

**THE EFFECT OF INFLATION RATE ON FOREIGN DIRECT
INVESTMENTS 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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This research project has been submitted for examination with my approval as University Supervisor.

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DEDICATION

I dedicate this project to God my creator, my strong pillar, my source of inspiration, wisdom, knowledge and understanding. I also dedicate to my grandmother, uncles and my aunts who have taught me that even the largest task can be accomplished.

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LIST OF ABBREVIATIONS

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

ABSTRACT

The determinants of foreign direct investments have become an important topic not only for the governments, policy makers but also for academic research. Both theory and empirical literatures hold that a country's growth has a direct link with the economy, which is made of many variables such as the GDP, remittances, foreign direct investment, interest rate, inflation, exchange rate, money supply, and many others. These variables are the backbone of any economy. Foreign direct investment inflows movements into a country are influenced by changes in many economic variables and these fundamentals' future prospects changes. This study sought to determine the effect of inflation on foreign direct investments inflows in Kenya. The independent variable was inflation as measured by quarterly inflation rate. The control variables were interest rates as measured by central bank lending rate on a quarterly basis, economic growth as measured by quarterly GDP growth rate and exchange rates as measured by quarterly exchange rate between ksh and usd. 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 2008 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 0.650 which means that about 65 percent of the variation in FDI inflows in Kenya can be explained by the four selected independent variables while 35 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 ($R=0.806$). ANOVA results show that the F statistic was significant at 5% level with an F statistic of 16.260. Therefore, the model was fit to explain FDI inflows in Kenya. The results further revealed that individually interest rates, economic growth and exchange rates are not significant determiners of FDI inflows in Kenya while inflation is a significant determiner. This study recommends that there is need for policy makers to regulate inflation levels prevailing in the country bearing in mind that they significantly influence FDI inflows in the country.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Most governments have appreciated the critical role the FDI plays and have established various ways of attracting it. FDI not only offers developing economies with financial resources required for economic growth but also creates employment and help transfer technological innovations and managerial expertise all contributing to the advancement of the economy. In theoretical literature, the purpose of FDI is that of a carrier of foreign technology that can promote economic growth (Jones, 1995). The most outstanding motivation of FDI has been resource seeking (Dunning, 1993). Economists consider FDI as an essential component of economic progression. The need for better economies, technological advancement, economic growth, poverty eradication and better standards of living has seen Africa's nations endeavor to get Foreign Direct Investments pumped into their economies to help accomplish these (Mishkin & Eakins, 2009).

This study was guided by several theories such as the internalization hypothesis, eclectic paradigm theory and product life cycle theory that strive to explain the determinants of foreign direct investments in a given country. Internationalization theory suggests that licensing has major draw backs as a strategy for entering foreign markets as it does not take full advantage of resources available in the foreign country. The second theory is eclectic paradigm that was championed by British Economist; John Dunning where he disputed that location-specific advantage is a substantial significance in illuminating both the justification for as well as trend of

FDI (Charles, 2008). Product life cycle theory the stages a new product goes through before the producing firm goes international (Dunning, 1993).

Kenya like many other developing nations can count FDI as one of the key agents responsible for its economic growth. Foreign direct investment helps a growing economy to easily absorb spill-over effects. Foreign Direct Investment remittances are the largest form of foreign currencies in Kenya. These remittances totaled \$1691.4 million in 2017. The country relies heavily on the FDI for capital and employment, as is proven by the fact that the majority of banks in Kenya are owned by foreigners. FDI, therefore, is an integral part of the Kenyan economy (UNCTAD, 2017).

1.1.1 Inflation Rate

Shiblee (2009) concluded that inflation can be said as a constant growth in the overall charges level for merchandises and services. It occurs when charges of properties escalate or when it desires additional cash to obtain similar substances (Saleem, Zafar & Rafique, 2013). Inflation burden can be essentially accredited to essential features such as; actual revenue decrease triggered by variation in oil income, high minimal earnings and liability responsibility in the method of expansionary financial shortage (Taofik & Omosola, 2013). Other causes of inflation are attributed to fluctuations in the demand of goods and services, as well as changes in available supplies of a product (Ariss, 2012).

Inflation is determined commonly by computing the Consumer Price Index (CPI) movement (Mohan & Chitradevi, 2014). Ahmad and Naseem (2011) argued that inflation in price is evaluated by the rate of inflation. This is computed using the general price index change percentage annually (Consumer Price Index) over the time period. Saleem, Zafar and Rafique (2013) explain that the rate of inflation is signified

by the consumer price index (CPI) that essentially shows a rise in goods prices and service prices overall. The two inflation mostly common measures in Kenya are CPI and inflation deflator. The percentage change in a CPI is used as a measure of inflation, and can be measured monthly, quarterly or annually. The current study will use monthly CPI as a measure of inflation.

1.1.2 Foreign Direct Investments

Foreign direct investment can be described as an investment made in a corporation by an interested party from another nation for which the company is controlled by a foreign investor. This transaction brings about a long term association between the host and home country investors (Olson, 2008). According to Ismaila and Imoughele (2010), FDI represent long term commitments to the host country. It is a preferred form of investment because it has no obligations to the host country. UNCTAD (2002) describes three different types of FDI. These are: reinvested earnings, equity capital and other capital which mainly consist of intercompany loans. FDI's 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 Kariguh (2014), foreign investment is one of the main sources of capital flows in most economies that are still developing as they tend to bridge the gap of capital, managerial skills, technology, and formation of human capital as well as creating an environment for more business competition. However, according to Voorpijl (2011), there are consequences for increasing the FDI inflows whereby the multinationals can exploit the local capabilities more freely. Also, the promotion of

private investment rather than public investments by many international donors leaves nothing to the host company when they decide to leave.

