THE RELATIONSHIP BETWEEN EXCHANGE RATES AND FOREIGN DIRECT INVESTMENT IN KENYA

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D63/79389/2015

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

NOVEMBER, 2016

DECLARATION

I declare that this research project is my original work and has not been presented for examination in any other university of higher learning.

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

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ACKNOWLEDGEMENTS

First and foremost to start with I thank Our Almighty God for giving me the gift of life and good health throughout my studies. A special appreciation goes to my family for the sacrifice they made to ensure successful completion of my studies and their constant encouragement and support. Thank you for your patience and understanding throughout my studies. I also convey my gratitude to my supervisors Dr. Mwangi Mirie and Ms. Hellen Kinyua for the good advice and guidance through the project.

I also thank and appreciate my fellow colleagues at the University of Nairobi, Paul Mani, Teddy Otambo, Hannah Kihenjo, Edward Keitany and Mercy Njeri for the constant motivation and encouragement during the whole period of my studies. Last but not least, I would also like to say a big thanks to you my friends, John Opiyo, David Odock, Julius Abok and Eric Magale for the never ending support and encouragement throughout my studies.

Thank you all.

DEDICATION

I dedicate this research project to my parents, Alfred and Agnes Njuguna, my sister Esther Njuguna and my niece Kimberly Mugure for the constant and never ending support and encouragement they have given me throughout my studies.

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ABBREVIATIONS

ANOVA	-	Analysis of Variance
CBK	-	Central Bank of Kenya
CPI	-	Consumer Price Index
EPZ	-	Export Processing Zone
FDI	-	Foreign Direct Investment
FII	-	Foreign Institutional Investor
GDP	-	Gross Domestic Product
IFE	-	International Fisher Effect
IRP	-	Interest Rate Parity
KES	-	Kenya Shilling
KNBS	-	Kenya National Bureau of Statistics
MNC	-	Multinational Corporation
OECD	-	Organization for Economic Corporation and Development
OTC	-	Over the Counter
PPP	-	Purchasing Power Parity
SPSS	-	Statistical Package for Social Sciences
UK	-	United Kingdom
UNCTAD	-	United Nations Conference on Trade and Development
USA	-	United States of America
USD	-	United States Dollar

ABSTRACT

The main purpose of this study was to determine the relationship between exchange rates and foreign direct investment in Kenya. An exchange rate is the rate at which one currency is exchanged for another in order to enable trading in a host country. It determines how much of one currency is available to be used to purchase goods and services in a country. FDI is an integral part of Kenya as it not only provides Kenya with the much needed foreign exchange but also has enabled the country to benefit from new technology and efficiency. The independent variables in this study were the exchange rates (KES/USD), inflation as determined by the consumer price index and economic growth as computed by gross domestic product while FDI was the dependent variable. 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 trend analysis between the FDI & exchange rates revealed a relationship that one was determined by the other. 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 regression analysis revealed a strong positive relationship between FDI, KES/USD exchange rate and GDP. A strong negative relationship was exhibited between FDI and inflation rates. The study concluded that exchange rates, inflation and economic growth do influence the levels of FDI in Kenya. A strong currency that can grow attracts FDI. It was noted that an increase in exchange rates resulted to an increase in FDI. 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 ONE: INTRODUCTION

1.1 Background of the Study

Kenya, like many other developing countries, can count foreign direct investment as one of the key factors in determining its economic growth. Foreign direct investment is important to a developing economy if it can effectively absorb its spill-over effects. FDI is a significant source of capital inflows with positive effects on the host country's economy which includes technology transfer, technological, specialized human capital, expansion in international trade, and a viable business environment (OECD, 2002). However, the macroeconomic environment in the home country must be favorable to attract foreign investors and one of the main factors of the operational monetary policy regime are exchange rates of its currency against other foreign currencies. Kenya liberalized her exchange rate market in the early 1990s, though this has done little to boost FDI inflows. The exchange rate has been volatile over the free regime with fluctuations pitting the shilling at historical highs and lows against foreign currencies (Mishkin & Eakins, 2009).

