EFFECT OF INTEREST RATES ON FOREIGN DIRECT INVESTMENT INFLOWS IN KENYA

BY

RACHEAL NYANYUKI

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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.

Signed: _____ Date: _____

RACHEAL NYANYUKI

D63/77767/2015

This research project has been submitted for examination with our approval as the University Supervisors.

Signed: _____ Date: _____

DR. MIRIE MWANGI

Senior Lecturer, Department of Finance and Accounting

School of Business, University of Nairobi

Signed: _____ Date: _____

RONALD CHOGII

Lecturer, Department of Finance and Accounting

School of Business, University of Nairobi

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DEDICATION

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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

UNCTAD   United Nations Conference on Trade and Development

GDP   Gross Domestic Product

KES   Kenya Shillings

OECD   Organization for Economic Corporation and Development

OLI   Ownership, Location and Internalization

SPSS   Statistical Package for Social Sciences

USD   United States Dollar

VIF   Variance Inflation Factors

ABSTRACT

Interest rates are critical determinants of foreign direct investment. Traditionally, an investor will go for credit sources of low cost or lower interest rates and invest it in an economy which promises 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 low interest rates. Consequently, there is high investment in states which offer better investment returns and security in the form of lower interest rates as well as a better business environment. The study aims at determining the impact 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, external debts as measured by quarterly external debt in natural logarithm form and balance of payment as measured by quarterly difference between exports and imports in natural logarithm form. 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. Collection of secondary data was done for a period of 10 years (January 2008 to December 2017) on a quarterly basis. This study used a descriptive research design. A multiple linear regression model was employed for analyzing the association between the variables. SPSS version 21 was employed for data analysis purposes. The results of the study produced R-square value of 0.700 whose implication is that about 70 percent of the variation in FDI inflows in Kenya can be explained by the four selected independent variables while 30 percent in the variation was associated with other factors not covered in this research. The study also found that the independent variables were strongly correlated with FDI inflows (R=0.837). 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 have a significant negative effect on foreign direct investment inflows while external debt as well as balance of payment have a significant positive impact on foreign direct investment inflows in Kenya. Economic growth was found to be an insignificant determiner of FDI inflows. 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

Foreign Direct Investment (FDI) not only offers countries with much-needed resources for domestic investment but also creates job opportunities, help transfer managerial expertise and technology all contributing to the advancement of the economy (Mishkin. & Eakins, 2009). Most governments have appreciated the critical role the FDI plays and have established various ways of attracting it. However, the macroeconomic environment in the home country must be favourable to attract foreign investors and some of the main factors of the operational monetary policy regime are real interest rates of a country relative to others (Adam & Tweneboah, 2009).

The study was based on three theories, namely; the loanable funds theory of interest rates, the classical theory and the rational expectations theory. Loanable funds theory argues that determination of the interest rates spread is founded on the market forces of demand and supply of the loanable funds. The interest rates are determined as the level at which demand and supply for loanable funds are equal and this goes against interest rate capping. Classical theory posits that the economy is viewed as being able to regulate itself. As a result, it applies savings and investments to establish the equilibrium interest rate obtainable from the point where the investments and the savings curves intersect (Oost, 2002). The study is also based on theory of rational expectations which uses statistical tools to show that businesses and workers shape the economy by updating and interpreting information regarding the future of the economy. Therefore, government monetary policies can be anticipated which affects those policies' outcomes (Chandra, 2008).

Kenya has a long standing rich history with foreign firms dating back to the 1960s. For years Kenya has been seen as an attractive destination for foreign investors seeking to invest in the greater East and Central Africa region. However, the country has also seen multinational corporations that had well established operations in the country leaving in unclear circumstances and this has negatively affected FDI inflows into the country (UNCTAD, 2015). Sameer Africa bowed out in September 2016, due

to cheap and subsidized imports, in 2014, Eveready East Africa closed its Nakuru manufacturing plant and imported batteries from its affiliate in Egypt because of stiff competition from cheap illegal imports, and after two weeks, Cadbury Kenya declared it had quit the Kenyan market. Other companies which have since moved out of Kenya to alternative markets are Colgate Palmolive, Unilever, Johnson and Johnson Procter and Gamble, Reckitt Benckiser and Bridgestone.

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 duration. Devereux and Yetman (2002), defined interest rates as the price paid by a borrower 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.

Interest rate is a proxy for financial prices for credit and affects resource allocation, production levels, prices and profitability (Uddin & Alam, 2009). Rate of interest has an advance effect on the market because a rise of rate of interest makes investors change their financial decisions on investments. Their decision may favor investment in fixed income securities other than in capital markets (Syed & Anwar, 2012). High interest risk will either push the lenders out of business or borrowers will be unable to pay (Ariemba, Kiweu & Riro, 2015).

Increase in rates of interest makes the funds costs so expensive and this has the potential of crowding out private demand, especially where there is significant investment sensitivity to interest rate changes. Nevertheless, high rates of interest have the potential of increasing savings and this can attract foreign inflows leading to appreciation of a local currency (Jordaan, 2013). Volatile fluctuations in rates of interest and unpredictability on incidence of next rate of interest, lead to unpredictability in various macroeconomic variables like investment, savings, output,

employment, aggregate demand and consumption in the economy (Matete, Ndede & Jagongo, 2014).

