

**THE EFFECT OF INTEREST RATES ON FOREIGN DIRECT  
INVESTMENT INFLOWS IN KENYA**

**BY**

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## **DECLARATION**

I, the undersigned, declare that this is my original work and has not been presented to any institution or university other than the University of Nairobi for examination.

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**D61/80934/2015**

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

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I also thank my colleagues for the tireless assistance, support and understanding

## **DEDICATION**

I dedicate this project to God Almighty who has been the source of strength throughout this process of research. I also dedicate this work to my wife Caroline Cherotich Bett who has encouraged me all the way from the start till the end of my research project. To my children Lidwin Kiptoo Linus and Patience Jepchumba Linus who have been affected in every way possible by this quest. Thank you and God bless you

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## **ABBREVIATIONS AND ACRONYMS**

<b>CBK</b>	Central Bank of Kenya
<b>CMA</b>	Capital Market Authority
<b>EU</b>	European Union
<b>FDI</b>	Foreign Direct Investment
<b>GDP</b>	Gross Domestic Product
<b>GOK</b>	Government of Kenya
<b>KES</b>	Kenya Shillings
<b>MNC</b>	Multinational Corporation
<b>NSE</b>	Nairobi Securities Exchange
<b>OECD</b>	Organization for Economic Corporation and Development
<b>SSA</b>	Sub-Saharan Africa
<b>UK</b>	United Kingdom
<b>UNCTAD</b>	United Nations Conference on Trade and Development
<b>USD</b>	United States Dollar
<b>USA</b>	United States of America
<b>CPI</b>	Consumer Price Index

## ABSTRACT

Interest rates are critical determinants of foreign direct investment. Traditionally, investors will shop for low cost credit sources or lower interest rates and invest it in economies that are promising higher returns. The economic theory which expounds on how capital moves a worldwide economy insist on the fact that capital tends to flow to states which have a return on investment that is higher as compared to countries with higher interest rates. Consequently, investment is high in states that offer better investment returns as well as security in the form of lower interest rates and a better business environment. This study sought to determine the effect of interest rates on foreign direct investments inflows in Kenya. The independent variable was interest rates as measured by quarterly CBK lending rate. The control variables were economic growth as measured by quarterly GDP, exchange rates as measured by quarterly exchange rate between KSH/USD and inflation rates as measured by quarterly CPI. FDI inflows in Kenya were the dependent variable which the study sought to explain and it was measured by FDI inflows in the country on a quarterly basis. Secondary data was collected for a period of 10 years (January 2007 to December 2017) on a quarterly basis. The study employed a descriptive research design and a multiple linear regression model was used to analyze the relationship between the variables. Statistical package for social sciences version 21 was used for data analysis purposes. The results of the study produced R-square value of 0,320 which means that about 32 percent of the variation in FDI inflows in Kenya can be explained by the four selected independent variables while 68 percent in the variation was associated with other factors not covered in this research. The study also found that the independent variables had a strong correlation with FDI inflows ( $R=0.566$ ). ANOVA results show that the F statistic was significant at 5% level with a p-value less than 0.005. Therefore the model was fit to explain FDI inflows in Kenya. The results further revealed that individually, interest rates, economic growth, exchange rates and inflation rates are not significant determiners of FDI inflows in Kenya. This study recommends that there is need for policy makers to regulate the interest rates prevailing in the country bearing in mind that they influence FDI inflows in the country.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Kenya, like many other developing countries, can count foreign direct investment as one of the key factors in determining its economic growth. Foreign direct investment is important to a developing economy if it can effectively absorb its spill-over effects. FDI is a significant source of capital inflows with positive effects on the host country's economy which includes technology transfer, technological, specialized human capital, expansion in international trade, and a viable business environment (OECD, 2002). However, the macroeconomic environment in the home country must be favorable to attract foreign investors and one of the main factors of the operational monetary policy regime are real interest rates offered in a given country relative to others (Mishkin& Eakins, 2009).

This study will be guided by several theories such as the open system theory, internalization theory and foreign direct investment dependency theory that have tried to explain the relationships between foreign direct investments and interest rates. These theories' main focus is on ways that FDI may facilitate increased growth in recipient countries. The theories have examined various levels in which FDI may contribute to changes in technology using spillover impact of knowledge together with modern capital goods. According to this study, they have argued that circumstances in the recipient countries are a contributing factor to FDI. The theories relate FDI with economical growing of a country which is influenced by macro-economic variables such as interest rates.

Foreign direct investment inflows to Kenya fluctuated from 1990 to 2008 and then started to increase until 2014. This implies that multinationals and their subsidiaries have continued to increase production of goods and services in Kenya. Most developing economies for instance Kenya has interest in foreign direct investment to be a source of capital for industrialization. This is due to the fact that foreign direct investment presents a long term commitment by the foreign investor to host country. In addition foreign direct leverage has significant contribution to a host country's fixed capital formation (Abala, 2014). In Kenya, fixed capital formation stands at 21 % of GDP of which 7% is contributed by FDI (World Bank, 2016). From 1991 until 2016 Interest Rate in Kenya were at an average of 14.21 %, getting to a maximum rate of 84.67 % as of July 1993 and a minimum rate of 0.83% as of September 2003 (GOK, 2015).

### **1.1.1 Interest Rates**

Keynes (1936), one of the earliest scholars on interest rates defined it as the cost associated with borrowing capital for a specified period of time. Devereux and Yetman (2002), defined interest rates as the price a borrower pays for using money or capital they do not own. Interest rates are normally predetermined by the supply and demand function of capital. In addition, interest rates in any given economy are determined by the monetary policy of the country. When there is a high demand for capital the interest rates go up. On the other hand, low demand for capital will lead to lower levels of interest rates. However, the government in its monetary policy can seek to increase or reduce the interest rates with the aim of achieving set macro-economic targets. For example in times of high inflation, the government may raise the interest rate to reduce money supply.

Ngugi (2001) opines that interest rate is a good information indicator as it forecasts future inflation as well as any anticipated change in money's purchasing power. The interest rate is also affected by demand for loans or money by borrowers. Interest rates operate like other prices as market clearing mechanism, they ration the amount of credit available (Culbertson, 2004). Interest rates are determined in the credit markets, or the debt markets just the same way as stock prices are determined in the NSE (Kasemo, 2015).

### **1.1.2 Foreign Direct Investments**

The common goal of all businesses is wealth maximization and businesses will seek all ways to remain profitable and increase shareholders' wealth. Muema (2013) defined FDIs as investments which are intended to last long together with those that lie outside the economic or physical boundaries of the shareholder. The beneficiary country of FDI is equipped with capital flow as well as technology flow that will aid in its development. When a country seeks to invest in another, the benefit it seeks to achieve must be higher than the risks it must deal with. UNCTAD (2002) describes three different types of FDI. These are: reinvested earnings, equity capital and other capital which mainly consist of intercompany loans. FDIs create new job opportunities as upon setting of the business, recruitment and training of the locals in the host country is undertaken transferring skills and technological know-how as well as providing jobs. According to Kinuthia (2010), long term commitment to the host country is what FDI represents. It is a preferred form of investment because it has no obligations to the host country.

FDI is important in adopting new technologies, skills and managerial capabilities in the different sectors of the economy which are traditionally difficult to raise through

use of domestic savings, and if not, there would be difficulty in importation of the technology from abroad. This would be compounded by the fact that transferring technology to firms with little experience is risky and they will find difficulty in the use of it and it comes at a great cost (Olson, 2008). FDI is responsible for many externalities that come in the form of benefits to the home country that are not responsible for generating incomes to the host country. FDI is important for developing countries as it avails resources necessary to optimize the level of economic development (Ismaila&Imoughele, 2010). The reason for this is that their economies face challenges such as low domestic savings, revenues, low levels of productivity and low foreign exchange earnings.