Foreign direct investment measurement is based on foreign direct investment stock which is expressed as a percentage of the GDP of a country. It's normally published at the end of year with its components being outward Foreign Direct investment stock that includes residences equity investments and credits to foreign countries and inward foreign direct investment stock which is foreigners' equity investment and credits to host economy. The problem with this method is that developing countries do not possess the necessary systems and technology to collect these data efficiently. Along with foreign direct investment stock, foreign direct investment flows is also a measure of foreign direct investment though its volatile nature makes foreign direct investment stock a suitable measure of foreign direct investment as foreign direct investment stock incorporates changes in the economy such as inflation and exchange rate (Nunnenkamp, 2002).

1.1.3 Inflation Rate and Foreign Direct Investments

A high level of inflation indicates tensions in the economic environment of a country. It can be argued that risk averse foreign investors coupled registered high inflation rates leads to inadequate FDI in the host nation because majority of the investors are may not be in a position to put their profits into risks in the mentioned investments and business ventures (Kadongo, 2011). Given high uncertainty levels, investors are forced to ask for prices which are a little bit high to safeguard their invested amount on the mentioned risk leading to lower the volume of investment. Thus as a move to encourage investments, inflation rate stability is key (Gastanaga et al., 1998).

Nwankwo (2006) emphasizes macroeconomic strategy weaknesses 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 as well as to make the region too risky as a destination for FDI. Flux in macroeconomic variables as evidenced by high inflation and extreme budget shortages, limits the country's ability to attract FDI.

However, Ayaya (2017) in his study on the effect of public debt on foreign direct investment inflows in Kenya found no linkage between FDI and inflation rates. His study used inflation rate as one of four independent variables that were expected to influence foreign direct investment inflows in Kenya. The results of regression analysis revealed that prevailing inflation rates had no significant effect on foreign direct investment inflows in Kenya. This finding was in support of an earlier research conducted by Wanjiru (2013) that found no significant effect between inflation volatility and foreign direct investment.

1.1.4 Inflation and Foreign Direct Investments in Kenya

Kenya business environment has been stable since the launch of vision 2030 in the year 2008. Various flagship projects that includes; the Konza city metropolis, LAPSET project, SGR, devolution, geothermal among others has placed Kenya in a good position to attract investors. According to African Development Outlook launched by African development bank (2015), due to improved investor preference, investment to Kenya doubled last year. Consequently, Kenya has asserted its economy as the preferred regional business hub despite facing challenges in security

which crippled the tourism sector. As a result, on the improved foreign investment to Kenya, the country projects that 160,000 jobs will be created by 2019. The country also intends to create 2,000,000 jobs from direct foreign investment by 2030. Another strategy that the government is undertaking to attract direct foreign investment is through privatization of state owned corporations which improve efficiency and transparency, thus drawing foreign capital into Kenya (UNCTAD, 2016).

In the recent past (between 1997 and 2017), the Kenyan economy has witnessed some significant changes in inflation. Inflation has been varying between a high of 18.96 percent in September 2004 and a low of -0.44 percent in the month of January 1999 (World Bank, 2012). Durevall and Sjö (2012) argued that Kenya as a country can never be considered as a hyper- inflation economy as most of the times the inflation is less than 10%. Only in few instances has the inflation rate been above 10% and there have been good reasons to explain the occurrence. For instance, Kenya experienced high inflation rates in 2011 which were attributed to poor agricultural harvests as a result of prolonged drought. This drought pushed prices of commodities high, international oil prices went up leading to a weakened shilling.

In 2008, Kenya launched vision 2030 with the objective of among other things to achieve global competitiveness for FDI and gain economic prosperity. Since the 1970-1980 period, inconsistent FDI inflows have been experienced in Kenya. Kenya was chosen by the multinational companies as their regional hub due to good infrastructure, openness to FDI, market size and a suitable timing when other countries in the developing economies were unattractive to the multinational companies. This led to Kenyan getting the opportunity of becoming the regional hub in terms on investments and business development. Between the year 1980 and the

year 1990 foreign direct investments registered high volatility rate and therefore there was a huge decline. This was further worsened by the structural adjustments plans proposed by the IMF and the World Bank therefore effecting businesses to a greater extent (Mwega & Ngugi, 2004).

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, 2016). 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

The determinants of foreign direct investments have become a vital topic not only for policy makers in the government but also for academic research (Mahiti, 2012). Both theory and empirical literatures hold that the growth of a country is directly associated with the economy, which consists of variables such as GDP, Remittances, Foreign Direct Investment, rate of interest, Inflation, rate of Exchange, Money supply, among others. FDI inflows movements into a country are influenced by fundamental economic changes and future economic prospects. FDI not only provides growing

economies with the required capital for domestic investment, but also facilitates the transfer of managerial skills and technology and creates employment opportunities which all lead to economic development. Appreciating that that FDI can significantly contribute to economic development, the world market for this type of investment is extremely competitive and Kenya, particularly, aspire such investment to accelerate the country's development efforts (Mitullah, 2010).

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 time 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 effect of inflation on main foreign direct investment inflows in a country. Okafor (2012) evaluated whether home macroeconomic parameters quantifiable for foreign direct savings arrival in Nigeria. The outcome indicates that actual GDP, countries exchange rate, interest rates are the majors measurable of FDIs in Nigeria. The study also established that inflation is not an indicator.

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 study's findings showed that trade openness, inflation, and infrastructure facilities were the most crucial deterrent factors of foreign direct investment to EAC countries. Mahiti (2012) investigated the factors that determine international corporate investments and found that infrastructure mainly in the transport sector plays a major role in attracting more Foreign Direct Investments. Inflation was found to be insignificant.

Locally, several topics have been conducted on determinants of FDI in Kenya. Kiplagat (2016) who conducted a study to analyze the impacts of interest rates on FDIs in Kenya which revealed strong positive correlation between the variable. Njuguna (2016) sought to determine the influence of exchange rates on FDIs in Kenya and established a strong positive association. Mbui (2017) investigated the effect of interest rates on FDIs arrivals in the energy and petroleum industry in Kenya and found that interest rate is not a significant determiner of FDI inflows into the energy and petroleum industry in Kenya. Ruhiu (2017) sought to establish the association between interest rates and FDI and established that interest rates had no statistical significant effect on FDIs inflows. From the foregoing, it is evident that many researches have been carried out to investigate the determinants of foreign direct investments in the Kenyan context but these studies have focused on other determinants of FDI other than inflation. It is this gap in literature that the research sought to leverage on by studying the effect of inflation on foreign direct investments in Kenya. The study intended to answer the subsequent research question; does inflation have any effects on foreign direct investments in Kenya?