1.1.2 Foreign Direct Investments

Hill (2005) defined FDI as the long lasting investments which are outside the investor's physical or economic boundaries. 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 Ryan (2006), 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.

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.

Generally, FDI are the net inflows of investments from one economy to another and therefore FDI is measured by the net inflow, which is the remainder of first time investment inflows after removing the divestiture and is measured as a percentage of GDP of that economy (Shahbaz, Lean & Kalim, 2013). FDI is advantageous to multinational enterprises as it is a means of entering the markets, accessibility to resources and reduced cost of production. It also benefits the invested country as it provides domestic investment capital which is much in need, creating job opportunity to locals, introduces new management skills and strategies, business practices, technology and economic concepts that ensures growth of local businesses, new

industries and increased revenue which leads to economic development (Karthik & Kannan, 2011, Selma, 2013).

1.1.3 Interest Rates and Foreign Direct Investment

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, there is high investment in states which offer better investment returns and security in the form of lower interest rates as well as a better business environment. Capital therefore usually moves from states with low-level rate return to nations with high return rates (Pholphirul, 2002).

The practical relevance of the interest-parity type of caveat has been dismissed some researchers. Countries have structured their financial markets differently. The aspect of capital market imperfection is crucial in ascertaining the speed with which investment returns are realized. According to Froot and Stein (1991) financiers suffer as a result of unavailability of relevant information about their investments. These inadequacies are due to the imperfect nature of financial markets. For this reason investors demand a return high enough to cover the extra cost they incur to keep track of their investments. Given a chance investors opt for private capital as a source of financing. This is because it increases the holdings of the parent company (Madura & Fox, 2011).

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 a measure of return on investment and as the cost of borrowing capital. In the past, an investor will go for credit sources that have a low cost or lower interest rates and invest it in an economy which promises higher returns. According to Vesarach (2014), the determining factors of FDI include interest rates, inflation, GDP, external debts, labor cost, money growth and political rights. He concluded that countries should offer competitive interest rates to attract foreign direct investments in their country.

1.1.5 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. The interest rate by commercial banks and other financial institutions has been fluctuating across period and has been greatly influenced by inflation patterns (CBK, 2014). In August 2016, the bill to cap interest rates was accented into law and this move saw the introduction of interest rate capping on lending rates at 4.0 percent above the Central Bank Rate (CBR) and a floor on the deposit rates at 70 percent of the CBR (CMA, 2016).

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. 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 (UNCTAD, 2015).

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 nations for instance Ghana, Tanzania, Zambia, Uganda,

Nigeria, Mozambique as well as 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 FDIs have become a crucial topic for governments, for academic research and also for policy makers (Mahiti, 2012). 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 (Mitullah, 2010). Foreign direct investment inflows movements into a country are influenced by changes in many economic variables and these fundamentals' future prospects changes. 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.

Kenya has a long standing rich history with foreign firms dating back to the 1960s. For years Kenya has been seen as an attractive destination for foreign investors seeking to invest in the greater East and Central Africa region. However, the country has also seen multinational corporations that had well established operations in the country leaving in unclear circumstances and this has negatively affected FDI inflows into the country. Sameer Africa bowed out in September 2016, due to imports that were cheap and subsidized, in 2014, Eveready East Africa closed its Nakuru manufacturing plant and imported batteries from its affiliate in Egypt because of stiff competition from imports that were cheap and illegal, after two weeks, Cadbury Kenya declared it had quit the Kenyan market. Other companies which have since moved out of Kenya for alternative markets are Colgate Palmolive, Unilever, Johnson and Johnson, Procter and Gamble, Reckitt Benckiser and Bridgestone. Experts have attributed these exits to government policies and macroeconomic variables and this study will seek to investigate whether interest rates and exchange rates influences FDI inflows.

Empirical evidence is largely inconsistent and quite varied on the main determinants of FDI inflows in a country. Okafor (2012) evaluated whether in Nigeria, home macroeconomic variables matter for foreign direct savings inflow. The outcome indicates that actual GDP, interest rate as well as actual exchange rate are primary indicators of FDI in Nigeria. Chingarande (2011) investigated the impact of interest rates on FDI in Zimbabwe. This researcher noted that no connection existed between interest rates and the inflow of FDIs. Babatunde (2012), in a study on the effect of tax incentives on FDI in the oil and gas industry in Nigeria, found that an important effect of tax enticement, accessibility of natural resources as well as trade openness on foreign direct investment exists. 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. Their study established that interest rates had had a relationship that was weak and positive with FDI inflows.

Studies done in the Kenyan context include Kiplagat (2016) who conducted a study to establish the impact of interest rates on FDIs in Kenya and found that a positive correlation exists between interest rates with FDI. Mbui (2017) sought to establish the impact of interest rates on FDI inflows in the energy and petroleum industry in Kenya and established that interest rate is an insignificant determiner of foreign direct investment inflows into the energy and petroleum industry in Kenya. Ruhiu (2017) conducted a study to establish the impact of interest rates on FDI and found that interest rates had an insignificant effect on foreign direct investment inflows. Bett (2017) sought to establish the impact of interest rates on FDI inflows in Kenya and concluded that interest rate and economic growth are significant determiners of FDI inflows while exchange rates and inflation rates are not significant determiners of FDI inflows in Kenya. The lack of consensus among the various scholars on the impact of interest rates on FDI inflows is the motivation for carrying out the current study. The current study attempted to give an explanation to the research question; what is the effect of interest rates on foreign direct investment inflows in Kenya?