A country's appeal for FDI is affected by changes in restrictions that include removal of government barriers to trade as well as privatization of government agencies. A country's appeal for FDI is also attributed to by economical growth as states that have high potential for economic growth may enable the firms to be able to take advantage of that growth by setting up business there. Exchange rates together with tax rates also have impact on affect a country's appeal for FDI. Low-leveltax rates on corporate profits are have a high probability of attracting Foreign straight Investment while organizations prefer to direct FDI to countries where the local currency is expected to appreciate against their own currency.

### **1.1.3 Effect of Interest Rates on Foreign Direct Investments**

The economic theory which expounds on how capital moves a worldwide economy insist on the fact that capital tends to flow to states which have a return on investment that is higher as compared to countries with higher interest rates. Consequently, investment is high in states that offer better investment returns as well as security in

the form of lower interest rates and a better business environment. Capital therefore tends to move from states with low-level rate return to countries with high rate of return (Pholphirul, 2002).

Singhania (2011) argues that interest rates are normally adjusted to reflect changes in inflation. As a result, interest rates are critical determinants of foreign direct investment. In his study, he defines interest rate as the cost of borrowing capital and also a measure of return on investment. Traditionally, investors will shop for low cost credit sources or lower interest rates and invest it in economies that are promising higher returns.

According to Vesarach (2014), who conducted a study on the role of interest rates in attracting FDI in the Asian economies; the findings indicated that determining factors of FDI include interest rates, inflation, GDP, exchange rates, labor cost, money growth and political rights. The researcher concluded that countries should offer competitive interest rates to attract foreign direct investments in their country.

Hooda (2009) investigated the effect of FDI on the Indian economy between 1991 and 2008 using multiple regression models. The findings showed that the significant factors that determine FDI in developing countries are corporate taxes, labor costs, interest rates, stable political environment, exchange rates, infrastructural facilities and inflation. Asiedu (2003) argued that a good investment framework facilitated by competitive interest rates contributes to higher FDI for African countries.

#### **1.1.4 Interest Rates and Foreign Direct Investments in Kenya**

Interest rates were liberalized in 1991 after which the minimum saving rate in Kenya fell from 13.5% to 6.9% between 1990 and 1995 (Ngugi, 2001). At the same time the



maximum lending rate was at the peak of 38.5% in 1993. This marked an unsuccessful financial reform due to the deteriorating economic conditions and increased inflationary pressure that marked the period. The Kenya Monetary policy faced challenges after liberalization of exchange rate in 1993, which marked loss for CBK in terms of foreign exchange reserves. It is at this time when scholars first noticed a strong link between money and the foreign exchange market since developments in treasury bills market were riding on the high interest rate differential that was attracting capital inflows. Capital inflows in turn increased appreciation of exchange rate and CBK had to intervene to address appreciation. In 1996, CBK sterilized liquidity through selling massive treasury bills and interest rate peaked to 6% and since then the rate has always been within the 6% to 9% with an abnormal high of 16.5% in November 2011. However, the interest rate by commercial banks and other financial institutions has been fluctuating across period and has been greatly influenced by inflation patterns.

FDI in Kenya is covered in all the sectors, be it in the banking, automobile or telecommunications sector. Various multinational companies have set up operations in Kenya and they include Car and General, Coca-Cola as well as communication firms like Airtel. In every aspect of our lives, FDI is felt that is in the goods and services that we use. FDIs are not in isolation as they have provided jobs and with them, technical knowledge as they train their Kenyan employees to maintain the standards that are there in their other investments all over the world. They are the major source of foreign exchange to the country. FDI has not been consistent over the years with some periods recording low inflows. In the 1980s and 1990s, FDI inflow was low due to deterioration in economic performance as well as rising problems of poor infrastructure and the high cost of living greatly impacted negatively on FDI

inflows in Kenya (KPMG, 2012). In total, Kenya has more than 200 multinational companies across the sectors with Britain, USA, Germany, South Africa, Netherlands, Switzerland, China and India being the main traditional sources of FDI (Kinuthia, 2010).

Kenya serves as the East African business hub for many international businesses. This translates to a dependence of FDI for capital inflow that in turn reflects on provision of jobs and an economy that is helped to grow by these foreign investments. Kenya's FDI average percentage growth between 2007 and 2016 was forty percent (40%) with the inflows primarily channeled into retail and consumer products, technology, media, telecommunications, minerals, oil and natural gas sector mainly from the UK, USA and India (Ernest & Young, 2015). This growth rate earned Kenya the status of a FDI hotspot joining other African Countries such as Ghana, Tanzania, Zambia, Uganda, Nigeria Mozambique, and Rwanda. In 2016, FDI inflows stood at USD 1076.9 million (KES 105.29 billion), up from USD 670 million (KES 65.51 billion) a year earlier which is a sixty per cent (60%) increase. This capital mainly went to oil, gas and the manufacturing industries (UNCTAD, 2016).

## **1.2 Research Problem**

Since FDI inflows into a country relies on a number of issues whose importance varies with evolution in the as the economic environment over time, therefore the host country's economy too changes in conjunction with evolution in the international environment. As a result the FDI factors also pervert (UNCTAD, 1998). Despite the fact that old determining factors together with kinds of FDI related with them have not become extinct due to globalization, their value is depreciating. For instance, one of the most valuable conventional FDI determinant factors; market size,

has weakened in level of importance, yet modern determining factors have become prominent. Cost of the factors of production, economic growth levels, total factor productivity, discount rates over time has increased on its value (UNCTAD 2008). According to these, countries need to seek new ways of attracting FDI stock since motives of investors are varying over. Research is therefore crucial for investment decision making and predictability of FDI inward stock is imperative.

In the Kenyan context, the country still remains an economic hub in the region and has retained regional advantages in FDI location. Overseas investors in the country have inclined to comparatively minor investments but they are several and reputable in an extensive range of the economy. Anytime there is a deep in FDI inflows such as in the last quarter of 2012 and mid-2015, measures have been undertaken to ensure the deep is not long lasting. Analysts in the Kenyan markets have attributed this to the Government, through the Central Bank of Kenya, implementing some corrective measures through the Monetary Policy. According to the analysts, so as to curb the effects of inflation, the Central Bank of Kenya adjusted the interest rates so as to adjust forces of demand and supply on the Kenyan shilling. This in turn attracted investors who wanted to capitalize on the high interest rates in the Kenyan markets and some of those investors came from the foreign countries.

Empirical evidence is largely inconsistent and quite varied on the influence of interest rates on foreign direct investments. Chingarande (2011) investigated the effect of interest rates on foreign direct investment in Zimbabwe. The study outline the determinants of FDI which includes interest rates and other factors which affect rate of return on investment such as inflation, exchange rates, labor cost, GDP and risk factors. The researcher noted that there existed no connection between interest rates

and the inflow of foreign direct investments. Consequently, interest rates should not be considered when making key policies regarding foreign direct investment. Hunady and Orviska (2014) investigated key determining factors of FDI inflows in European Union (EU) using panel data and regression models. The study focused on country lending interest rates and the effect of FDI inflows using data from 27 EU countries. The study found that interest rates had had a weak positive relationship with FDI inflows.

Locally, Kinuthia (2010) conducted a study on the factors affecting FDI in Kenya with the main focus being on policy framework and economic determinants. The study findings showed that policy framework and maintaining political stability are key factor in attracting FDIs in Kenya. Ochieng and Anyango (2012) studied on the impact of fluctuating exchange rates in determining FDI in Kenya. The findings of the research showed that fluctuating exchange rates is not significant in attracting FDIs. Exchange rates increase fluctuation which results to an increase in FDI inflows in Kenya. Munyoki (2010) studied the role of Kenya investment authority in attracting foreign direct investment in Kenya. In this study, Munyoki was keen on the development of the Kenyan markets. He analyzed the financial sector and the manufacturing sector and also looked into the Greenfield Investment where there is investment on establishment of new fixed assets such as buildings and Brownfield investment where there is investment on already existing fixed assets.