1.3 Objective of the Study

The objective of this study was to determine the effect of inflation rate on foreign direct investments in Kenya.

1.4 Value of the Study

This study will be of huge significance to a number of users;

For future reference by researchers, students and scholars who seek to undertake correlated or similar studies. The study will also benefit researchers and scholars in the identification of other fields of research by citing related topics that require further studies and empirical studies to determine study 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 maintaining inflation rates that are consistent with the objective of attracting foreign direct investments.

The research findings will benefit international investors in making informed decisions in venturing into the Kenyan Market. Investors with an interest in the Kenyan market will be able to make informed evaluation with regard to the influence of inflation on foreign direct investments in the country.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter reviews theories which form the foundation of this study. In addition, previous empirical studies that have been carried before on this research topic and related areas are also discussed. The other sections of this chapter include determinants of foreign direct investments, conceptual framework showing the relationship between study variables and a literature review summary.

2.2 Theoretical Framework

This presents assessment of the important theories that clarify relationship between inflation 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) is the originator of this theory that describe production life cycle as a process that consists of four phases of production which include innovation, growth, maturity and decline. A firm conceptualizes an idea about a business, a product or service they would like to provide and the market niche they would like to focus on for a start. The developed product or service goes through a phase termed as growth and after sometime attains maturity. The expectation is that the product or service will not stabilize in the maturity stage as there are confounding factors that will force it to start declining. The product decline is mainly caused by rivalry in the market as well as inability of the business to create new products. Foreign direct investments comes about when firms are in the growth stage as they decide to venture into new markets

to increase their market share and to take advantage of factors of production in the foreign country (Dunning, 1993).

The production life cycle by Vernon is typically used in countries that engage in exportation and manufacturing of 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. The innovator produces local market product first which is later exported to foreign countries with little innovative capacity and technology to produce comparable produce. Therefore, the produce normalizes leading to maturity. During this level of product growth, labor and other factors of production becomes a critical production input. Consequently, the firm ventures into the foreign country that will provide cheap resources and provide a ready market for the product or service (Chen, 1983). This theory is relevant to the current study as it recognizes a firm's lifecycle stage as the main determinant of FDI inflow. If this theory holds, then inflation rates would not be significant determiners of FDI inflows in a given country.

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 additional 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 supersedes the relative cost of investing abroad. In summary, he implies that FDI occurs 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. This theory is relevant to the current study as it acknowledges there exist some factors in the host country that determines whether there will be foreign direct investment inflows or not. This study seeks to investigate whether inflation rates are some of the factors that influence FDI inflows.

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 remain the same, 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. The current study aims to investigate whether prevailing inflation rates in a given country determine FDI inflows.

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 make one 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 determent 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 phenomenon (Kinuthia, 2010).

2.3.1 Inflation

In order to manage the macroeconomic environment and fiscal governance, inflation is very key. It is determined by shifts in the consumer price index (CPI) that represents the weighted average price of commodities utilized in an economy (Nwankwo, 2006). Tensions in the economic environment of a nation occurs when the inflation level is high and it depicts 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 cause decreases in FDI in the hosting nation since investors are may not be in a position to put their profits into risks in the mentioned investments and business ventures (Kadongo, 2011).

Given high uncertainty levels, investors are bound to ask for high price levels in order to offset their exposure to inflationary risks which are bound to lower the volume of investment. Thus, as a move to encourage investments, inflation rate stability is paramount (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).

2.3.2 Interest Rates

Agiomirgianakis (2003) explained FDI as capital inflow into a nation due to investment from multinational business entities. From the economic theory, financial resources have a tendency to flow to nations that have a higher return on investment as compared to countries with lower rates of return (Pholphirul, 2002). Consequently, investment is higher in nations that give better returns on investment and security in terms of lower rates of interest and a better environment of business. Therefore, capital moves from nations with low rate of return to nations 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 rates of interest and invest it in economies that promise 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.

2.3.3 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 backing on the hypothesis for the duration between year 1983 and year 1986, and further a weaker link for the period between year 1975 and year 1978.

Basing on 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 low level economic growth for the sampled data plus non-Sub-Saharan African nations 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 system (Bhinda, Griffith-Jones & Martin, 1999)

2.4 Empirical Review

A number of empirical researches have been conducted both locally and internationally to support the relationship between inflation rates and foreign direct investments, but these studies have produced mixed results.

2.4.1 Global Studies

Parajuli (2012) observed the association between the foreign direct investment, exchange rate and trade in the developing economy of Mexico from the Organization for Economic Corporation and Development countries and how exchange rates and the volatility of exchange rates impact the flow of FDI from 1994 to 2008. The results showed a positive correlation between the expectations of exchange rates and FDI. The exchange rate coefficient variables showed that appreciation in the home currencies encourage outward FDI flows from members of OECD countries to Mexico.

Ullah, Haider and Azim (2012) investigated the interdependence of Foreign Direct Investment (FDI) with exchange rate and exchange rate fluctuations in Pakistan. Time series data for a period of 30 years from 1980 to 2010 was collected. The variables of interest included exchange rate and its movements, inflation, FDI and trade openness. Unit root test, causality analysis, volatility and co-integration technique were used to analyze the data. According to the findings FDI had a positive relationship with Rupee depreciation, exchange rate volatility deterred FDI and trade openness considerably attracted FDI while inflation was found to be insignificant to the study. The outcomes of Granger causality test proposed that exchange rate volatility granger caused foreign direct investment and not the other way round.

Okafor (2012) studied evaluated whether home macroeconomic parameters quantifiable for foreign direct savings arrival in Nigeria. The study revealed that FDIs have a positive impact on the country's economic growth. The study used ordinary least square method as an estimation technique. Foreign direct investment in Nigeria is majorly determined by real GDP, the interest rate level, and the countries real

exchange rate. FDI inflow is majorly determined by domestic macroeconomic variables.