A host country's current account balance can be said to be the indicator of the strength of its local currency. Any decreases in the current account balance will lead to the weakening of the host country's currency. Potential multinational investors may have a negative perception of a deficit in a country's current account since it is likely to lead to higher levels of inflation and drastic movements in exchange rates. This being the case, increases in the current account deficits may lead to decreased FDI inflows. Contrary to this, many multinational companies may capitalize on this by entering into negotiations

with the host country for more favorable operating terms leading to more FDI inflows to increase the deficit (Mishkin & Eakins, 2009).

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. Kenya continues to serve as the East African business hub of choice for a number of multinational companies like General Motors, Proctor & Gamble, Microsoft, Google, Ogilvy and Mather, Coca-Cola and Citibank among others. It is worth noting that foreign investors control about 51% of the total banking assets in the country (CBK, 2015). Kenya has been seen as a favorable hub for the region because of its connectivity to worldwide hubs, its skilled and educated workforce, advanced financial system, developed infrastructure and strategic regional trade memberships and partnership agreements (Ryan, 2006).

1.1.1 Exchange Rates

For currencies to trade in a common market, one currency has to be expressed in terms of the other. An exchange rate can be defined as the price of one currency in terms of another (Mishkin & Eakins, 2009). An exchange rate can either be a direct or an indirect quotation. A direct quotation refers to how much of the home currency can buy a unit of the foreign currency while an indirect quotation is how much of the foreign currency is obtainable from a unit of the home currency (Howells & Bain, 2007). Exchange rate is said to be the nominal exchange rate when it includes inflationary effects and is referred to as the real exchange rate when inflationary effects are excluded (Lothian & Taylor,

1997). Prior to 1972, nearly all countries in the world operated on a fixed exchange rate system whereby their individual country's currencies had a fixed rate relative to the US dollar.

The importance of exchange rate lies in the fact that it allows a self-adjustment of the rate depending on the supply and demand conditions of the foreign exchange in the economy. This self-adjustment is responsible for bringing equilibrium in the market without altering the level of reserves. It is also important in allowing countries to formulate their own monetary policies without worrying about the effects on the balance of payments. External shocks and imbalance effects usually show in the movements in the exchange rate rather than movements in the reserves or an intervention by the central bank to control the process of adjustments (Ndungu, 2000). The exchange rates are driven largely by market supply and demand. Using the flexed exchange rate systems, the price of currencies is as a result of the demand and supply forces of the currency in the forex market.

1.1.2 Foreign Direct Investment

The common goal of all businesses is wealth maximization and businesses will seek all ways to remain profitable and increase shareholders' wealth. Muema (2013) defined FDIs as investments that are meant to be long lasting and those that are outside the economic or physical boundaries of the investor. The beneficiary country of FDI is equipped with capital flow as well as technology flow that will aid in its development. When a country seeks to invest in another, the benefit it seeks to achieve must be higher than the risks it

must deal with. UNCTAD (2002) describes three different types of FDI. These are: reinvested earnings, equity capital and other capital which mainly consist of intercompany loans. FDIs create new job opportunities as upon setting of the business, recruitment and training of the locals in the host country is undertaken transferring skills and technological know-how as well as providing jobs. According to Kinuthia (2010), FDI usually represents long term commitment to the host country. It is a preferred form of investment because it has no obligations to the host country.

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

A country's appeal for FDI is affected by changes in restrictions that include removal of government barriers to trade as well as privatization of government agencies.

Potential economic growth is also a factor that affects a country's appeal for FDI as countries that have greater potential for economic growth may enable the firms to be able to take advantage of that growth by setting up business there. Exchange rates and tax rates make up some factors that affect a country's appeal for FDI. Low tax rates on corporate profits are more likely to attract foreign direct investment while firms prefer to direct FDI to countries where the local currency is expected to appreciate against their own currency.