The lack of consensus among the various scholars on the influence of interest rates on foreign direct investments by international researchers is reason enough to conduct further examination on the area of study. In addition, most of the existing empirical evidence has expounded on the impact of different variables on foreign direct inflows

to Kenya while still others researched on the outcome of foreign straight investments on growth in the economy. However, there exist few studies on the result of interest rates on foreign direct investment in Kenya. Thus, this study intends to overfill this research gap by addressing this question; what is the effect of interest rates on foreign direct investment in Kenya?

### **1.3 Objectives of the study**

To determine the effect of interest rates on foreign direct investments in Kenya

### **1.4 Value of the study**

The finding of this research forms a reference basis to researchers, scholars and students in the same area of study. The study will be valuable to them in identifying areas that need more research in the view of literature reviews and identifying existing gaps.

The findings are hoped to be of benefit to policy makers in developing investment strategy policies and developing the necessary institutional framework required to market Kenya as an ideal foreign investment destination. Also, it will help them in coming up with monetary policies that ensure setting interest rates that are consistent with the objective of attracting foreign direct investments.

The study may also help the government to have some sense of control on the operations of different stakeholders in the sector. A clear picture of the FDI flows can be painted which may help in doing comparative analysis with other developing countries. Policy makers may use the findings to overcome disadvantages as the study outlines the potential strengths and weaknesses of Kenya.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This section presents the theoretical framework applied in the study and reviews previous studies on interest rates and foreign direct investments. It contains the theoretical review, determinants of foreign direct investments, empirical review, the conceptual framework and a summary of the literature.

#### **2.2 Theoretical framework**

This presents review of the relevant theories that explains the relationship between interest rates and foreign direct investments. The theoretical reviews covered are; product life cycle theory, internalization theory and the eclectic paradigm theory.

##### **2.2.1 Product Life Cycle Theory**

Vernon (1966), defines production life cycle as a process that consists of four phases of production which include innovation, growth, maturity and decline. A business entity would first come up with an idea about a product or a service. The product or idea then goes through a growth stage and finally attains maturity. It then begins to decline. The product decline is mainly caused by competition in the market place as well as inability of the business to innovate. Companies that are directly involved in foreign direct investment bring production equipment to foreign countries in order to be near the target market and ensure a sustainable market share is attained and maintained (Dunning, 1993).

The production life cycle described by Vernon is typically used in countries that are engaged in manufacturing and exporting products. Sometimes, the countries may lose

the market share to competitors who imitate the products and end up being the main exporters of the product. The theory explains that diffusion of technological innovations takes place at a much slower rate. As a result, differences are likely to occur in terms of the production technologies used by different countries. However, it is important to emphasize that the production life cycle described by Vernon is only applicable to certain kinds of products especially those targeting high income earners and products that have alternative labor and capital sources. Critiques have argued that Vernon's theory is silent on industrial innovation which is important in taking transitional advantages on innovations that require a significant amount of rent to develop (Dunning, 1993).

Vernon's evaluation of foreign direct investment solely focused on a product. A summary of the process shows that a product is first invented in the home country. The home country, where the foreign investor resides has advantages in terms of technology and innovation capabilities. The innovator produces the product for the local market first. At a later stage in the production cycle, the product is exported to foreign countries which lack the technology or the innovative capacity to develop similar products. Consequently, the product becomes standardized and eventually matures. At this stage of the product development, labor becomes and critical production input. Consequently, the investor has to attract value input from local materials and people in the foreign country. As a result, foreign direct investment is viewed as a critical stage in the product development life cycle (Chen, 1983).

### **2.2.2 Internalization Theory**

This theory was advanced by Casson and Buckley in 1976. Further development of the theory was by Hennart (1982) and benefits from addition works by Casson (1983).

The theory explains the growth of multinational corporations and their motivations. It demonstrates that multinational corporations organize their internal activities to achieve specific advantage and exploit them to enhance its competitiveness. According to Hymer (1976), FDI will occur only when the exploitation of firm specific advantage supersede the relative cost of investing abroad. In summary, he implies that FDI occur in imperfect markets and it's simply a strategy decision at firm level rather than a financial decision of the capital market.

Casson and Buckley (1976) argue that an FDI is only attractive if the Ownership, Location and Internalization (OLI) conditions are met. First, the multinational must have an ownership advantage compared to the local firm's ownership. This may be in form of the multinational's specific organizational or technological knowledge. The government policies' likely on the benefits of investing in a certain host country is also vital. In some cases the host government may pose regulations concerning the nature of foreign ownership. Such restrictions in effect reduce FDI inward inflows which will be accompanied by technology. Secondly, it must be advantageous for the multinational companies as well as other investors to produce in the host country if they can benefit from some comparative locational advantage. Finally, it should be suitable to execute the activities within the host countries, as opposed to leasing or buying them from other firms.

### **2.2.3 Eclectic Paradigm Theory**

Dunning (1993) came up with this theory which is in itself a mix of three different but correlated theories. These theories are Ownership, Location and Internalization (OLI) which are used to describe how the factors therein contribute to changes in foreign direct investments. Ownership related advantages are those provided by intangible



assets. These assets must however be considered as exclusive possessions held and owned by the company and are transferable to other firms at prices that would lead to reduction of costs to the company, or would lead to the company registering high rates of return. In his arguments, Dunning (2005) argues that when all other factors are held constant, a company with a higher level of competitive advantages, in comparison with its competitors, has a higher chance in increasing its overall production and hence increasing its global presence.

Location benefits, as explained by Denisia (2010) are used to compare the different economies, as per their strengths and opportunity. The end result of this analysis is that the most suitable country is selected to be a host country for the activities of multinational firms. The correlation existing between location and ownership advantages is that when a multinational corporation is able to host itself in the most suitable economy, it is now able to engage in the exploitation of its ownership related abilities, and thus leading to the firm engaging in foreign direct investment.

Internalization establishes a need for the firm to be able to have an established business in each of the economies that the company sells its products or services. The firm must derive ways through which it can benefit further through foreign production as compared to the meager fees that are earned in international trade activities such as exporting and franchising. Dunning (2005) states that a corporation is more likely to get higher returns if, it engages in foreign production as opposed to the extension of its production rights to other countries. The eclectic paradigm is therefore in support of the establishment of production markets by a corporation through exploitation of its competitive advantages and the selection of suitable locations. In doing this, the

corporations are not only engaging in foreign direct investments but also gaining much more than their competitors.

### **2.3 Determinants of Foreign Direct Investments**

FDI involves real assets and this ensures that an investor will be active in managing the assets he is acquiring. A number of issues exist which cause the attractiveness of a country to be more than the other and these factors can also vary from one period to another. These determinants have contributed to studies on why some given countries are more prosperous than others nations in attracting FDI. Quite many researches have been carried out on the determinant factors of FDI but so far there is yet to be a definite consensus. The different approaches to the determinants of FDI do not cancel each other out but expound on various issues of a similar phenomena (Kinuthia, 2010).

#### **2.3.1 Interest Rates**

Agiomirgianakis (2003) defined FDI as capital inflow into a country as a result of investment from multinational business entities. The economic theory which elaborates on ways that capital moves in the globalized economy insist that capital tends to flow to countries that have a higher return on investment as compared to countries with higher interest rates (Pholphirul, 2002). Consequently, investment is high in countries that offer better investment returns as well as security in the form of lower interest rates and a better business environment. Capital therefore tends to move from countries with low rate return to countries with high rate of return.

