45	1865055	17.87	48,171,636	169,700,854	101.3339
	5.8	1918939	18.18	48,464,936	169,700,854	101.1022
	6.34	1895281	13.86	48,758,236	169,700,854	101.2617
	6.35	1914788	13.66	49,051,534	169,700,854	102.4858
2017	10.28	1965097	13.61	49,343,936	316,534,321	103
	9.21	1981364	13.66	49,636,338	316,534,321	103.7117
	7.06	1956143	13.69	49,928,740	316,534,321	103.2472
	4.5	1981211	13.64	50,221,142	316,534,321	103.2317
2018	4.18	2066814	13.49	50,513,998	406,480,283	100.8472
	4.28	2100854	13.22	50,806,854	406,480,283	101.05
	5.7	2059359	12.66	51,099,710	406,480,283	100.9556
	5.71	2100577	12.51	51,392,565	406,480,283	101.8461
2019	4.35	2165942	12.51	51,687,917	333,109,226	100.75
	5.7	2224683	12.47	51,983,269	333,109,226	102.2983

	3.83	2158331	12.47	52,278,621	333,109,226	103.8856
	5.82	2193456	12.24	52,573,973	333,109,226	101.3365
2020	5.84	2261903	12.09	52,873,304	111,971,279	104.6926
	4.59	2120133	11.89	53,172,635	111,971,279	106.5224
	4.2	2112883	11.75	53,471,966	111,971,279	108.4971
	5.62	2219852	12.02	53,771,296	111,971,279	109.1718