Omweri (2013) studied determinant factors of FDI 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.

Bilawal (2014) conducted a study aimed at investigating whether uncertainty or fluctuations in exchange rate affected FDI inflows in Pakistan. A time series model was applied for data analysis purposes and secondary data was collected for 32 years which was between the year 1982 and the year 2013 acquired from the official website of Pakistan Country Bank. In data analysis, both regression and correlation analysis were conducted using SPSS to establish the nature of association between Exchange rate and FDI. The correlation results showed that there was a significant positive association between exchange rate and foreign direct investment.

2.4.2 Local Studies

Bichanga (2016) studied the relationship between foreign direct investment and exchange rate volatility in Kenya. Secondary data required for the analysis was acquired from the yearly published data by the Central Bank of Kenya and KNBS

data for a duration of 10 years on a quarterly basis while. A descriptive research design was applied in the analysis. The study findings showed a weak positive and significant relationship between foreign direct investment and exchange rate. The study findings showed that 22.5% of the variations in FDI were explained by changes in exchange rate. The study recommended that there is need for policymakers to minimize the exchange rate volatility through proper planning and well regulated foreign exchange market.

Njuguna (2016) analyzed the relationship between exchange rates and foreign direct investment in Kenya. This research was carried out in a ten years' period which was from January year 2006 to December 2015 using secondary data on FDI remittances as well as the spot rate for exchange rate over that period with data being collected monthly. Inflation and economic growth were used as control variables. This study results revealed a strong positive correlation between the two variables an indication that an increase in one of the variable will have a high chance of resulting to an increase in the other variable. The study concluded that exchange rates, inflation and economic growth do influence the levels of FDI in Kenya. The model summary revealed that the independent variables: exchange rates, inflation and economic growth have a correlation of 94.3% with the dependent variable which implies that they are significant predictors of foreign direct investment in Kenya.

Kiplagat (2016) sought to ascertain how interest rates affects FDI arrival in Kenya. The independent variable was interest rates as measured by quarterly CBK lending rate. The control variables were inflation rates as measured by quarterly CPI, exchange rates as measured by quarterly exchange rate between KSH/USD and economic growth as measured by quarterly GDP. 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 an annual basis. Secondary data for the analysis was gathered for a duration of 44 years that is from year 1971 and year 2014. The results revealed that although interest rate had a correlation with FDI inflows, the correlation was not significant.

Mbui (2017) assessed the association between interest rates and FDI inflows in the energy and petroleum industry 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, inflation rates as measured by quarterly CPI and exchange rates as measured by quarterly exchange rate between ksh and usd. FDI inflows into the energy and petroleum industry in Kenya were the dependent variable which the study sought to explain and it was measured by FDI inflows in the energy and petroleum industry on a quarterly basis. Data for the study was gathered for a duration of 10 years that is from January year 2007 and December year 2016 which was based on quarters. The results revealed that individually, interest rate and exchange rates are not significant determiners while economic growth and inflation rates of FDI inflows into the energy and petroleum industry in Kenya are significant.

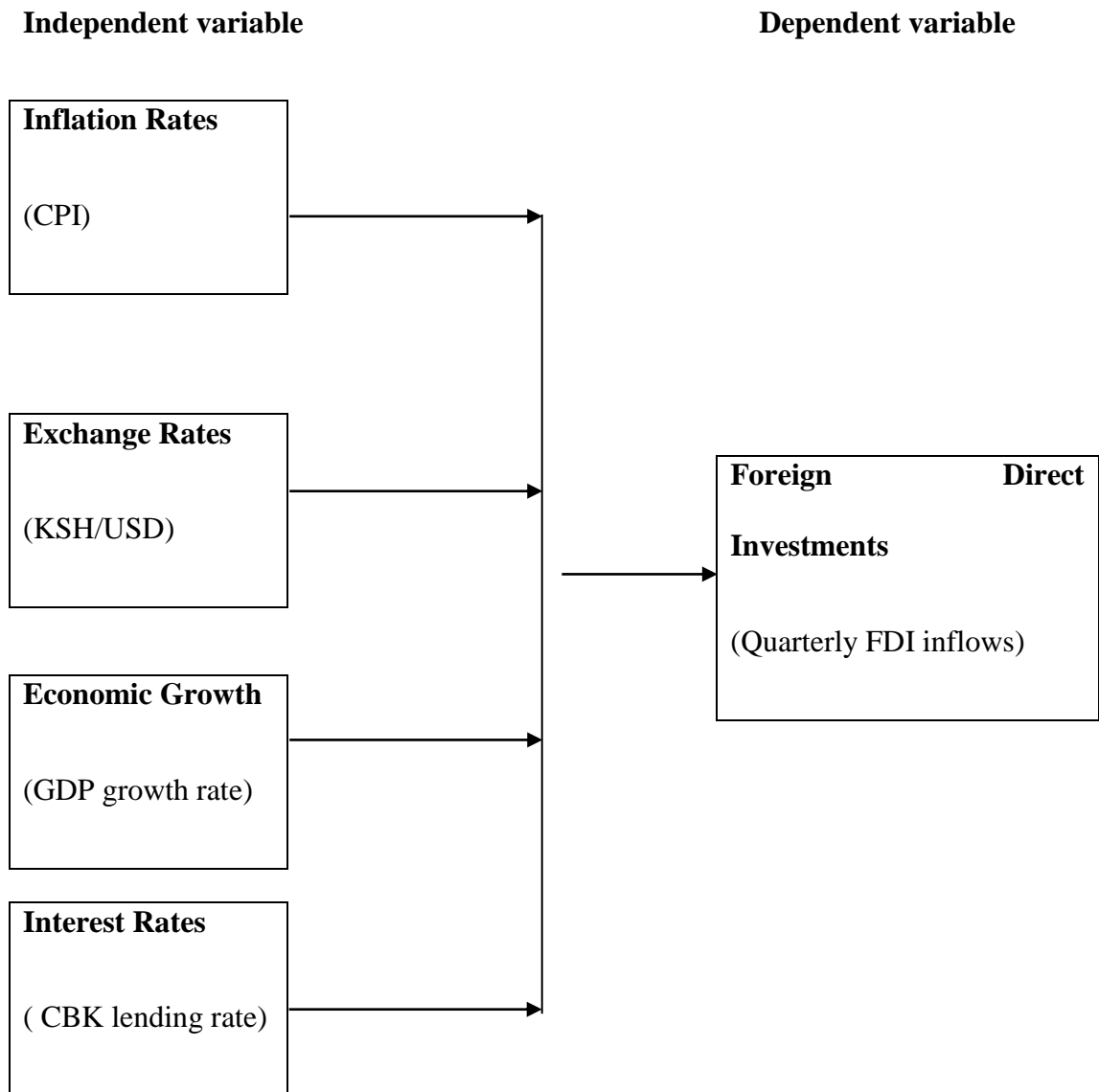
Ruhiu (2017) sought to ascertain how interest rates affected on influenced FDI arrival in Kenya. The independent variable was interest rates as measured by quarterly CBK lending rate. The control variables were inflation rates as measured by quarterly CPI, exchange rates as measured by quarterly exchange rate between KSH/USD and economic growth as measured by quarterly GDP. 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. The study data which was secondary data