Singhania (2011) argues that interest rates are normally adjusted to reflect changes in inflation. As a result, interest rates are critical determinants of foreign direct investment. Traditionally, investors will shop for low cost credit sources or lower

interest rates and invest it in economies that are promising higher returns. According to Vesarach (2014), who conducted a study on the role of interest rates in attracting FDI in the Asian economies; the results showed that the determinants of FDI are interest rates, inflation, GDP, exchange rates, labor cost, money growth and political rights. The researcher concluded that countries should offer competitive interest rates to attract foreign direct investments in their country.

### **2.3.2 Inflation**

Inflation is very important in managing the macroeconomic environment and fiscal governance. It is usually measured by changes in the consumer price index which is essentially a weighted average price of goods and services consumed (Nwankwo, 2006). A high level of inflation is an indicator of tensions in the economic environment of a country and is a reflection of the government's reluctance to have a stable monetary policy. It can be argued that risk averse foreign investors coupled with high levels of inflation will lead to decreases in FDI in the host country since investors are not willing to risk the profits that they expect from their investments (Kadongo, 2011).

Given high uncertainty levels, investors are bound to demand high price levels in order to offset their exposure to inflationary risks which are bound to lower the volume of investment. Therefore as a move to encourage investments, inflation rate stability is important (Gastanaga et al., 1998). Nwankwo (2006) has stressed macroeconomic policy failures as deflecting FDI flows from Africa; he points that, poor monetary and fiscal policies cause unsustainable deficits in budgets and increase inflationary pressures thereby raising the production costs in the local country and thus

creating instability in exchange rates and thereby the region becomes a risky destination for FDI (Onyeiwu&Shrestha, 2004).

### **2.3.3 Exchange Rates**

Exchange rate is an essential component affecting FDI. Asiedu (2002) stated that different currency areas were responsible for the generation of FDI. Dunning stated that greater fixed capital stakes of an investment showed the possibility of taking into account future movements in exchange rates (Dunning, 1993). Goldberg (2011) agrees that exchange rates volatility impact location decisions of MNCs. Other research indicates that exchange rate risk contributes significantly in explaining FDI (Gastanaga et al., 1998).

Exchange rate volatility may negatively affect and reduce direct investment. Gastanaga et al., (1998) based on an analysis of macroeconomic factors, institutional and legal frameworks and risk in determining FDI, proved that market size, fiscal deficit, inflation and exchange regime and trade openness were all significant. According to earlier research, exchange rate movements have shown to be relevant and significant to FDI because exchange rate volatility contributes directly to uncertainty in the transaction plan from the countries investing (Behera, 2008).

### **2.3.4 Economic Growth**

Many scholars have been attracted to the issue on the role played by economic development in attracting foreign direct investment. According to Charkrabarti (2001) better improved opportunities for gaining profits are attributed to by a rapidly growing economy as compared to those that are growing slowly or not increasing at all. Mishkin and Eakins (2009) find a high outcome of growth on FDI, while Gastanaga et

al., (1998) gains a stiff support for the hypothesis over the period 1983 to 1986, but only a weak link from 1975 to 1978.

Basing on the same guidelines, Aoki (2007) established that for the less developed countries, there exists a weak positive relationship and a weak negative relationship for the developed countries. Asiedu (2002) asserted that lagged growth for the full sample and non-Sub-Saharan African countries are affected positively, whereas there the Sub-Saharan Africa sample has an insignificant impact. Gastanaga et al., (1998) found significant positive effects of growth on FDI.

### **2.3.5 Availability of Good Infrastructure**

Productivity of investment is increased by good infrastructure which increases FDI flows (Asiedu, 2002). According to Wheeler and Mody (1992) infrastructure is very crucial for developing countries. It is not only made up of roads alone but also telecommunications. In order to enhance communication between the host and home countries, there is need for availability and efficiency of telephones. Not only is physical infrastructure crucial to FDI inflow, but also financial infrastructure.

In order to tap the full importance of an FDI inflow, there is need for a well-developed financial. A study on the issue on factors discouraging investors in Uganda, Tanzania and Zambia problems related to funds mobilization are on the priority list Bhinda, Griffith-Jones & Martin (1999)

### **2.3.6 Country Risk**

FDI in developing countries is negatively affected by economic and political uncertainty as per several studies. Negative relationship between FDI and political and economic stability is evidenced as per the data sources. In a study on foreign owned firms in Africa, political and macroeconomic stability is of great concern as per

a study conducted by Sachs and Sievers (1998) based on foreign owned firms in Africa. According to Lehman (1999) and Jaspersen et al., (2000), less risky countries tend to attract more FDI. Foreign direct investment is hindered by high perception of risk in Africa.

## **2.4 Empirical Review**

There are numerous empirical studies both locally and internationally to support the relationship between interest rates and foreign direct investments, but these studies have produced mixed results.

### **2.4.1 Global Studies**

Asiedu (2006) studied on the influence of natural resources and market size vis-à-vis government policy, host country's institutions and political instability in directing FDI flows to the region. The researchers used data for 22 SSA over the period 1984-2000. Countries in SSA that are endowed with natural resources or have large markets will attract more FDI. However, small countries and/or countries that lack natural resources in the region can also obtain FDI can be obtained by small countries by improving their institutions and policy environment, because good infrastructure, an educated labour force, macroeconomic stability, openness to FDI, an efficient legal system, less corruption and political stability also promote FDI.

Bende - Nabende (2008) studied on the macro locational as determinant factors of FDI in Sub Saharan Africa (SSA) by carrying out an analysis of long-run relationships between FDI and its determinants. The study used not only individual country data but also panel data analyses techniques which comprised of 19 SSA states over the 1970 - 2000 periods. Real effective exchange rates and market size what follows. Openness of the economy is the last on the list. Macroeconomic management,

liberalizing their FDI regimes and broadening their export bases facilitates improvement of long-run FDI position according to SSA.

Piteli (2009) studied on the determinant factors of foreign direct investment (FDI) by multinational corporations (MNCs) in developed economies. Using a context of an estimated equation derived from economic theory, which compares the main demand and supply-side determinants of FDI the researcher compared between EU and non-EU countries. Application of different proxies for demand and supply-side factors, comparison between European and non-European developed countries and testing for the relative importance of total factor productivity (TFP) as a determining factor of FDI are the ways in which these research contributes to literature. The findings indicate the value of TFP as the determining factor par excellence of FDI in developed countries.

Okafor (2012) studied on the value of domestic macroeconomic variables matter for foreign direct investment inflow in Nigeria. Prediction that foreign capital flows could stimulate economic growth of nations is the major finding of the study. The study used ordinary least square method as an estimation technique. Foreign direct investment in Nigeria is majorly determined by real gross domestic product, interest rate, and real exchange rate as per the findings. FDI inflow is majorly determined by domestic macroeconomic variables. The flow and benefits of foreign direct investment in Nigeria can be achieved when policy makers should strive to improve the macroeconomic environment.

Omweri (2013) studied the determinant factors of foreign direct investment stock in the five countries of the East African Community i.e. Kenya Uganda, Tanzania, Rwanda and Burundi, to find out why the region was recording very low increase of

FDI. The research employed panel data analysis methods. The study used trade openness, Gross Domestic Product growth, Gross Domestic Product per Capita, telephone line (per 100 people); a proxy for infrastructural facilities, inflation, return on investment and natural resource endowment as independent variables and the stock of foreign direct investment as the dependent variable. The analyzed data was between 1991 and 2012. The study's findings showed that trade openness, inflation, and infrastructure facilities were the most crucial determinant factors of foreign direct investment to EAC countries.