1.3 Objective of the Study

The objective of this study was to determine the effect of interest rates on foreign direct investment inflows in Kenya.

1.4 Value of the Study

This study's findings will be used 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 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 interest rates 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

The section reviews relevant theories which explain the relationship between interest rates and foreign direct investments. The theories selected for this study are the loanable funds theory of interest rates, classical theory and rational expectations theory.

2.2.1 Loanable Funds Theory of Interest Rates

This theory was developed by Fry (1995) and it argues that in the theory of the loanable funds, there is an assumption that the interest rates charged usually are subject to determination by two market forces which are the demand for credit and supply of loanable funds. This theory focuses more on interest rates determination and long term interest rates explanation.

Loanable fund is the money the investors and entities in the economy have saved and intend to lend it to the potential borrowers. By using market demand as well as supply for loanable funds, this theory explains the interest rates on loans in the market. The supply for the loanable funds comes from the economic entities, government and individuals who opt not to spend but to save money for investing. Investors lending at an interest rate here is one way of investing. The demand for the loanable funds arises from individuals and business who wants to finance their businesses and investments such as purchase of assets that increase in value with time e.g. Land. As a result, borrower's choice to finance their investments through acquiring the credit facilities creates the demand for the loanable fund (Rocha, 1986).

As per the theory, determination of the interest rates spread is founded on the market forces of demand and supply of the loanable funds. Determination of interest rates is

as the level at which demand and supply for loanable funds are equal. According to research by Claeys and Vander (2008), loanable funds theory explains the determinants of interest rate spread, this is because if people do not save with the banks, there is insufficient supply of the loanable funds and the banks will not be able to lend or give credit facilities to the borrowers. As a result, there will be higher demand for the credit facilities than the supply of the loanable funds. This high demand leads to banks charging high interest rates. This has a resultant effect of widened interest rate spread. The loanable funds theory assumes that there is existence of a perfect competition within the market such that, neither a borrower nor the lender can determine the prices of the securities. Also, it assumes there exist free mobility of the funds in the market.

2.2.2 Classical Theory

The classical theory of the interest rates determination significantly relate to the classical theory of the economics. According to the classical theory, the economy is viewed as being able to regulate itself. As a result, it applies savings and investments to establish the equilibrium interest rate obtainable from the point where the investments and the savings curves intersect (Oost, 2002).

In the economy, individuals with surplus cash save their money in the banks as savings. This fund is available for borrowing by the economic entities that use the fund to invest in order to generate more income that will be saved in the banks as savings. If the savings exceed investments, it implies there is excess savings of the money than the investments. As a result, the interest rates drop until the borrowers can access the fund cheaper. Conversely, if the level of savings is less than the investments, the level of the interest rates will rise until it reaches the equilibrium point which is the point where the savers find the incentive or the reward to keep their money in the bank (Gelos, 2006).

When the interest rates increase, the savings in the economy increases due to the reward associated with the increased interest rate on savings. Additionally, as the rate of interest charged decreases, the cost that is carried in the borrowing also increases leading to investments. When the savings increases, the lending rates decline which lead to increased investments from the ease of access of the money at a lower interest rate (Grenade, 2007).

2.2.3 Rational Expectations Theory

This theory of rational expectations by Lucas 1970) applied arithmetical techniques to demonstrate the ways in which enterprises can maneuver their business strategies on the improvement their financial stability through the interpretation of figures to predict the future economic trend. Since governments policies are prone to changes within the short time possible, the prediction of the future economic outcome can be anticipated. Lucas applied the rational expectations theory to dismiss a number of orthodox financial statements of the 1970s, particularly the theories of British economist John Maynard Keynes and the efficiency of government involvement in the financial system. It could consist of the money in form of short term investments, the coins and notes currency, safe assets, cash and bank balance held in the savings and currents accounts. The economy of a country is affected by the money in supply and therefore the monetary authority has to regulate the amount in circulation through the monetary policies. This difference the idea that government rule manipulates the resolution of people in the financial system (Madura, 2010).

According to Lucas study, the rational expectations theory has two main parts; the old hypothesis that depression is self-corrective. The moment people starts hoarding money, it becomes very difficult to know that the recession has occurred. Immediately the individuals recognizes this recession, they intend to fear and the market quickly gain strengths. At this scenario, the manufacturers intend to lower prices to enhance a larger market share, and the workers also reduce their wages to please the employer, making the purchasing power of the shilling to grow. The part is that, the government involvement can only vary from ineffectualness to damage. This then means, that no change that the government can make if the businesses have not cut prices of their commodities to let the economy to take its corrections. Keynesians are then robbed of the argument that may be the central bank may be helpful in speeding upturn, but not making it happen (Madura, 2010). This theory is related to this study as it explains how government policies such as monetary policy are ineffectual in influencing business growth and foreign direct investment 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

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 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 phenomenon (Kinuthia, 2010).