1.1.3 Foreign Exchange Rates and Foreign Direct Investment

A company that seeks to invest in another will always seek out a host country that has a local currency that will be expected to strengthen against their own. Madura and Fox (2011) argue that a firm will invest funds in a country whose local currency is currently weak in order to earn from new operations which may regularly be converted back to the foreign firm's currency at a better exchange rate. Exchange rate movements affect FDI values because they tend to generally affect the expected amount of cash inflows received from their investments and the amount of cash outflows required to pay to continue operating these investments.

Currencies appreciate and depreciate according to prevailing market conditions. Firms that have operations in other countries other than their mother countries must understand the forces that cause exchange rates to change over time in order to gauge how currencies may be affected by these forces and in so doing be in a position to mitigate these losses.

Theoretically, exchange rates affect FDI because the rate at which one currency is expressed in terms of another will determine how viable an investment will be. In determining exchange rates, the factors that influence how much of a currency will be exchanged for another will ultimately determine how much of FDI will be invested in a country. The two cannot be held in isolation as FDI is determined by how much of a currency is available for use. An investor will identify a country that will enable one to gain in expressing one's currency in denomination of the host currency. The theories that explain the determination of exchange rates will help to determine how these exchange rates affect FDI in a country. The cost of goods in one country as determined by the amount of money that a particular currency will enable an investor to seek a country that will provide the best exchange rate (Madura & Fox, 2011).

Madura and Fox (2011) assert that demand and supply of currencies is price driven and at any given point in time, a currency should depict the price at which its demand is equal to the given currency in order to represent the equilibrium exchange rate. Exchange rates therefore affect FDI in that when a currency, expressed in terms of another loses its value relative to the currency of the foreign country, investors will be attracted to that host country because it will be cheaper to operate in that host country. The relationship that exists between exchange rates and FDI being that if the currency loses its value, FDI is expected to increase while if a currency gains value, FDI is expected to reduce (Madura & Fox, 2011).

1.1.4 Foreign Exchange Rates and FDI in Kenya

In international transactions, country and currency risks are encountered. Country risk occurs when financial claims and business contracts become unenforceable while currency risks occur when the values of currencies fluctuate relative to each other. Foreign exchange markets developed in order to enable conversion of cash to different currencies to be able to transact (Kidwell et al, 2008). There is no physical location for the foreign exchange market in Kenya as there are no physical goods being exchanged at any given time, rather it is an over the counter market, a linkage of bank currency traders. Mishkin and Eakins (2009) define a foreign exchange market as a place of trading of currencies and bank deposits. It involves the process of converting the purchasing power of one currency into another, the financing of foreign trade, credit extensions denominated in foreign currencies, foreign currency bank deposits, futures and option contracts and currency swap contracts (Eun & Resnick, 2009). These transactions ultimately influence the rate at which currencies are converted and will in turn influence the cost of purchasing foreign financial assets and goods.

Trading that occurs in the foreign exchange market will determine the rate at which an investor will trade his foreign currency so as to invest in Kenya. The Central Bank of Kenya Act, Cap 491, Section 28, provides that CBK may engage in foreign exchange transactions with foreign central banks, public entities, authorized dealers as well as foreign governments or their agencies as well as international financial institutions and any other person or body of persons who may be gazetted for that purpose.

FDI in Kenya is covered in all the sectors, be it in the banking, automobile or telecommunications sector. Various multinational companies have set up operations in Kenya and they include Car and General, Coca-Cola as well as communication firms like Airtel. In every aspect of our lives, FDI is felt that is in the goods and services that we use. FDIs are not in isolation as they have provided jobs and with them, technical knowledge as they train their Kenyan employees to maintain the standards that are there in their other investments all over the world. They are the major source of foreign exchange to the country. FDI has not been consistent over the years with some periods recording low inflows. In the 1980s and 1990s, FDI inflow was low due to deterioration in economic performance as well as rising problems of poor infrastructure and the high cost of living greatly impacted negatively on FDI inflows in Kenya (KPMG, 2012). In total, Kenya has more than 200 multinational companies across the sectors with Britain, USA, Germany, South Africa, Netherlands, Switzerland, China and India being the main traditional sources of FDI (Kinuthia, 2010).