#### **2.4.2 Local Studies**

Kinano (2006) investigated the determinant factors of Foreign Direct Investment in Kenya. Identifying the key factors that influence FDI decisions in Kenya was the main objective of the study. In analyzing the various variables included in the model, the researcher used econometric technique. In the examination of the locational factors of FDI inflows to Kenya, the proposed Human capital, real exchange rate, annual inflation and openness of the economy are exogenous variables. Johansen co integration technique was used to ascertain the co-integration of the series and it was robust. FDI is affected positively in the short run by economic openness and human capital as per the findings. Besides both inflation and real exchange rate have impact negatively on FDI inflows in the short and long run respectively.

Nyamwange (2009) conducted a research study to find out foreign direct investment in Kenya. Objective of the research was to determine factors which influence FDI decisions in the Kenyan context. He explored the correlation between FDI and economic development in Kenya. Findings evidenced that FDI in Kenya is affected by level of human capital, stable macroeconomic policies, taxation, and market size.



Additionally, there was no statistically significant link between human capital and GDP which means that there is shortage of skilled employees in Kenya.

Kinuthia (2010) studied on the determinant factors of Foreign Direct Investment based on a survey of foreign firms in Kenya in 2007. Market size, political and economic stability, bilateral trade agreements and a favorable climate are marketing firms and that the most important determinants as per the findings. According to the researcher, political instability, crime and insecurity, and institutional factors most notably corruption are three main impediments to foreign investment inflow to Kenya.

Oganda (2012) studied the correlation between exchange rates and foreign direct investment in the horticulture industry in Kenya. The study used a survey of horticulture industries which consisted of 30 horticulture companies that traded in the period 2000 to 2010. Data collected was used to calculate and analyze export of goods and services, import of goods and services, exchange rates, Gross domestic product, interest rates, the openness of the economy and wages. The study identified a connection between foreign direct investment and the export of services and goods. This is closely linked with the rate of currencies; the GDP raised, interest rates and general openness of the economy

Wanjiru (2013) examined the effect of inflation volatility and economic growth on foreign direct investment in Kenya. FDI was taken as the dependent variable whereas GDP and inflation were taken as independent variables. A linear regression analysis was used on the data to determine the connection between inflation, GDP and FDI flows. The results suggest that there is no connection between foreign direct investment and inflation, whereas there is a negative connection between foreign direct investment and gross domestic product. This study insisted on the intervening effect

of inflation on the impact of economic growth on FDI. This therefore means that the effects of economic growth on FDI remain unstudied.

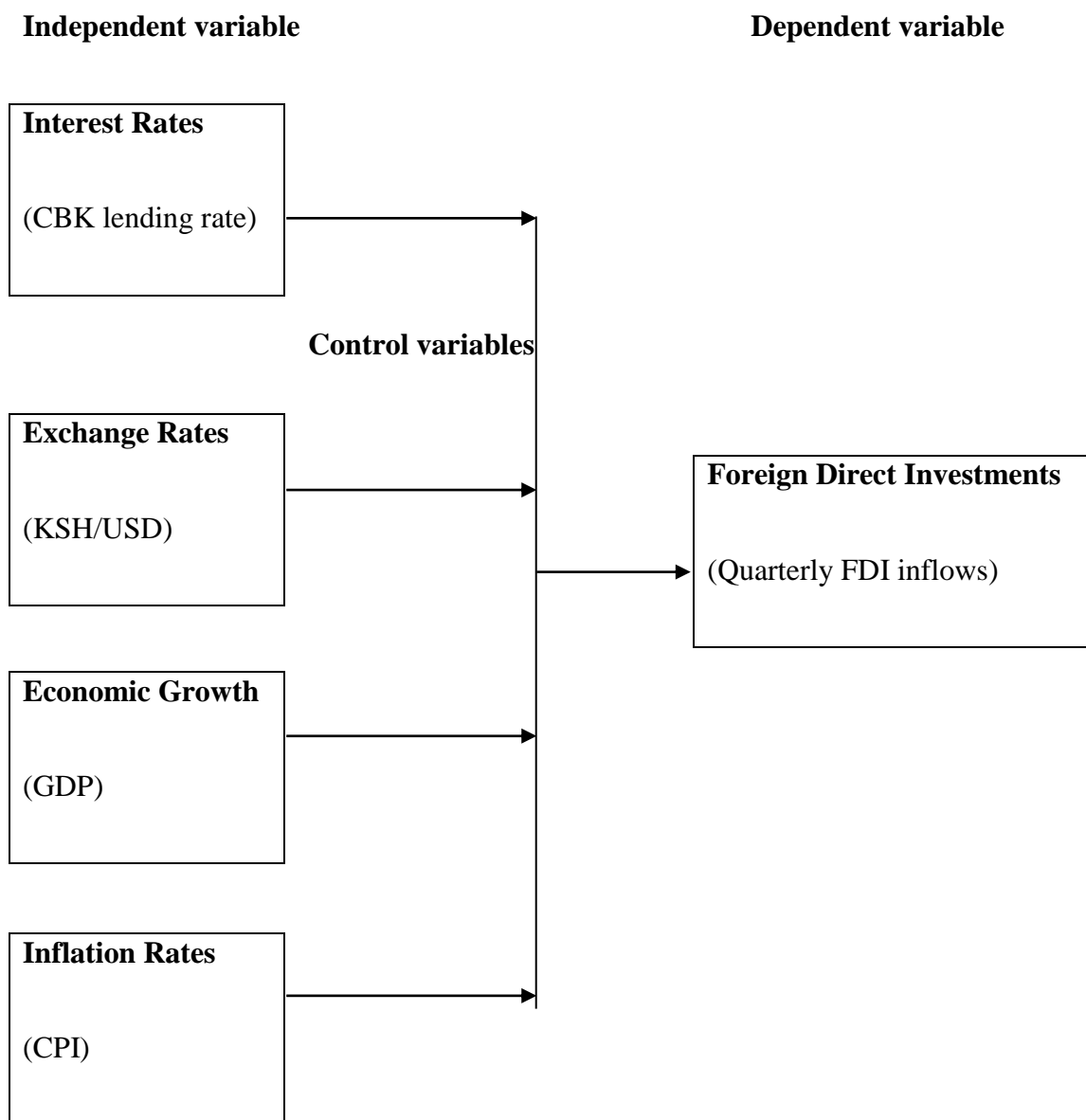
Kiplagat (2016) carried out a study to determine the effect of interest rates on direct foreign investments in Kenya. The study adopted a descriptive research design which assisted in the establishment of the relationship between interest rates and foreign direct investments in Kenya. The sample frame was based on 44 data points i.e. time series annual data of the dependent and independent variables from 1971 to 2014. The dependent variable was FDI while the independent variables were; interest rates and other variables namely, inflation, exchange rates and GDP since they are the main macroeconomic variables in the economy. Data was gathered only from secondary sources and analysis done using SPSS 17.0. Descriptive and inferential data analysis was used to analyze the data. The overall findings and conclusion of the study was that interest rates have a positive correlation with FDI but not significant at all in determining the level of FDI inflows in Kenya.

## **2.5 Conceptual Framework**

The economic theory which expounds on how capital moves in the global economy insist that capital tends to flow to countries which have a higher return on investment as compared to countries with higher interest rates. Consequently, investment is high in countries that offer better investment returns as well as security in the form of lower interest rates and a better business environment. Capital therefore desires to move from countries with low rate return to countries with high rate of return (Pholphirul, 2002). This study seeks to investigate whether this theoretically expected relationship between interest rates and foreign direct investment holds.

The conceptual model developed below portrays this expected relationship between the study variables. The factors characterized here are interest rates and foreign direct investments. The independent variables are interest rate as measured by CBK quarterly lending rate, exchange rates as measured by quarterly exchange rate between KSH and USD, economic growth as measured by quarterly GDP and inflation rates as measured by quarterly CPI. Foreign direct investment is the dependent variable which the study seeks to explain and it will be measured by quarterly FDI inflows.