was gathered for a duration of 10 years which was from January year 2007 to December year 2017 and this was in quarterly basis. The results further revealed that individually, interest rate, inflation rates, exchange rates and economic growth are not significant determiners of FDI inflows in Kenya.

2.5 Conceptual Framework

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

Figure 2.1: The Conceptual Model



Source: Researcher (2018)

2.6 Summary of the Literature Review

This research was underpinned on the theories that form the foundation for this study. The theories discussed here are namely; product life cycle theory,

internalization theory and the eclectic paradigm theory. The chapter has also focused on some of the factors that are expected to determine foreign direct investments. There have been previous studies carried out either in this area and/or related areas and their findings have been discussed under empirical review. From the foregoing, it is evident that many researches have been carried out to investigate the determinants of foreign direct investments in the Kenyan context but these studies have focused on other determinants of FDI other than inflation (Bichanga, 2016; Njuguna; 2016; Kiplagat, 2016; Mbui; 2017 and Ruhiu, 2017). It is this gap in literature that the research sought to leverage on by studying the effect of inflation on foreign direct investments in Kenya. The study intended to answer the study research question; are there any effect of inflation on foreign direct investments in Kenya?

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines how the research was carried out. The chapter has four sections namely; research design, data collection, diagnostic tests and analysis of data.

3.2 Research Design

A descriptive research design was employed in this study to investigate the effect of inflation on foreign direct investment inflows in Kenya. Descriptive design was utilized as the researcher is interested in finding out the state of affairs as they exist (Khan, 2008). This research design was appropriate for the study as the researcher was familiar with the phenomenon under investigation but want to know more concerning the nature of association between the study variables. In addition, a descriptive research aims at providing a valid and accurate representation of the study variables and this helps in responding to the research question (Cooper & Schindler, 2008).

3.3 Data Specification

The following secondary data was put into use in this study. FDI remittances into Kenya per quarter, average inflation rate per quarter, average exchange rate (KSH/USD) per quarter, average CBK lending rate per quarter and economic growth per quarter for the period between January 2008 and December 2017.

3.4 Data Collection

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 2008 to 2017 collected on a quarterly basis. Data on interest rates and exchange rates was collected from the CBK website on a quarterly basis from 2008 to 2017. Data on inflation was the CPI while data on economic growth was Kenya's GDP, both collected for every quarter from 2008 to 2017 from KNBS.

3.5 Diagnostic Tests

The linearity test was obtained through the scatterplot testing or F-statistic in ANOVA. Stationarity test is a process where the statistical properties such as mean, variance and autocorrelation structure do not change with time. Stationarity was obtained from the run sequence plot. Normality is a test for the assumption that the residual of the response variable are normally distributed around the mean. This was determined by Shapiro-walk 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).

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 moves close to zero then the multicollinearity becomes stronger. Variance Inflation Factors (VIF) and tolerance levels were also carried out to show the degree of multicollinearity (Burns & Burns, 2008).

3.6 Data Analysis

The data collected from various sources was organized in a manner that can help

address the research objective. This study utilized SPSS version 23 to analyse the secondary data. Both descriptive and regression analyses were carried out. Descriptive statistics helped in computing the mean, standard deviation minimum and maximum. In inferential statistics, both regression and correlation analysis were carried out. Correlation analysis involved determining the extent of relationship between the study variables while regression analysis involved establishing the cause and effect between the independent and dependent variables. A multivariate regression analysis was employed to determine the association between foreign direct investment which is the outcome variable and inflation rate, economic growth, exchange rate and interest rate which are the predictor variables.

3.6.1 Analytical Model

Using the collected data, the researcher used regression analysis to ascertain the extent of the interdependence between inflation rates and foreign direct investments.

The study applied below regression model:

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

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

β_0 = y intercept of the regression equation.

β_1 , β_2 and β_3 , = are the slope of the regression

X_1 = Average quarterly inflation rate as measured by CPI

X_2 = Average quarterly exchange rate between USD and Ksh in natural logarithm form. The researcher used the USD because it is most traded foreign currency

X_3 = Economic growth as measured by quarterly GDP growth rate

X_4 = Quarterly interest rates as measured by CBK lending rate

ε =error term

3.6.2 Tests of Significance

The researcher carried out parametric tests to establish the statistical significance of both the overall model and individual parameters. To test significance of the variables and the model, F test was used and it was obtained from Analysis of Variance (ANOVA) while a t-test was used to establish statistical significance of individual variables.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND INTERPRETATION

4.1 Introduction

The chapter gives the research findings as per the secondary data collected and in relation to the study objectives. The chapter dealt with the analysis of the collected data from CBK and KNBS to establish the effect of inflation 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. The research assumed a 95 percent confidence interval or 5 percent significance level (both leading to identical conclusions) for the data used. These values helped to verify the truth or the falsity of the data. Thus, the closer to 100 percent the confidence interval (and thus, the closer to 0 percent the significance level), the higher the accuracy of the data used and analyzed is assumed to be. 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 test results are as shown below

The Both Kolmogorov-Smirnova and Shapiro-Wilk tests was carried out and registered o-values which were greater than 0.05 an implication that that the secondary data collected was normally distributed leading to the rejection of the studies null hypothesis. This indicated that the data collected was therefore fit for any inferential statistic.