2.3.1 Interest Rates

The economic theory which elaborates on ways that capital move in the globalized economy insist that capital usually flows to nations whose investments have a higher return as compared to nations whose interest rates are higher (Pholphirul, 2002). Consequently, nations with high investments are those which offer better investment returns and security in the form of lower interest rate as well as a better environment for business. Capital therefore usually moves from countries with low rate 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 would seek credit sources with low costs or interest rates that are lower and carry out investment in an economy which promises higher returns. According to Vesarach (2014), who carried out a research 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 External Government Debt

According to economic theory, government external debt is good for a country's economic growth which in effect affects the various sectors that make up the economy. However, this is only possible up to a certain level beyond which its effects are adverse to an economy. The theory of debt overhang as explained by Krugman (1988) clearly demonstrates how accumulation of high public debt leads to low FDI inflows translating into low economic growth of a country.

According to Krugman (1988), debt overhang refers to a situation where the existing external debt is very large. The theory suggests that foreign investors will be discouraged from investing in a country that has a large external debt since part of their proceeds would be used to service the debt through high taxation. However, this theory posits that reducing debt obligation results to a rise in both domestic and foreign direct investment thus minimizing the chances of debt default.

2.3.3 Balance of Payments

The Balance of Payment (BOP) can be defined as trade balance between two nations. It is a reflection of all the payments and receipts for dividends, products and interests between the two nations. A country has a negative balance of payment in the current account when its imports are greater than what it is exporting. This is also referred to as a deficit and it shows that a nation needs more foreign currency than it acquires from the products that it's exporting. The balance of trade and earnings on foreign investment of a country are reflected by its current account which involves transactions such as its imports, exports and debt, among others. More expenditure of its currency by a country on imports than on exports causes a deficit in the current account. Soaring current account deficits are often an antecedent to difficulties in balance of payments (Higgins & Klitgaard, 1998).

Theoretically, economies consuming more than they are generating through running large deficits, are unable to have enough funds for investing in the economy and thus foreign investors shy away from such a country. However, an increase in exports relative to imports may imply increase income for the locals which can end up attracting foreign direct investments (Higgins & Klitgaard, 1998).

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 between 1983-1986, but only had a link that was weak between 1975-1978.

Basing on the same guidelines, Aoki (2007) established that for the less developed countries, there's a relationship that is weak and positive as well as a weak negative association for the developed countries. Asiedu (2002) asserted that growth that is lagged for non-Sub-Saharan African nations and the full sample 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.

2.4 Empirical Review

Several studies have been carried out both locally and internationally to support the relationship between interest rates, exchange rates and foreign direct investments, but these studies have produced mixed results.

2.4.1 Global Studies

Ullah, Haider and Azim (2012) investigated the association of FDI with exchange rate and volatility of exchange rate in Pakistan. Time series data over a period of 30 years between 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 caused FDI and not the other way round.

Parajuli (2012) investigated the association between the FDI, 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.

Okafor (2012) studied on the Nigerian value of domestic macroeconomic variables matter for FDI inflow. Prediction that flow of foreign capital could lead to stimulation of economic growth for countries 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 exchange rate, interest rate, and real GDP as per the findings. FDI inflow is majorly determined by domestic macroeconomic variables. The importance and the flow of FDI in Nigeria can be achieved when policy makers ensure improvements are done in the macroeconomic environment.

Bilawal et al., (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 (1982-2013) from State Bank of Pakistan website. In data analysis, both regression and correlation analysis were conducted using SPSS to establish the nature of association between foreign direct investment and exchange rate. Results from correlation revealed that a significant and positive association existed between FDI and exchange rate.

2.4.2 Local Studies

Kiplagat (2016) sought to establish the impact of interest rates on FDI inflows 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. Collection of secondary data was done for a period of 44 years (1971-2014). The results revealed that although interest rate had a correlation with FDI inflows, the correlation was not significant.

Njuguna (2016) investigated the association between exchange rates and FDI in Kenya. His study was carried out over a ten year period (Jan 2006-Dec 2015) using secondary data on FDI remittances as well as the spot rate for exchange rate over the ten years and collection of data done monthly. Inflation as well as economic growth were used as control variables. A correlation analysis of the two variables revealed a relationship that was strong and positive implying that when one variable increases, it would probably cause the other variable to increase. This study concluded that exchange rates, inflation and economic growth do influence the levels of FDI in Kenya.

Mbui (2017) sought to establish the impact of interest rates on 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 that the research sought to explain and it was measured by FDI inflows in the energy and petroleum industry on a quarterly basis. Collection of secondary data was done over a 10 year period (Jan 2007-Dec 2016) on a quarterly basis. 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 establish the impact of interest rates on FDI inflows 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. Collection of secondary data was done over a 10 year period (Jan 2007-Dec 2017) on a quarterly basis. 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

Conceptual model developed below portrays the expected relationship between the study variables. The factors characterized here are interest rates and foreign direct investment inflows. The independent variable is interest rate as measured by CBK quarterly lending rate on a quarterly basis. Economic growth as measured by quarterly GDP growth rate, external government debt as measured by the natural logarithm of government external debt on a quarterly basis and balance of payments as measured by the natural logarithm of exports minus imports on a quarterly basis are the control variables for this study. Foreign direct investment inflow will be measured by quarterly FDI inflows.