Kenya serves as the East African business hub for many international businesses. This translates to a dependence of FDI for capital inflow that in turn reflects on provision of jobs and an economy that is helped to grow by these foreign investments. Kenya's FDI average percentage growth between 2007 and 2015 was forty percent (40%) with the inflows primarily channeled into retail and consumer products, technology, media, telecommunications, minerals, oil and natural gas sector mainly from the UK, USA and India (Ernest & Young, 2015). This growth rate earned Kenya the status of a FDI hotspot joining other African Countries such as Ghana, Tanzania, Zambia, Uganda, Nigeria,

Mozambique and Rwanda. In 2015, 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, 2015).

1.2 Research Problem

When a country's borders are opened and people with different ideas are welcomed into it, the host country is given a chance to learn new ways of doing things. Wealth is transferred not only through the exchange of goods and services but also through the exchange of ideas, exchange of technology and the exchange of manpower. FDI, which involves the investment of assets in a host country subjecting it to the laws of that land, seeks to provide a country such as Kenya with its many advantages. The leading determinant of FDI is the exchange rate. A country whose currency is weaker compared to that of the foreign country will make it attractive as the costs of production are bound to be cheaper than in the FDI's home country.

When a currency, for example a dollar, is exchanged at the current rate, it will gives KES 101.3972 (CBK, 2016) that will enable the firm to pay for the goods and services it requires to set up business in Kenya. This rate is beneficial to the firm as it gets more shillings for less dollars thereby making Kenya as a country an attractive location for FDI. This should be the ideal that because one dollar provides more shillings, investors in the United States should be flocking to Kenya to take advantage of the exchange rate provided. This has not been the case observed. The foreign exchange market is expected

to maintain a balance between attracting FDI and ensuring that the local currency is able to maintain its strength in a bid to ensure that the cost of living does not escalate to a point whereby the gains of FDI are used to offset poverty.

Exchange rates as one of the determinants of FDI are one of the reasons that a foreign investor would seek to invest in Kenya, mostly that the Kenyan shilling should be weaker than the currency of the home of the foreign investor. What is in question is the price the country has to pay in order to attract these investments and whether the benefits outweigh the costs associated with them. If a currency is weaker, is it obvious that FDI will flow into that country? This has not been researched about. Once FDI has been attracted, it is expected to help the economy grow and with its growth, a stronger shilling is expected to be a characteristic of a country with FDI. This is far from what the country has experienced. Despite being home to a number of FDIs, the currency has not vastly improved. The exchange rates have been skewed to enabling FDIs to thrive which in reality has not been observed. Kinuthia (2010) finds that FDI is a key input in the reduction of poverty levels in developing countries. He further attests that those factors which are favorable to domestic investment are often likely to increase FDI. This would in effect mean that a weak currency, as a determinant of FDI should also encourage local investments.

Currencies trading at the foreign exchange market determine the exchange rates to be used as the market is expected to determine which currency is demanded more than it is supplied. The advent of FDIs would mean that more shillings are required in order to buy

assets as well as set up operations in Kenya. The high demand would be countered by the demand for foreign currencies when remitting revenue after operations. As such market forces would determine the exchange rate holding all other factors constant. This would be the ideal whereby the exchange rates would signify that there will be a significant rise in FDI in a country. Unfortunately, this has not been observed. The question that arises therefore is to what level do exchange rates determine FDI?