**Figure 2.1: The Conceptual Model**



**Source: Researcher (2017)**

## **2.6 Summary of the Literature Review**

Various theoretical frameworks have attempted to explain the concept of capital structure. Four theories have been discussed in this theoretical review. The theories are namely: product life cycle theory, internalization theory and the eclectic paradigm theory. Some of the key determining factors of foreign direct investments have also been discussed in this section. Several empirical studies have been conducted both internationally and locally on interest rates and foreign direct investments. The findings of these studies have also been discussed in this chapter.

The lack of consensus among the various scholars on the impact of interest rates on foreign direct investments is reason enough to conduct further examination on the area of study. Chingarande (2011) researched on impact of interest rates on foreign direct investment in Zimbabwe. The researcher noted that there was no significant relationship between interest rates and the inflow of foreign direct investments. Hunady and Orviska (2014) investigated key determinants of FDI inflows in European Union (EU) using panel data and regression models. The study found that interest rates had had a weak positive connection with FDI inflows. In addition, most of the existing empirical evidence has examined the impact of different variables on foreign direct inflows in Kenya while still others have examined the effect of foreign direct investments on economic growth. However, there exist few studies on the impact of interest rates on foreign direct investment in Kenya. Thus, this study intends to fill this research gap by addressing the question; what is the effect of interest rates on foreign direct investment in Kenya?

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter describes methods of research applied to objectively establish the influence of interest rates on foreign direct investments. It also shows the population of study, research design, data collection and analysis criteria.

#### **3.2 Research Design**

Research design is defined as a blue print of those procedures, which are adopted by a researcher for testing the relationship between dependent variables and independent variables (Khan, 2008). Descriptive research design was adopted for the study. A descriptive study involves a description of all the elements of the population. It allows estimates of a part of a population that has these attributes.

#### **3.3 Data Specification**

Data used for the study was the FDI remittances into Kenya per quarter, average CBK lending rate per quarter, average exchange rate (KSH/USD) per quarter, average inflation rate per quarter and economic growth per quarter for the period between January 2007 and December 2016.

#### **3.4 Data Collection**

Data was exclusively collected from a secondary source. The study used secondary data from KNBS publications as well as from the CBK website. The quantitative data collected included total FDI remittances into Kenya from 2007 to 2016 collected on a quarterly basis. Data on interest rates and exchange rates was collected from the CBK website on a quarterly basis from 2007 to 2016. Data on inflation was the CPI while

data on economic growth was Kenya's GDP, both collected for every quarter from 2007 to 2016.

### **3.5 Diagnostic Tests**

Linearity shows that two variables X and Y are related by a mathematical equation  $Y=c+bX$  where c is a constant number. The linearity test will be obtained through the scatterplot testing or F-statistic in ANOVA. Normality is a test for the assumption that the residual of the response variable are normally distributed around the mean. This will be determined by Shapiro-Wilk test or Kolmogorov-Smirnov test. Autocorrelation is the measurement of the similarity between a certain time series and a lagged value of the same time series over successive time intervals. It was tested using Durbin-Watson statistic (Khan, 2008).

Homoskedasticity of variance is required for multiple linear regressions and therefore is when the variance of the error term is constant over the population while the variance of y is constant and is not dependent on the x's. Otherwise, non-existence of a constant variance of the variance of error term posits heteroskedasticity. Homoskedasticity was evaluated using Cameron & Trivedi's IM-test.

Multicollinearity is said to occur when there is a nearly exact or exact linear relation among two or more of the independent variables. This was tested by the determinant of the correlation matrices, which varies from zero to one. Orthogonal independent variable is an indication that the determinant is one while it is zero if there is a complete linear dependence between them and as it approaches to zero then the Multicollinearity becomes more intense (Burns & Burns, 2008).

### **3.6 Data Analysis**

The collected data was sorted, classified, coded and then tabulated for easy analysis.

Collected data was analyzed using both the descriptive and the inferential statistics. SPSS computer package version 21 was used in the analysis since it's more user-friendly. The data was inputted into the SPSS and examined using descriptive, correlation and regression analyses. In descriptive statistics, the study used mean, standard deviation and scatter plot. In inferential statistics, the study used multivariate regression analysis to determine the relationship between the dependent variable (foreign direct investments) and independent variables: interest rate, economic growth, exchange rate and inflation rate.

### 3.6.1 Analytical Model

Using the collected data, the researcher conducted a regression analysis to establish the extent of the relationship between interest rates and foreign direct investments. The study applied the following regression model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon.$$

Where: Y = Foreign direct investments as measured by natural logarithm of FDI inflows on a quarterly basis

$\beta_0$  = y intercept of the regression equation.

$\beta_1$ ,  $\beta_2$  and  $\beta_3$  = are the slope of the regression

$X_1$  = Quarterly interest rates as measured by CBK lending rate

$X_2$  = Average quarterly exchange rate between USD and Ksh in natural logarithm form

$X_3$  = Economic growth as measured by natural logarithm of quarterly GDP

$X_4$  = Average quarterly inflation rate as measured by natural logarithm of CPI

$\varepsilon$  = error term

### **3.6.2 Tests of Significance**

To test the statistical significance the F- test and the t – test were used at 95% confidence level. The F statistic was utilized to establish a statistical significance of regression equation while the t statistic was used to test statistical significance of study coefficients.



## CHAPTER FOUR

### DATA ANALYSIS, FINDINGS AND INTERPRETATION

#### 4.1 Introduction

This chapter represents the results and findings of the study based on the research objective. The chapter focused on the analysis of the collected data from CBK and KNBS to establish the effect of interest rates on foreign direct investments in Kenya. Using descriptive statistics, correlation analysis and regression analysis, the results of the study were presented in form of tables for easy interpretation.

#### 4.2 Diagnostic Tests

The researcher carried out diagnostic tests on the collected data. Cameron & Trivedi's IM-test was used to test for heteroscedasticity. The null hypothesis stated that there is no heteroscedasticity. Results in Table 4.1 show that the p-value ( $p=0.3629$ ) is greater than the critical value of 0.05. Therefore, we fail to reject the null hypothesis and conclude that the variance is homogenous.

**Table 4.1: Cameron & Trivedi's decomposition of IM-test**

Source	chi2	Df	P
Heteroskedasticity	18.42	17	0.3629

**Source: Research Findings (2017)**

To test for normality, the null hypothesis for the test was that the secondary data was not normal. If the p-value recorded was more than 0.05, the researcher would reject it. The results of the test are as shown in Table 4.2.

Both Kolmogorov-Smirnova and Shapiro-Wilk tests recorded o-values greater than 0.05 which implies that the research data was normally distributed and therefore the

null hypothesis was rejected. The data was therefore appropriate for use to conduct parametric tests such as Pearson’s correlation, regression analysis and analysis of variance.

**Table 4.2: Normality Test**

FDI Inflows	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Interest rates	.178	40	.300	.881	40	.723
Economic Growth	.176	40	.300	.892	40	.784
Exchange rates	.181	40	.300	.896	40	.792
Inflation rates	.173	40	.300	.918	40	.822
a. Lilliefors Significance Correction						

**Source: Research Findings (2017)**

#### 4.4 Descriptive Analysis

Descriptive statistics gives a presentation of the mean, maximum and minimum values of variables applied together with their standard deviations in this study. Table 4.3 below shows the descriptive statistics for the variables applied in the study. An analysis of all the variables was obtained using SPSS software for the period of ten years (2007 to 2016) on a quarterly basis. FDI inflows had a mean of 6.45 with a standard deviation of 0.597. Interest rate recorded a mean of 8.010335 with a standard deviation of 3.1788441. Economic growth resulted to a mean of 5.893685 with a standard deviation of 0.0761285. Exchange rate resulted to a mean of 81.17 with a

standard deviation of 10.002 while Inflation had a mean of 8.290545 and standard deviation of 4.5644054.