Figure 2.1: The Conceptual Model

Independent variable   **Dependent variable**

```
┌─────────────────────┐
│ Interest rate       │
│                     │
│ (CBK lending rate)  │
│                     │
└─────────────────────┘
                         ╲
                          ╲        ┌─────────────────────┐
                           ╲       │ FDI Inflows         │
                            ➤      │                     │
                           ╱       │ (Quarterly FDI      │
┌─────────────────────┐   ╱        │  Inflows)           │
│ Economic Growth     │  ╱         └─────────────────────┘
│                     │ ╱
│ External Debt       │╱
│                     │
│ Balance of Payments │
└─────────────────────┘
```
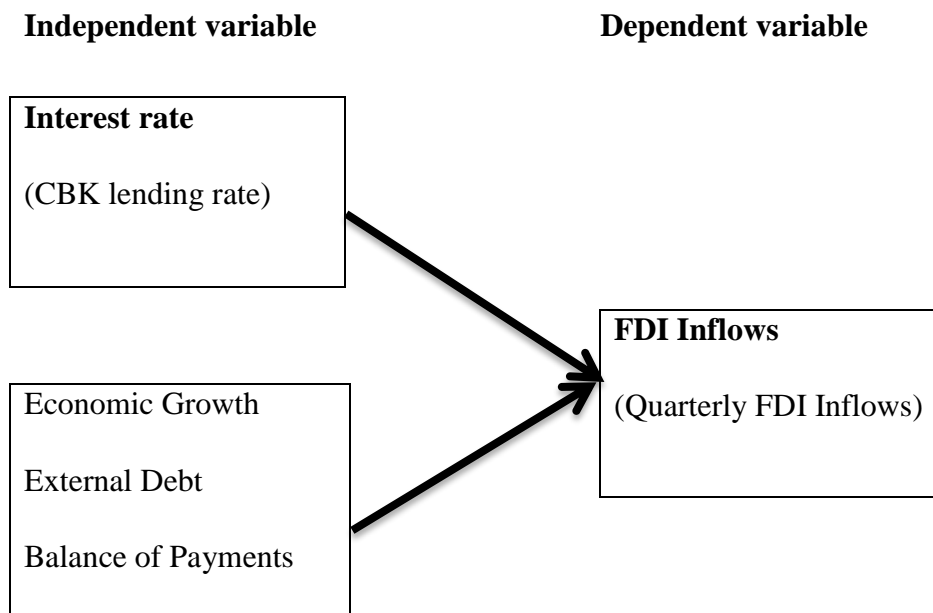
Control variables

Source: Researcher (2018)

2.6 Summary of the Literature Review

The chapter has focused 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. Kiplagat (2016) determined a positive and significant impact of interest rates on FDI. Ruhiu (2017) established that interest rates had an insignificant effect on foreign direct investment inflows. The lack of consensus among the previous local studies is the motivation for the currents study. This study seeks to contribute to this debate by addressing the question; what is the impact of interest rates on foreign direct investment in Kenya?

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

To determine the effect of interest rates on foreign direct investment, a research methodology is necessary to outline how the research was carried out. This chapter has four sections namely; research design, data collection, diagnostic tests and data analysis.

3.2 Research Design

A descriptive research design was employed in the study to investigate the impact of interest rates 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 is appropriate for the study as the researcher is familiar with the phenomenon under investigation but want to know more in terms of the nature of relationships 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

Data used for the study was the FDI remittances into Kenya per quarter, average CBK lending rate per quarter, average government external debt per quarter, average balance of payments per quarter and economic growth per quarter for the period between January 2008 and December 2017.

3.4 Data Collection

Data was exclusively obtained from a secondary source. This 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 January 2008 to December 2017 collected on a quarterly basis. Data on interest rates and government external debt was collected from the CBK website on a quarterly basis from 2008 to 2017. Data on balance of payments which was exports and imports and data on economic growth which was Kenya's GDP growth rate were collected quarterly from KNBS.

3.5 Diagnostic Tests

Linearity show that two variables X and Y are related by a mathematical equation Y=bX whereby c represents a constant number. Linearity test was gotten via 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 tests the assumption that the response variable residual 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 when there's a linear dependence between them that is complete and as it approaches to zero then the multicollinearity becomes more intense. 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 the different sources were organized in a manner that can help address the research objective. SPSS version 22 was used in analyzing the data. Both descriptive and regression analyses were carried out. In descriptive statistics, the minimum, maximum, mean, standard deviation, skewness and kurtosis were computed for each variable. 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 establish the association between the dependent variable (foreign direct investments) and independent variables: interest rate, external government debt, economic growth and balance of payments.

3.6.1 Analytical Model

Using the collected data, the researcher carried out a regression analysis to establish the extent of the association between interest rates and foreign direct investment inflows. The study applied the regression model below:

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

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

β_0 = y intercept of the regression equation.