Ideally, FDI should enable the home country to gain from the capital invested as well as the advancements in technology at the expense of a weaker currency. The current situation is that despite the Kenyan currency's decline, there has not been any record of any new FDI. It is evident that there exists a gap. This study seeks to ascertain why there is a deviation from the ideal and the effects of this deviation on the foreign exchange market in Kenya. What has been the role of exchange rates on the declining FDI? While many studies have been conducted on the determinants of FDI (Kinuthia, 2012; Muema, 2013), on the other hand, Otieno (2012) focused on what is essentially the impact of exchange rate fluctuations on FDI. No known study has been undertaken to determine the actual relationship between exchange rates and FDI in Kenya. The question that this study seeks to answer is, to what extent do exchange rates influence FDI in Kenya?

1.3 Research Objective

The main objective of this study is to establish the relationship between the exchange rates and foreign direct investment in Kenya.

1.4 Value of the Study

The findings are hoped to be of benefit to policy makers in developing investment strategy policies and developing the requisite institutional framework necessary to market Kenya as an ideal foreign investment destination. It will also help them in coming up with monetary policies that ensure exchange rate stability thus protecting the profit margins and net present values of current and potential investors alike.

The government also stands to benefit from this study as it would be able to understand the factors underlying the dismal performance in the FDI sector specifically exchange rate volatility. This indeed would help it come up with marketing strategies especially under the brand Kenya initiative to actively market the country as the FDI destination of choice while addressing the factors that would curtail this noble initiative i.e. exchange rate volatility. It would also try to contain the political situation in the country which has for a long time impacted negatively on the exchange rates and by extension FDI inflows into the country.

The study results would be valuable to other academicians and researchers, as it would mainly form a basis for further research. Various scholars and academicians would use this study as a reference for discussions on relationship between exchange rates and FDI in the country and Africa as a region. The study would be a source of reference material for future researchers on other related topics.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter is divided into five sections, the first section covers the theories in the study, the second section covers the determinants of foreign direct investments, the third section covers empirical studies, the fourth section covers the conceptual framework and the fifth section covers the summary of the theoretical and empirical reviews.

2.2 Theories on Exchange Rates

Kidwell et al. (2008) defined an exchange rate as the price of a given monetary unit stated in terms of another given currency rate. These theories are differentiated by the short and long run. In the long run, if two countries produce an identical good, holding all factors that include transportation and legal costs constant, the given price of that good in essence should be constant throughout the world regardless of which country produces it. This is what is referred to as the law of one price. This law is only relevant in the long run (Mishkin & Eakins, 2009).

2.2.1 Theory of Purchasing Power Parity

PPP was first stated by Gustav Cassel, the Swedish economist in 1918 where he used the theory to recommend sets of official exchange rates at the end World War I to allow for normal trade relations to resume (Shapiro, 1992). This theory was founded on the law of one price which is held to be true in the absolute version. According to the PPP theory, price levels adjusted for exchange rate differences should be identical worldwide i.e. one unit of the local currency should have the same purchasing power the world over. The

theory banks its prediction of exchange rate movements on the changing patterns of trade due to different rates of inflation between countries.

Kidwell et al (2008) argued that in most times exchange rates tends to likely move to levels at which the cost of goods in any country is the same in the same currency. If PPP holds, then all goods should cost the same price in the same currency in all countries therefore there is no net saving from buying goods in one place rather than in another. The absolute form of PPP is based on the notion that in the absence of international trade barriers, consumers shift their demand to areas with low prices implying that similar baskets of goods in two different countries should be of the same cost when priced using the same (Madura & Fox, 2011). If one currency is undervalued, goods produced in that country tend to be cheaper than similar goods produced somewhere else therefore growing exports and diminishing imports unless trade barriers, transportation costs or the perishability of products makes it feasible for people to buy the same products in various places. It is in effect the application of the law of one price to national levels (Mishkin & Eakins, 2009).