**Table 4.3: Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
FDI Inflows	40	6	8	6.45	.597
Interest rates	40	2.1233	19.5200	8.010335	3.1788441
Economic Growth	40	5.7803	6.0219	5.893685	.0761285
Exchange rate	40	63	104	81.17	10.002
Inflation rate	40	2.7136	19.1870	8.290545	4.5644054
Valid N (listwise)	40				

**Source: Research Findings (2017)**

#### 4.4 Correlation Analysis

Pearson correlation was employed to analyze the level of association between FDI inflows and the independent variables for this study (interest rates, economic growth, foreign exchange rates and inflation rates). From correlation analysis, the study showed the existence of a weak positive and insignificant correlation between interest rates and FDI inflows into the country ( $p=.011$ ,  $p>.945$ ). This goes to show that the level of interest rates in a country has no significant association with FDI inflows into the country. The relationship between economic growth and FDI inflows was found to be weak and positive ( $p=.495$ ,  $p>0.001$ ). This implies that movement in

economic growth is positively correlated to FDI inflows and in a significant manner. The study also showed that there exist a strong positive correlation between exchange rates and FDI inflows ( $p=.519$ ,  $p>.001$ ). This shows that exchange rates have a strong positive association with FDI inflows and the association is significant. Although the independent variables had an association to each other, the association was not strong to cause Multicollinearity as all the  $r$  values were less than 0.70. This implies that there was no Multicollinearity among the independent variables and therefore they can be used as determinants of FDI inflows into the country in regression analysis.

**Table 4.4: Correlation Analysis**

		FDI Inflows	Interest rates	Economic Growth	Exchange rate	Inflation rate
FDI Inflows	Pearson Correlation	1	.011	.495**	.519**	-.203
	Sig. (2-tailed)		.945	.001	.001	.210
	N	40	40	40	40	40
Interest rates	Pearson Correlation	.011	1	.297	.298	.448**
	Sig. (2-tailed)	.945		.062	.061	.004
	N	40	40	40	40	40
Economic Growth	Pearson Correlation	.495**	.297	1	.610**	-.110
	Sig. (2-tailed)	.001	.062		.000	.498
	N	40	40	40	40	40
Exchange rate	Pearson Correlation	.519**	.298	.610**	1	.029
	Sig. (2-tailed)	.001	.061	.000		.860
	N	40	40	40	40	40
Inflation rate	Pearson Correlation	-.203	.448**	-.110	.029	1
	Sig. (2-tailed)	.210	.004	.498	.860	
	N	40	40	40	40	40

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

**Source: Research Findings (2017)**

#### 4.5 Regression Analysis

FDI inflows were regressed against four predictor variables; interest rates, economic growth, foreign exchange rates and inflation rates. The study obtained the model summary statistics as shown in table 4.5 below.

**Table 4.5: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.566 <sup>a</sup>	.320	.242	.520	1.736

a. Predictors: (Constant), Inflation rate, Exchange rate, Interest rates,

Economic Growth

b. Dependent Variable: FDI Inflows

#### **Source: Research Findings (2017)**

From the outcome in table 4.5 above, the value of R square was 0.320, a discovery that 32 percent of the deviations in FDI inflows into the country is caused by changes in interest rates, economic growth, exchange rates and inflation rates. Other variables not included in the model justify for 68 percent of the variations in FDI inflows to the country. Also, the results revealed that there exists a strong relationship among the selected independent variables and FDI inflows as shown by the correlation coefficient (R) equal to .566. A durbin-watson statistic of 1.736 indicated that the variable residuals were not serially correlated since the value was more than 1.5.

**Table 4.6: Analysis of Variance**

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	4.446	4	1.112	4.115	.008 <sup>b</sup>
Residual	9.454	35	.270		
Total	13.900	39			

a. Dependent Variable: FDI Inflows

b. Predictors: (Constant), Inflation rate, Exchange rate, Interest rates, Economic Growth

**Source: Research Findings (2017)**

The significance value is 0.008 which is less than  $p=0.05$ . This implies that the model was statistically significant in predicting how interest rates, economic growth, exchange rates and inflation rates affect FDI inflows in the country. Given 5% level of significance, critical value from the table is 2.324, table 4.6 above shows computed F value as 4.115. This confirms that overall the multiple regression model is statistically significant, in that it is a suitable prediction model for explaining how interest rates, economic growth, exchange rates and inflation rates affects FDI inflows in the country.

**Table 4.7: Model Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	4.599	15.523		.296	.769
Interest rates	-.012	.032	-.065	-.384	.703
Economic Growth	-.090	2.897	-.011	-.031	.975
Exchange rate	.033	.021	.554	1.553	.129
Inflation rate	-.025	.022	-.191	-1.108	.275

a. Dependent Variable: FDI Inflows

**Source: Research Findings (2017)**

The study applied t-test to determine the significance of individual variables applied in this study as predictors of FDI inflows in the country. The p-value under sig. column was used as an indicator of the significance of the relationship between the dependent and the independent variables. At 95% confidence level, a p-value of less than 0.05 was interpreted as a measure of statistical significance. As such, a p-value above 0.05 indicates a statistically insignificant relationship between the dependent and the independent variables. The results are as shown in table 4.7

From the above results, it is evident that none of the four selected independent variables is a significant determiner of FDI inflows as shown by p values greater than 0.05.

The following regression equation was estimated:

$$Y = 4.599 - 0.012X_1 - 0.090X_2 + 0.033X_3 - 0.025X_4$$

Where,

Y = FDI Inflows

X<sub>1</sub> = Interest rates

X<sub>2</sub> = Economic Growth

X<sub>3</sub> = Exchange rates

X<sub>4</sub> = Inflation rates

On the estimated regression model above, the constant = 4.599 shows that if selected dependent variables (interest rates, economic growth, foreign exchange rates and inflation rate) were rated zero, FDI inflows would be 4.599. A unit increase in interest rates would lead to a decrease in FDI inflows in the country by 0.012. A unit increase in exchange rates would lead to an increase in FDI inflows in the country by 0.033 while a unit increase in economic growth and inflation would lead to a decrease in FDI inflows in the country by 0.090 and 0.025 respectively.

#### **4.7 Discussion of Research Findings**

The study sought to determine the effect of interest rates on FDI inflows in the country. The independent variable was interest rates as measured by CBK lending rate on a quarterly basis. The control variables were economic growth as measured by quarterly GDP, exchange rates as measured by quarterly exchange rate between Ksh and USD and inflation rates as measured by quarterly CPI. FDI inflows were the dependent variable which the study sought to explain and it was measured by quarterly FDI inflows in Kenya. The effect of each of the independent variables on the dependent variable was analyzed in terms of strength and direction.

The Pearson correlation coefficients between the variables revealed existence of a weak positive and insignificant correlation between interest rates and FDI inflows into



the country. The relationship between economic growth and FDI inflows was found to be weak and positive. The study also showed that there exist a strong positive correlation between exchange rates and FDI inflows. The results also revealed a weak negative and insignificant correlation between inflation rates and FDI inflows in the country.

The model summary revealed that the independent variables: interest rates, economic growth, exchange rates and inflation explains 32% of changes in the dependent variable as indicated by the value of  $R^2$  which implies that there are other factors not included in this model that account for 68% of changes in FDI inflows in Kenya. The model was found to be fit at 95% level of confidence since the F-value of 4.115 is higher than the critical value. This implies that overall the multiple regression model is statistically significant, in that it is a suitable prediction model for explaining FDI inflows in Kenya.