$\beta_1, \beta_2, \beta_3$ and β_4, = are the slope of the regression

X_1 = Quarterly interest rates as measured by CBK lending rate

X_2 = Average quarterly external government debt in natural logarithm form

X_3 = Economic growth as measured by quarterly GDP growth rate

X_4 = Average quarterly balance of payments as measured by natural logarithm of exports minus imports

ε = error term

3.6.2 Tests of Significance

The researcher carried out parametric tests to determine the statistical significance of both the overall model and individual parameters. F-test was employed to determine the overall model significance and it was obtained from Analysis of Variance (ANOVA) while a t-test was employed to establish the individual variables' statistical significance.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND INTERPRETATION

4.1 Introduction

The chapter represents the study's results and findings based on the research objective. This chapter's focus was on analyzing the data collected 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 study's results 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 employed in testing for heteroscedasticity. The null hypothesis stated that no heteroscedasticity exists. Results in Table 4.1 show that the p-value (p=0.3873) 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	41.42	39	0.3873

Source: Research Findings (2018)

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's results 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[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Interest rates	.178	40	.300	.881	40	.723
Economic Growth	.176	40	.300	.892	40	.784
External debt	.181	40	.300	.896	40	.792
Balance of payments	.173	40	.300	.918	40	.822
a. Lilliefors Significance Correction						

Source: Research Findings (2018)

Autocorrelation tests were run to check for correlation of error terms across time periods. Autocorrelation was tested by use of the Durbin Watson test. A durbin-watson statistic of 1.643 indicated that the variable residuals were not serially correlated because 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	.837[a]	.700	.666	20.956947	1.643

a. Predictors: (Constant), Balance of payments, Interest rate, Economic growth, External debt

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 of the variables applied in the research. All the variables were analyzed by use of SPSS software over the ten year period (2008 to

2017) on a quarterly basis. FDI inflows had a mean of 49.695 with a standard deviation of 36.252. Interest rate recorded a mean of 15.810 with a standard deviation of 1.955. Economic growth resulted to a mean of 6.215 with a standard deviation of 3.488. External debt resulted to a mean of 28.622 with a standard deviation of 0.523 while balance of payments had a mean of 0.015 and standard deviation of 0.237.

Table 4.4: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
FDI inflows (Ln)	40	17.480	210.920	49.69500	36.251814
Interest rate (%)	40	13.653	20.213	15.80990	1.954510
Economic growth (%)	40	.300	12.500	6.21500	3.487895
External debt (Ln)	40	27.874	29.585	28.62165	.521503
Balance of payments (%)	40	-1.000	.558	.01450	.237236
Valid N (listwise)	40				

Source: Research Findings (2018)

4.4 Correlation Analysis

Pearson correlation was employed to analyze the level of relationship between FDI inflows and the independent variables for this study (interest rates, economic growth, external debt and balance of payments). 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=.053, p=.745). 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 positive but insignificant (p=.152, p>0.350). This implies that movement in economic growth is positively correlated to FDI inflows but not in a significant manner.

The study also revealed that external debt and FDI inflows were strongly and positively correlated (p=.757, p>.000). The implication of this is that external debts

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have a strong positive association with FDI inflows and the association is significant. Balance of payments was found to have a weak negative and insignificant relationship with FDI inflows as evidenced by a p value which is greater than 0.05. 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 4.5: Correlation Analysis

		FDI inflows	Interest rate	Economic growth	External debt	Balance of payments
FDI inflows	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	40				
Interest rate	Pearson Correlation	.053	1			
	Sig. (2-tailed)	.745				
	N	40	40			
Economic growth	Pearson Correlation	.152	$.367^*$	1		
	Sig. (2-tailed)	.350	.020			
	N	40	40	40		
External debt	Pearson Correlation	$.757^{**}$	$.389^*$	.032	1	
	Sig. (2-tailed)	.000	.013	.844		
	N	40	40	40	40	
Balance of payments	Pearson Correlation	-.049	.051	.146	-.276	1
	Sig. (2-tailed)	.766	.755	.369	.085	
	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 four predictor variables; interest rates, economic growth, external debt and balance of payments. The study obtained the model summary statistics as depicted 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	.837[a]	.700	.666	20.956947	1.643

a. Predictors: (Constant), Balance of payments, Interest rate, Economic growth, External debt

b. Dependent Variable: FDI inflows

Source: Research Findings (2018)

According to the outcome in table 4.6 above, the R square value was 0.700, a discovery that 70 percent of the deviations in FDI inflows into the country is caused by changes in interest rates, economic growth, external debt and balance of payments. Other variables not included in the model justify for 30 percent of the variations in FDI inflows to the country. Also, the results revealed that there's a strong association among the selected independent variables and FDI inflows as shown by the correlation coefficient (R) equal to .837. A durbin-watson statistic of 1.643 indicated that the variable residuals were not serially correlated because the value was more than 1.5.

Table 4.7: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35881.790	4	8970.447	20.425	.000[b]
	Residual	15371.777	35	439.194		
	Total	51253.566	39			

a. Dependent Variable: FDI inflows

b. Predictors: (Constant), Balance of payments, Interest rate, Economic growth, External debt

Source: Research Findings (2018)

The significance value is 0.000 which is less than p=0.05. This implies that the model was statistically significant in the prediction of how interest rates, economic growth, external debt and balance of payments affect FDI inflows in the country. Given 5% level of significance, critical value from the table is 2.324, table 4.7 above reveals computed F value as 20.425. This makes the confirmation that the multiple regression model is overly statistically significant since it's a prediction model that suitably explains how interest rates, economic growth, external debt and balance of payments rates affects FDI inflows in the country.