Table 4.1: Normality Test

FDI Inflows	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Inflation rates	.173	40	.300	.918	40	.822
Interest rates	.180	40	.300	.894	40	.790
Economic Growth	.176	40	.300	.892	40	.784
Exchange rates	.181	40	.300	.896	40	.792
a. Lilliefors Significance Correction						

Source: Research Findings (2018)

To test the variables tolerance level, Multicollinearity test was carried out. VIF value were used where values more than 0.2 for Tolerance and values less than 10 for VIF implies that there is no Multicollinearity. For multiple regressions to be applicable there shouldn't be strong relationship among variables. As revealed in the study, the all the study variables had a tolerance values >0.2 and VIF values <10 as shown in table 4.2 indicating that there is no Multicollinearity among the independent variables.

Table 4.2: Multicollinearity Test for Tolerance and VIF

Variable	Collinearity Statistics	
	Tolerance	VIF
Inflation	0.398	1.982
Interest rates	0.360	1.382
Economic growth	0.392	1.463
Exchange rates	0.646	1.434

Source: Research Findings (2018)

For purposes of checking a correlation of error terms for the durations used, autocorrelation tests were carried out. This was done using Durbin Watson recommended test. A durbin-watson statistic of 1.668 indicated that the variable residuals were not serially correlated since the value was within the acceptable range of between 1.5 and 2.5.

Table 4.3: Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.806 ^a	.650	.610	22.634773	1.668

a. Predictors: (Constant), Growth in economic , rate of exchange, rate of interest, rate of inflation

b. Dependent Variable: FDI inflows

Source: Research Findings (2018)

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 4.4 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 (2008 to 2017) on a quarterly basis. FDI inflows had an average of 49.695 with a standard deviation of 36.252. Inflation had a mean of 8.556 and standard deviation of 3.721. Interest rate had a mean of 15.810 and a standard deviation of 1.955. Economic growth resulted to a mean of 6.215 with a standard deviation of 3.488 while exchange rate resulted to an average of 1.939 and a standard deviation of 0.055 while

Table 4.4: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
FDI inflows	40	17.480	210.920	49.69500	36.251814
Inflation rate	40	4.030	16.830	8.55850	3.720589
Exchange rate	40	1.797	2.015	1.93938	.055269
Interest rate	40	13.653	20.213	15.80990	1.954510
Economic growth	40	.300	12.500	6.21500	3.487895
Valid N (listwise)	40				

Source: Research Findings (2018)

4.4 Correlation Analysis

Pearson correlation was employed to analyze the level of association between FDI inflows and the independent variables for this study (rates of inflation, rates of interest, economic growth and foreign exchange rates). From correlation analysis, the relationship between inflation and FDI inflows was found to be strong and negative ($p = -.798$, $p < 0.005$). This implies that movement in the inflation rate is negatively correlated to FDI inflows and in a significant manner.

The relationship between economic growth and FDI inflows was found to be weak, positive and insignificant ($p = .152$, $p > 0.005$). This implies that movement in economic growth is positively correlated to FDI inflows but not in a significant manner. The study further revealed that there is a strong negative correlation between exchange

rates and FDI inflows ($p=-.637$, $p<.005$). This shows that exchange rates have a strong negative association with FDI inflows and the association is significant. The relationship between interest rate and FDI inflows was found to be weak, positive and insignificant ($p=.053$, $p>0.005$). This implies that movement in interest rates is positively correlated to FDI inflows but not in a significant manner.

Table 4.5: Correlation Analysis

	FDI inflows	Inflation rate	Exchange rate	Interest rate	Economic growth
Pearson Correlation	1	-.798**	-.637**	.053	.152
FDI inflows Sig. (2-tailed)		.000	.000	.745	.350
N	40	40	40	40	40
Pearson Correlation	-.798**	1	.640**	.201	-.092
Inflation rate Sig. (2-tailed)	.000		.000	.214	.571
N	40	40	40	40	40
Pearson Correlation	-.637**	.640**	1	.416**	.056
Exchange rate Sig. (2-tailed)	.000	.000		.008	.730
N	40	40	40	40	40
Pearson Correlation	.053	.201	.416**	1	.367*
Interest rate Sig. (2-tailed)	.745	.214	.008		.020
N	40	40	40	40	40
Pearson Correlation	.152	-.092	.056	.367*	1
Economic growth Sig. (2-tailed)	.350	.571	.730	.020	
N	40	40	40	40	40

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

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

Source: Research Findings (2018)

4.5 Regression Analysis

FDI inflows were regressed against five predictor variables; rates of inflation, rates of interest, growth in the economy and rates of exchange. The study obtained the model summary statistics as shown in table 4.6 below.

Table 4.6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.806 ^a	.650	.610	22.634773	1.668

a. Predictors: (Constant), Growth in economic , rate of exchange, rate of interest, rate of inflation

b. Dependent Variable: FDI inflows

Source: Research Findings (2018)

From the outcome in table 4.5 above, the value of R square was 0.650, a discovery that 65 percent of the deviations in FDI inflows into the country are caused by changes in inflation rates, interest rates, economic growth and exchange rates. Other variables omitted in the model justify for 35 percent of the changes in FDI inflows to the country. Also, the results revealed existence of a strong dependence among the selected independent variables and FDI inflows as shown by the correlation coefficient (R) equal to .806. A durbin-Watson statistic of 1.668 indicated that the variable residuals were not serially correlated since the value was more than 1.5.