The relative form of this hypothesis is that PPP exists the home currency rate of depreciation in comparison to the foreign currency is equal to the difference in the differences in the aggregate inflation prices in the two countries (Sarno & Taylor, 2002). This means in effect that issues such as transportation costs, tariffs and quotas are taken into account. This relative form of PPP is highly used. PPP is not a complete theory of exchange rate determination because deviations from PPP have been seen to prevail

throughout the history of the world (Shapiro, 1992).

According to the PPP theory, exchange rates will not be constant but adjust to match purchasing power parity. The proportional change in the foreign currency should seek to maintain parity between the new adjusted price indexes of the two given countries. This theory does not fully explain exchange rates because the assumption that all goods are identical as well as the fact that trade barriers and transportation costs are low is not realistic in two different countries. PPP is important as it helps us to observe the ideal situation. In perfect conditions, FDI would not be influenced by exchange rates as the profit gained by operating in a country whose currency is weaker would not materialize. All costs would be the same thus no need to invest elsewhere other than your home country (Mishkin & Eakins, 2009).

2.2.2 International Fisher Effect

The International Fisher Effect model was designed by Irving Fisher in the 1930s. It does not use inflation to determine exchange rates but rather nominal interest rates. In its purest form, risk free aspects of capital must be allowed to flow between nations that comprise a particular currency pair. According to Fisher, the nominal rate almost equates the sum of the real rates together with inflation rates. The theory derives the use of interest rates rather than inflation to explain the reason why interest rates change over a period of time. High inflation leads to high interest rates. The assumption is that when investors from different countries require the same real return for the same risk level, the only reason why there should be a disparity in interest rates for a given level of risk is

differences expected inflation. It suggests that depreciation will occur to foreign currencies with relatively high interest rates similar to currencies with high inflation rates (Madura & Fox, 2011).

IFE is a theory of market expectations. Fisher provides that an unexpected increase in interest rates would attract foreign investors who may wish to invest in the home market to take advantage of high interest rates but where there is no flood of inward investment, the market must be expecting that the value of the home currency will fall as it should if the foreign exchange market is acting efficiently. The relationship between interest rates and inflation rates cannot always hold because exchange rates may be affected by factors other than interest rates (Madura & Fox, 2011). IFE essentially states that arbitrage between financial markets should ensure that the interest differential between any two countries is an unbiased predictor of the future change in the spot exchange rate. The interest deferential is not an accurate predictor; rather, the prediction errors tend to cancel out over time (Shapiro, 1992).

2.2.3 Interest Rate Parity

IRP as a theory was first developed by J.M. Keynes in 1930. It is based on the law of one price such that identical securities quoted in a common market should have similar prices in all markets. It is defined as the state of equilibrium that exists when forces in the market make interest rates and exchange rates to adjust (Madura & Fox, 2011). This occurs when the forward rate is different from the spot rate at equilibrium level by an amount that is equal to the difference in interest between the two countries.

It is an arbitrage condition that must hold when international financial markets are in equilibrium. Capital is easily transferrable and foreigners can easily buy assets in Kenya and indeed each person who is not a resident of one country can still easily buy assets that in this case refer to local and foreign bank deposits, in whichever country he deems fit. When there is capital mobility and assets are perfect substitutes, if returns from a foreign currency are lower than those of the local currency, both local and foreign investors will be willing to hold the local assets than foreign assets (Mishkin & Eakins, 2009).

Likewise, if the expected return on foreign assets is by chance higher than the local assets, both foreigners and locals will not want to have in possession any local assets and will want to only hold on to foreign assets. The domestic interest rate is calculated by deducting expected domestic currency appreciation from the foreign interest rate. A higher domestic interest rate relative to the foreign interest rate and thus causing a positive expected appreciation of the foreign currency which will compensate for the lower foreign interest rate (Mishkin & Eakins, 2009). This theory is important as it describes the situation whereby an investor decides on which country to invest in. IRP does not imply that all currencies must have the same interest rate. A currency experiencing high inflation rates and high interest rates can dilute the effects of other foreign currencies by devaluing (Madura & Fox, 2009). IRP is generally supported.