The findings of this study are in agreement with Kiplagat (2016) who carried out a study to determine the effect of interest rates on direct foreign investments in Kenya. The study adopted a descriptive research design which assisted in the establishment of the relationship between interest rates and foreign direct investments in Kenya. The sample frame was based on 44 data points i.e. time series annual data of the dependent and independent variables from 1971 to 2014. The dependent variable was FDI while the independent variables were; interest rates and other variables namely, inflation, exchange rates and GDP since they are the main macroeconomic variables in the economy. Data was gathered only from secondary sources and analysis done using SPSS 17.0. Descriptive and inferential data analysis was used to analyze the data. The overall findings and conclusion of the study was that interest rates have a positive correlation with FDI but not significant at all in determining the level of FDI

inflows in Kenya.

This study is in contrast with Kinaro (2006) who investigated the determinant factors of Foreign Direct Investment in Kenya. Identifying the key factors that influence FDI decisions in Kenya was the main objective of the study. In analyzing the various variables included in the model, the researcher used econometric technique. In the examination of the locational factors of FDI inflows to Kenya, was proposed Human capital, real exchange rate, annual inflation and openness of the economy are exogenous variables. Johansen co integration technique was used to ascertain the co-integration of the series and it was robust. FDI is affected positively in the short run economic openness and human capital as per the findings. In addition, both inflation and real exchange rate impact negatively on FDI inflows in the short and long run respectively.

## **CHAPTER FIVE**

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

#### **5.1 Introduction**

This chapter shows the summary of research findings, the conclusions made from the results, and the recommendations for policy and practice. The chapter also discusses limitations encountered as well as suggestions for future research.

#### **5.2 Summary of Findings**

The study sought to investigate the effect of interest rates on FDI inflows in Kenya. The independent variables for the study were interest rates, exchange rates, economic growth and inflation. The study adopted a descriptive research design. Secondary data was obtained from CBK and KNBS and was analyzed using SPSS software version 21. The study used quarterly data covering a period of ten years from January 2007 to December 2016.

From the results of correlation analysis, a weak positive and insignificant correlation between interest rates and FDI inflows into the country was observed. The relationship between economic growth and FDI inflows was found to be weak and positive. The study also showed that there exist a strong positive correlation between exchange rates and FDI inflows. The results also revealed a weak negative and insignificant correlation between inflation rates and FDI inflows in the country. In addition, economic growth and exchange rates were found to have a significant relationship with FDI inflows in Kenya while interest rates and inflation rates had an insignificant association with FDI inflows in Kenya.

The co-efficient of determination R-square value was 0.320 which means that about 32 percent of the variation in FDI inflows in Kenya can be explained by the four selected independent variables while 68 percent in the variation of FDI inflows in Kenya is associated with other factors not covered in this research. The study also found that the independent variables had a strong correlation with FDI inflows in Kenya( $R=0.566$ ). ANOVA results show that the F statistic was significant at 5% level with a  $p=4.115$ . Therefore the model was fit to explain the relationship between the selected variables.

The regression results show that when all the selected dependent variables (interest rates, economic growth, exchange rates and inflation) are rated zero, FDI inflows in Kenya would be 4.599. A unit increase in interest rates would lead to a decrease in FDI inflows in the country by 0.012. A unit increase in exchange rates would lead to an increase in FDI inflows in the country by 0.033 while a unit increase in economic growth and inflation would lead to a decrease in FDI inflows in the country by 0.090 and 0.025 respectively.

### **5.3 Conclusion**

From the study findings, the study concludes that FDI inflows in Kenya have a negative association with interest rates. The study therefore concludes that higher interest rates lead to reduced FDI inflows in the country even though not to a significant extent. Exchange rates were also found to be positively related to FDI inflows in the country and therefore an increase in exchange rates leads to an increase in FDI inflows in Kenya. The study found that inflation rate and economic growth had a negative correlation with FDI inflows in the country and we can therefore conclude that higher inflation rates and economic growth tend to discourage foreign direct investment inflows in Kenya.

This study concludes that independent variables selected for the study interest rates, economic growth, exchange rates and inflation influence FDI inflows in the country to a significant extent as they account for 32percent of the changes in FDI inflows in the country. The fact that the four independent variables explain 32% of changes in FDI inflows in Kenya imply that the variables not included in the model explain 68% of changes in FDI inflows in the country. The overall model was found to be significant as explained by the F statistic. It is therefore sufficient to conclude that these variables significantly influence FDI inflows in the country as shown by the p-value in ANOVA summary.

This finding concurs with Kiplagat (2016) who carried out a study to determine the effect of interest rates on direct foreign investments in Kenya. The study adopted a descriptive research design which assisted in the establishment of the relationship between interest rates and foreign direct investments in Kenya. The sample frame was based on 44 data points i.e. time series annual data of the dependent and independent variables from 1971 to 2014. The dependent variable was FDI while the independent variables were; interest rates and other variables namely, inflation, exchange rates and GDP since they are the main macroeconomic variables in the economy. Data was gathered only from secondary sources and analysis done using SPSS 17.0. Descriptive and inferential data analysis was used to analyze the data. The overall findings and conclusion of the study was that interest rates have a positive correlation with FDI but not significant at all in determining the level of FDI inflows in Kenya.

#### **5.4 Recommendations**

The study established that although there is a negative influence of interest rates on FDI inflows in the country, the influence is not statistically significant. This study

recommends that there is need for policy makers to regulate the interest rates prevailing in the country bearing in mind that they influence FDI inflows in the country.

The study found that exchange rates have a positive influence on FDI inflows in the country. This study recommends that policy makers should regulate prevailing exchange rates as depreciation in exchange rates may lead to decreased FDI inflows into the country. Economic growth and inflation rates were found to have a negative relationship with FDI inflows in the country. The variables were however found to be insignificant determinants of FDI inflows in the country. This study recommends that policy makers should pay attention to the prevailing rates of these selected independent variables as they can negatively affect FDI inflows in the country.

### **5.5 Limitations of the Study**

The scope of this research was for ten years 2007-2016. It has not been determined if the results would hold for a longer study period. Furthermore it is uncertain whether similar findings would result beyond 2016. A longer study period is more reliable as it will take into account major economic conditions such as booms and recessions.

One of the limitations of the study is the quality of the data. It is difficult to conclude from this research whether the findings present the true facts about the situation. The data that has been used is only assumed to be accurate. The measures used may keep on varying from one year to another subject to prevailing condition. The study utilized secondary data, which had already been obtained and was in the public domain, unlike the primary data which is first-hand information. The study also considered selected determinants and not all factors affecting FDI inflows mainly due to limitation of data availability.

For data analysis purposes, the researcher applied a multiple linear regression model. Due to the shortcomings involved when using regression models such as erroneous and misleading results when the variable values change, the researcher cannot be able to generalize the findings with certainty. If more and more data is added to the functional regression model, the hypothesized relationship between two or more variables may not hold.

### **5.6 Suggestions for Further Research**

This study focused on interest rates and FDI inflows in Kenya and relied on secondary data. A research study where data collection relies on primary data i.e. in-depth questionnaires and interviews covering the different sectors that receive FDI is recommended so as to complement this research.

The study was not exhaustive of the independent variables affecting FDI inflows in Kenya and this study recommends that further studies be conducted to incorporate other variables like money supply, interest rates, cost of labour, technological advancement, education levels, political stability and other macroeconomic variables. Establishing the effect of each variable on FDI inflows will enable policy makers know what tool to use when controlling FDI inflows.

The study concentrated on the last ten years since it was the most recent data available. Future studies may use a range of many years e.g. from 1970 to date and this can be helpful to confirm or disapprove the findings of this study. The study limited itself by focusing in Kenya. The recommendations of this study are that further studies be conducted on other contexts such as other East Africa countries. Finally, due to the shortcomings of regression models, other models such as the

Vector Error Correction Model (VECM) can be used to explain the various relationships between the variables.



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