From the analysis of variance, the significance value is 0.000 which is less than $p=0.05$. This implies that the model was statistically significant in predicting how inflation rates, interest rates, economic growth and exchange rates affect FDI inflows in the country. Given 5% level of significance, critical value from the table is 2.74, table 4.5 above shows computed F value as 16.260. This is a confirmation that overall the multiple regression model is statistically significant, in that it is a suitable prediction model for explaining how rates of inflation, rates of interest, growth in the economy and rates of exchange affects FDI inflows in the country.

Table 4.7: Analysis of Variance

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	33321.913	4	8330.478	16.260	.000 ^b
Residual	17931.654	35	512.333		
Total	51253.566	39			

a. Dependent Variable: FDI inflows

b. Predictors: (Constant) Growth in economic , rate of exchange, rate of interest, rate of inflation

Source: Research Findings (2018)

The study applied t-test to determine the importance of individual variables applied in this research 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 an indicator 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 4.8.

Table 4.8: Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	30.964	238.249		.130	.897
1 Inflation rate	-8.049	1.908	-.826	-4.220	.000
Interest rate	-1.689	2.263	-.091	-.746	.460
Exchange rate	-10.725	136.906	-.016	-.078	.938
Economic growth	.427	1.140	.041	.375	.710

a. Dependent Variable: FDI inflows

Source: Research Findings (2018)

From the above results, it is evident of the four selected predictor variables, only inflation is a significant determiner of FDI inflows as shown by a p value less than 0.05. The other variables (interest rates, economic growth and exchange rates) were found to be statistically insignificant.

The regression equation established was as follows:

$$Y = 30.964 - 8.049X_1$$

Where,

Y = FDI Inflows

X₁ = Inflation rates

On the above assessment regression model, the constant = 30.964 point out that if selected predictor variables (inflation rate, interest rates, economic growth and foreign exchange rates) were rated zero, FDI inflows would be 30.964. A unit rise in inflation rate would cause a drop in FDI inflows in the country by 8.049. The other selected variables (interest rates, economic growth and exchange rates) do not have a significant influence on FDI inflows as shown by high p values.

4.7 Discussion of Research Findings

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

The Pearson correlation coefficients between the variables revealed existence of a strong negative and significant correlation between inflation rate and FDI inflows into the country ($p=-.798$, $p<0.005$). The relationship between economic growth and FDI inflows was found to be weak, positive and insignificant ($p=.152$, $p>0.005$). The study also showed that there exist a strong negative correlation between exchange rates and FDI inflows ($p=-.637$, $p<0.005$). The relationship between interest rate and FDI inflows was found to be weak, positive and insignificant ($p=.053$, $p>0.005$). This implies that movement in interest rates is positively correlated to FDI inflows but not in a significant manner

The model summary revealed that the independent variables: inflation rate, interest

rates, economic growth and exchange rate explains 65% of changes in the dependent variable as indicated by the value of R^2 meaning that there are other factors that this model does not include which account for 35% of changes in FDI inflows in Kenya. The model was found to be fit at 95% level of confidence since the F-value of 16.260 is higher than the critical value. This implies that overall the multiple regression model is statistically significant, in that it is an adequate prediction model for explaining FDI inflows in Kenya.

The findings of this study are in agreement with Mbui (2017) sought to establish the impacts of interest rates on foreign direct investments inflows in the energy and petroleum industry 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, inflation rates as measured by quarterly CPI and exchange rates as measured by quarterly exchange rate between ksh and usd. FDI inflows into the energy and petroleum industry in Kenya were the dependent variable which the study sought to explain and it was measured by FDI inflows in the energy and petroleum industry on a quarterly basis. Secondary data was collected for a period of 10 years (January 2007 to December 2016) on a quarterly basis. The results revealed that individually, interest rate and exchange rates are not significant determiners while economic growth and inflation rates of FDI inflows into the energy and petroleum industry in Kenya are significant.

This study is in agreement with Njuguna (2016) who analyzed the relationship between exchange rates and FDI in Kenya. The study was conducted over a period of ten years from January 2006 to December 2015 using secondary data on FDI remittances as well as the spot rate for exchange rate over that period with data being collected monthly. Inflation and economic growth were used as control variables. A

correlation analysis of the two variables revealed a strong positive association showing that a rise in one variable was likely to cause a rise in the other. This study concluded that exchange rates, inflation and economic growth do influence the levels of FDI in Kenya. The model summary revealed that the independent variables: exchange rates, inflation and economic growth have a correlation of 94.3% with the dependent variable which implies that they are significant predictors of foreign direct investment in Kenya.

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 a few limitations encountered and ideas to base future studies.

5.2 Summary of Findings

The study seek to investigate effect of inflation rate on FDI inflows in Kenya. The independent variables for the study were, Growth in economic, rate of exchange, rate of interest, rate of inflation. The study adopted a descriptive research design. Secondary data was obtained from CBK and KNBS and was analyzed using SPSS software version 21. This research used quarterly data for a period of ten years from January 2008 to December 2017.

From the results of correlation analysis, a strong negative correlation was found to exist between inflation rate and FDI inflows in Kenya and the correlation was significant as indicated by a p value less than 0.05. The relationship between exchange rate and FDI inflows in Kenya was found to be strong, negative and significant while interest rates had a weak negative but insignificant relationship with FDI inflows in Kenya. Economic growth exhibited a weak positive and insignificant correlation with foreign direct investment inflows as shown by a p value that was more than 0.05.

The co-efficient of determination R-square value was 0.650 which means that about 65 percent of the variation in FDI inflows in Kenya can be explained by the four

selected independent variables while 35 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 ($R=0.806$). ANOVA outcomes reveal that the F statistic was significant at 5% level with a $p=16.260$. Therefore the model was fit to explain the relationship between the study variables.

The regression results show that when all the selected dependent variables (inflation rate, interest rate, economic growth and exchange rates) are rated zero, FDI inflows in Kenya would be 30.964. A unit increase in inflation rate would lead to a decrease in FDI inflows in the country by 8.049. The other selected variables (rates of interest, growth in the economy and rates of exchange) don't have a significant influence on FDI inflows as shown by high p values.