2.3 Determinants of Foreign Direct Investment

FDI involves real assets and this ensures that an investor will be active in managing the

assets he is acquiring. There are various factors that make one country more attractive than the others and these factors can also vary from one period to another. These determinants have contributed to studies on why some given countries are more successful than others nations in attracting FDI. Quite many researches have been conducted on the determinants 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 explain different aspects of the same phenomena (Kinuthia, 2010).

2.3.1 Inflation

Inflation is very important in managing the macroeconomic environment and fiscal governance. It is usually measured by changes in the consumer price index which is essentially a weighted average price of goods and services consumed (CBK, 2013; Nwankwo, 2006). A high level of inflation is an indicator of tensions in the economic environment of a country and is a reflection of the government's reluctance to have a stable monetary policy. It can be argued that risk averse foreign investors coupled with high levels of inflation will lead to decreases in FDI in the host country since investors are not willing to risk the profits that they expect from their investments (Kadongo, 2011).

Given high uncertainty levels, investors are bound to demand high price levels in order to offset their exposure to inflationary risks which are bound to lower the volume of investment. Therefore as a move to encourage investments, inflation rate stability is important (Gastanaga et al., 1998). Nwankwo (2006) has stressed macroeconomic policy

failures as deflecting FDI flows from Africa; he points that, poor monetary and fiscal policies cause unsustainable deficits in budgets and increase inflationary pressures thereby raising the production costs in the local country and thus creating instability in exchange rates and thereby making the region too risky as a destination for FDI. Instability in macroeconomic variables as evidenced by high inflation and excessive budget deficits, limits the country's ability to attract FDI (Onyeiwu & Shrestha, 2004).

2.3.2 Economic Growth

The importance of growth in attracting FDI has been rather controversial. Charkrabarti (2001) stated that the hypothesis of growth that was developed by Lim (2001) suggests that a rapid growth in the economy provides more profitable opportunities than those experiencing slow growth or no growth at all. Mishkin and Eakins (2009) from their research study found that growth was positively correlated with FDI while Gastanaga et al. (1998), strongly supported the hypothesis from the periods 1983 to 1986 but showed a weak link from the periods 1975 to 1978.

Contrary to the results, Aoki (2007) found a weak but positive relationship for economies of less developing countries and weak negative relationship for economies of developed countries. Asiedu (2002) found a positive relationship but with lagged growth for countries not in the Sub-Saharan Africa region, but an insignificant effect for the Sub-Saharan Africa region. Gastanaga et al. (1998) found a positive effect of growth on FDI.

2.3.3 Exchange Rates

Exchange rate is an essential component affecting FDI. The eventual importance of exchange rates to the location of FDI was initially suggested by Asiedu (2002). Asiedu 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).

2.4 Empirical Literature Review

Goldberg and Kolstad (1994) in relating FDI, exchange rate variability and demand uncertainty from 1978 to 1991, using bilateral FDI flows between USA and UK, Canada and Japan, concluded that exchange rate volatility increases the productive capacity located abroad.

Ndung'u (1997) in determining price and exchange rate dynamics between 1970 and 1993 concluded that exchange rate movements and changes in the foreign exchange reserves and the domestic credit drive each other. Further, that a pass through effect from exchange rate and foreign price level are found to drive the domestic price level.

Goldberg and Klein (1998) in their determination of the relationships among trade, foreign direct investment and the real exchange rate between a set of South East Asia and Latin American countries and both USA and Japan concluded that the domestic currency depreciation potentially raised the return to Japanese investment in South East Asia relative to investment in Japan. They also concluded that a real depreciation of the currencies of the South East Asian countries when compared to the yen were responsible for increased FDI to these countries from Japan and also responsible for a decrease in FDI investment to the countries from the United States at the same time increasing the level of imports in terms of factors of production from Japan.