Table 4.8: Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1725.126	200.985		-8.583	.000
	Interest rate	-5.234	2.037	-.282	-2.570	.015
	Economic growth	1.179	1.049	.113	1.125	.268
	External debt	65.138	7.407	.937	8.794	.000
	Balance of payments	36.788	15.034	.241	2.447	.020

a. Dependent Variable: FDI inflows

This 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 association between the dependent and the independent variables. At 95 percent level of confidence, a p-value of less than 0.05 was interpreted as a measure of statistical significance. As such, a p-value above 0.05 shows a statistically insignificant association between the dependent and the independent variables. Results are as depicted in table 4.8

From the above results, it is evident that three of the four selected independent variables are significant determiner of FDI inflows as shown by p values less than 0.05. Only economic growth was found to be insignificant as it produced positive but statistically insignificant values for this study.

The following regression equation was estimated:
$$Y = -1725.126 - 5.234X_1 + 65.138X_2 + 36.788X_3$$
Where,

Y = FDI Inflows

X_1 = Interest rates

X_2 = External debt

X_3 = Balance of payments

On the estimated regression model above, the constant -1725.126 shows that if selected dependent variables (interest rates, economic growth, external debt and balance of payments) were rated zero, FDI inflows would be -1725.126. A unit increase in interest rates would cause FDI inflows in the country to reduce by 5.234. A unit increase in external debt would cause FDI inflows in the country to go up by 65.138 while a unit increase in balance of payments would cause FDI inflows in the country to increase by 36.788.

4.7 Discussion of Research Findings

This study aimed at determining the impact 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, external debt as measured by quarterly external debt in natural

logarithm form and balance of payments rates as measured by natural logarithm of exports minus imports on a quarterly basis. 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 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 revealed the existence of a correlation that is strong and positive between external debts and FDI inflows. The results also revealed a correlation that is significant, positive and strong between balance of payments and FDI inflows in the country.

The model summary revealed that the independent variables: interest rates, economic growth, external debt and balance of payment explains 70% of changes of the dependent variable as shown by the R^2 value which means that other factors not made part of this model which account for 30% of changes in FDI inflows in Kenya exist. The model was found to be fit at 95 percent confidence level because the F-value of 20.425 is higher than the critical value. This implies that the multiple regression model is overly statistically significant since it's a prediction model that suitably explains FDI inflows in Kenya.

These findings conform with those of Kiplagat (2016) who sought to establish the impact of interest rates on FDI inflows 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. Collection of secondary data was over a 44 year period (1971-2014). The results revealed that although interest rate had a correlation with FDI inflows, the correlation was not significant.

This study is in contrast with Ruhiu (2017) who sought to establish the impact of interest rates on FDI inflows 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. Collection of secondary data was over a ten year period (Jan 2007-Dec 2017) on a quarterly basis. Results further revealed that individually, interest rate, inflation rates, exchange rates and economic growth are not significant determiners of FDI inflows in Kenya.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter shows the summary of research findings, the conclusions 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

This study's aim was to investigate the effect of interest rates on FDI inflows in Kenya. The independent variables were interest rates, external debts, economic growth and balance of payments. The study employed a descriptive research design. Secondary data was obtained from CBK as well as KNBS and was analyzed using SPSS software version 21. The study used quarterly data covering a period of ten years from January 2008 to December 2017.

The correlation analysis results showed that 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 established to be weak and positive. This study also showed that external debt and FDI inflows were strongly, positively and significantly correlated. The results also revealed that balance of payments and FDI inflows in the country were strongly, positively and significantly correlated.

The co-efficient of determination R-square value was 0.700 which implies that about 70 percent of the variation in FDI inflows in Kenya could be explained by the four selected independent variables while 30 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 was strongly correlated with FDI inflows in Kenya (R=0.837). ANOVA results reveal that the F statistic was significant at 5% level with a p=20.425. Therefore the model was fit to explain the association between the selected variables.

The regression results show that when all the selected dependent variables (interest rates, economic growth, external debt and balance of payments) are rated zero, FDI inflows in Kenya would be -1725.126. A unit increase in interest rates would cause FDI inflows in the country to reduce by 5.234. A unit increase in external debt would cause FDI inflows in the country to increase by 65.138 while a unit increase in balance of payments would cause FDI inflows in the country to increase by 36.788.

5.3 Conclusion

As per the findings, the study makes the conclusion 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 and to a significant extent. Economic growth was also determined to have a positive relationship with FDI inflows in the country and therefore a rise in economic growth results to a rise in FDI inflows in Kenya. This study found that balance of payment and external debt positively and significantly affect FDI inflows in the nation and we can therefore conclude that higher external debt and balance of payment tend to encourage FDI inflows in Kenya.

The study concludes that independent variables selected for the study interest rates, economic growth, external debt and balance of payment influence FDI inflows in the country to a significant extent as they account for 70 percent of the changes in FDI inflows in the country. The fact that the four independent variables explain 70% of changes in FDI inflows in Kenya imply that the variables not included in the model explain 30% of changes in FDI inflows in the country. The overall model was found to be significant as explained by the F statistic. Thus it's adequate to make the conclusion that these variables affect FDI inflows in the country in a significant manner as depicted by the p-value in ANOVA summary.