5.3 Conclusion

From the study findings, a conclusion is drawn that FDI inflows in Kenya have a negative association with inflation rate. The study therefore concludes that high inflation rates lead to reduced FDI inflows in the country and to a significant extent. Economic growth was established to be positively related to FDI remittance in the country and therefore an increase in economic growth leads to an increase in FDI remittance in the country. The study found that interest rates and exchange rate had a negative correlation with FDI inflows in the country and we can therefore conclude that higher interest rates and exchange rates tend to discourage foreign direct investment inflows in Kenya.

This study concludes that independent variables selected for the study inflation rate, interest rates, economic growth and exchange rates influence FDI inflows in the

country to a significant extent as they account for 65 percent of the changes in FDI inflows in the country. The fact that the four independent variables explain 65% of changes in FDI inflows in Kenya indicate that the variables not used explain 35% of the variation in FDI inflows in the country. The overall model was found to be significant as explained by the F statistic. Thus, it is adequate to resolve that variables of this study significantly affect FDI inflows into the country as illustrated by the p-value in ANOVA summary.

This finding concurs with Njuguna (2016) who examined the connection between exchange rates and foreign direct investment in Kenya. The study was conducted over a period of ten years from January 2006 to December 2015 using secondary data on FDI remittances as well as the spot rate for exchange rate over that period with data being collected monthly. Economic growth and inflation were used as control variables. A correlation analysis of the two variables showed a strong positive association meaning that an increase in one variable was likely to result in an increase in the other variable. The study concluded that exchange rates, inflation and economic growth do influence the levels of FDI in Kenya. The model summary revealed that the independent variables: exchange rates, inflation and economic growth have a correlation of 94.3% with the dependent variable which implies that they are significant predictors of FDI in Kenya.

5.4 Recommendations

The study established that there is a significant but negative influence of inflation rate on FDI inflows in the country. This study recommends that there is need for policy makers to regulate the inflation levels prevailing in the country bearing in mind that they influence FDI inflows in the country. Economic growth was also found to have a

positive effect on FDI inflows and therefore this study recommends that policy makers should develop measures to boost economic growth as it attracts foreign direct investments.

The study found that exchange rates have a negative 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. Interest rate was also 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

This study had a scope of a ten years' duration which was from year 2008 to the year 2017. The study did not establish whether the study results would grasp for a lengthier research period. Further it is not clear whether alike results would result beyond year 2017. A longer duration would be more favourable as it would accommodate major economic conditions such as booms and recessions.

Data quality is one of the study limitations. From this research, it is hard to conclude whether the results present the true facts about the situation. Secondary data that was used can only be assumed precise. The measures used may keep on changing from one year to another due to existing conditions. The study used secondary data that had already been obtained and was in the public domain, unlike the primary data which is first-hand. 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

The study focused on inflation rate and FDI inflows in Kenya and relied on secondary data. A research study where data collection relies on primary data like in-depth questionnaires and interviews covering the different sectors that receive FDI is recommended so as to complement this research.

The study was not all-inclusive of the independent variables influencing FDI inflows in Kenya and this study advocate for further studies to be conducted to incorporate other factors like money supply, 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 important in confirming or contradicting 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 demerits of regression models, other models such as the Vector

Error Correction Model (VECM) can be adopted to determine different connections between the variables.

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APPENDICES

Appendix I: Research Data

Year	Quarter	FDI inflows	Interest rate	Exchange rate	Inflation rate	Economic growth
2008	1	24.370	13.893	1.832	5.870	3.100
	2	31.220	13.993	1.797	5.390	3.500
	3	19.780	13.740	1.836	5.380	0.400
	4	23.220	14.440	1.890	5.040	3.700
2009	1	33.660	14.773	1.901	4.710	5.600
	2	49.220	14.883	1.895	4.560	5.400
	3	17.480	14.763	1.884	4.160	10.100
	4	17.890	14.797	1.877	4.030	7.700
2010	1	18.230	14.920	1.884	6.010	5.700
	2	18.360	14.477	1.898	6.390	7.300
	3	18.470	14.150	1.908	6.400	10.400
	4	22.560	13.890	1.907	6.430	12.500
2011	1	24.360	13.903	1.915	6.470	12.500
	2	25.440	13.957	1.936	6.480	4.200
	3	25.990	14.417	1.969	6.590	2.300
	4	27.070	15.573	1.971	6.660	0.300
2012	1	39.470	15.620	1.925	6.670	0.300
	2	42.190	15.977	1.925	6.780	2.200

Year	Quarter	FDI inflows	Interest rate	Exchange rate	Inflation rate	Economic growth
	3	42.270	16.083	1.926	6.830	7.200
	4	42.290	16.403	1.932	6.840	1.200
2013	1	42.390	16.540	1.938	6.980	10.700
	2	47.240	16.677	1.927	7.240	10.000
	3	48.790	16.947	1.941	7.260	7.100
	4	49.200	16.960	1.934	7.720	5.200
2014	1	52.180	17.000	1.936	7.850	7.300
	2	52.680	17.347	1.941	8.150	7.200
	3	52.700	17.430	1.946	8.320	8.500
	4	53.430	17.900	1.954	8.630	10.200
2015	1	54.850	17.920	1.962	9.020	10.100
	2	59.450	17.927	1.988	10.300	8.800
	3	62.290	18.147	2.007	10.700	11.800
	4	62.420	18.323	2.013	11.920	7.000
2016	1	65.110	20.003	2.008	12.780	8.100
	2	66.020	20.053	2.005	13.390	7.900
	3	66.670	20.213	2.006	14.300	6.800
	4	79.830	13.687	2.007	15.220	4.000
2017	1	89.930	13.653	2.015	15.830	4.700
	2	210.920	13.660	2.014	16.830	3.500

Year	Quarter	FDI inflows	Interest rate	Exchange rate	Inflation rate	Economic growth
	3	150.670	13.680	2.015	16.290	1.700
	4	57.490	13.677	2.014	15.920	2.400