This finding concurs with Kiplagat (2016) who carried out a study to establish the impact of interest rates on FDIs in Kenya. This study employed a descriptive research design that helped in establishing the association between interest rates and FDI in Kenya. The sample frame was based on 44 data points, that is, time series annual data of the dependent and independent variables between 1971-2014. Foreign direct investment was the dependent variable whereas interest rates, GDP, inflation, balance of payment and exchange rates were the independent variables because they're the

economy's main macroeconomic variables. Collection of data was from only secondary sources and the data was analyzed by use of SPSS 17.0. Data was analyzed by use of descriptive and inferential data analysis. The study's overall findings and conclusion was that interest rates are positively correlated with foreign direct investment but is however completely insignificant in establishing the foreign direct investments inflows level in Kenya.

5.4 Recommendations

This study established that there is a negative influence of interest rates on FDI inflows in the country which is 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 interest rates that are high have a significant negative influence on foreign direct investment inflows in the nation.

This study found that external debt has a positive influence on foreign direct investment inflows in the nation. This study recommends that policy makers should be motivated to fund projects using external debts as this will positively influence foreign direct investment inflows. However, high debt levels may also have some negative consequences in the economy and so policy makers should strike a balance between the benefits of external debt and the ills associated with unsustainable debt levels.

Balance of payment was determined to positively and significantly affect FDI inflows in the country. The study recommends that policy makers should pay attention to the prevailing level of exports and imports as they have a significant impact on foreign direct investment inflows in the country. Boosting exports will go a long way in encouraging foreign direct investments.

5.5 Limitations of the Study

The scope of this research was for ten years 2008-2017. 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 2017. A longer study period is more reliable as it will take into account major economic conditions such as booms and recessions.

The quality of the data is a limitation of the study. It's hard to make a conclusion from this study if the findings portray the true facts regarding the situation. The data that

has been used is only assumed to be accurate. The measures employed may continue changing from one year to another according to the conditions that prevail. This study used secondary data that had already been gotten and was in the public domain, contrary to primary data whereby data is obtained first-hand. This 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's focus was on interest rates and foreign direct investment inflows in Kenya and relied on secondary data. A research study where collection of data depends on primary data, that is, in-depth questionnaires as well as 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's recommendation is that further studies be carried out to incorporate other variables like money supply, exchange rates, inflation, 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, because of the regression models' shortcomings, other models such as the Vector Error Correction Model (VECM) can be employed in explaining the various associations between the variables.

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APPENDICES

Appendix I: Research Data

Year	Quarter	FDI inflows	External debt	Interest rate	Balance of payments	Economic growth
2008	1	24.370	27.874	11.981	-0.101	3.100
	2	31.220	27.890	12.139	0.558	3.500
	3	19.780	27.893	11.331	-0.067	0.400
	4	23.220	27.968	11.812	-0.168	3.700
2009	1	33.660	28.063	12.022	0.066	5.600
	2	49.220	28.079	12.198	-0.027	5.400
	3	17.480	28.093	11.482	0.260	10.100
	4	17.890	28.122	11.878	-0.179	7.700
2010	1	18.230	28.094	12.120	0.244	5.700
	2	18.360	28.129	12.301	0.049	7.300
	3	18.470	28.175	11.493	0.102	10.400
	4	22.560	28.217	11.956	0.081	12.500
2011	1	24.360	28.267	12.171	0.098	12.500
	2	25.440	28.350	12.329	0.225	4.200
	3	25.990	28.469	11.504	0.008	2.300
	4	27.070	28.430	12.000	-0.131	0.300
2012	1	39.470	28.337	12.247	0.113	0.300
	2	42.190	28.418	12.396	-0.007	2.200
	3	42.270	28.482	11.632	0.021	7.200
	4	42.290	28.531	12.086	0.006	1.200
2013	1	42.390	28.536	12.306	-0.087	10.700
	2	47.240	28.544	12.495	0.137	10.000
	3	48.790	28.606	11.613	0.047	7.100
	4	49.200	28.633	12.085	-0.248	5.200
2014	1	52.180	28.660	12.291	0.261	7.300
	2	52.680	28.728	12.480	0.250	7.200
	3	52.700	28.815	11.655	-0.098	8.500
	4	53.430	28.840	12.170	-0.222	10.200

Year	Quarter	FDI inflows	External debt	Interest rate	Balance of payments	Economic growth
2015	1	54.850	28.950	12.441	0.217	10.100
	2	59.450	29.046	12.623	-0.135	8.800
	3	62.290	29.147	11.673	-0.229	11.800
	4	62.420	29.172	12.249	-0.056	7.000
2016	1	65.110	29.234	12.475	0.353	8.100
	2	66.020	29.274	12.662	0.042	7.900
	3	66.670	29.327	11.797	-0.008	6.800
	4	79.830	29.349	12.334	0.169	4.000
2017	1	89.930	29.447	12.574	0.010	4.700
	2	210.920	29.526	12.750	0.110	3.500
	3	150.670	29.566	11.777	-0.084	1.700
	4	57.490	29.585	12.328	-1.000	2.400