Ndung'u (2001) in his conclusion stated that when a decline in the local currency started, capital inflows increased to take advantage of weaknesses in the shilling. An important factor to also note is that as the real exchange rate appreciates, differences in interest rates rise. He argued that drastic changes in capital flows and foreign interest changes account for almost half the historical innovations of the real exchange rate movements. His conclusion was that the risk premium associated with the volatility of private capital flows is responsible for the exchange rate movements.

Osinubi and Amaghionyeodiwe (2009) on FDI and volatility of exchange rates in Nigeria, using secondary data from 1970 to 2004, argued that there is a positive relationship between inward FDI and exchange rates. The findings implied that the depreciation of the naira increased real inward FDI. They further concluded in 2010 that private investment by foreign firms, an increase in domestic investment and an increase in net exports increased the level of economic growth in Nigeria having analyzed data on foreign private investors from 1970 to 2007.

Otieno (2012) in determining the impact of exchange rate fluctuations on FDI in Kenya for a thirty year period (1981 to 2010) stated in his conclusion that there is an insignificant impact of changes in exchange rates on FDI. The relationship between the two variables is however positive whereby an increase in the exchange rate fluctuations of the local currencies leads to an increase in FDI inflows although the impact is weak.

Parajuli (2012) examined the relationship between the exchange rate, foreign direct investment 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 variable showed that appreciation in the home currencies encourage outward FDI flows from members of OECD countries to Mexico.

Sifunjo and Mwasaru (2012) in investigating the relationship between exchange rates and

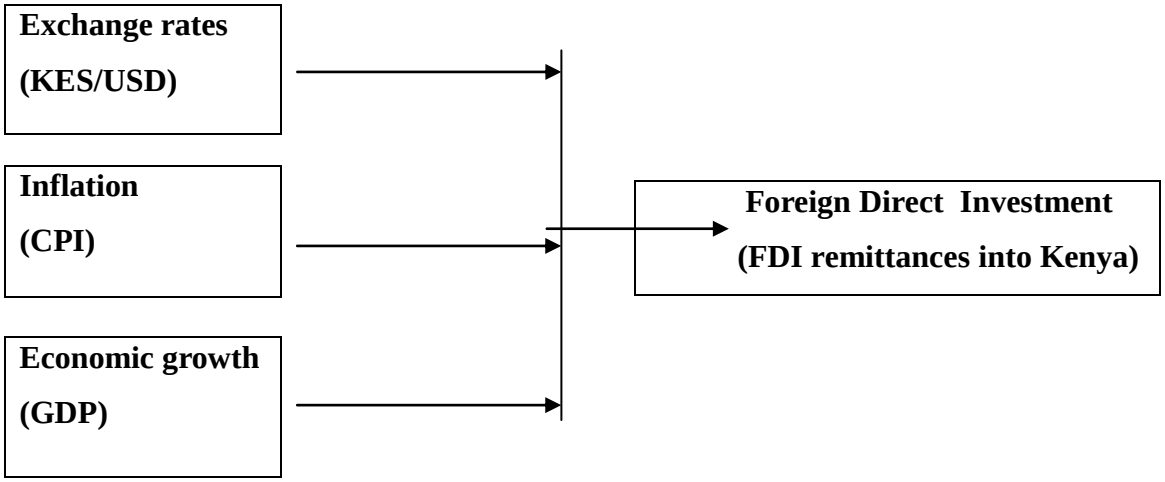
stock prices from November 1993 to May 1999 with the data set consisting of monthly observations of the Nairobi Stock Exchange stock price index and the nominal Kenya shilling per US Dollar change rates concluded that a perceived risk with respect to the foreign exchange market and hence the stock market led to a higher cost of capital that in effect led to reduction in the sources of supply. This arose not only from the falling investor confidence in these two markets but also the financing capacity of the investors may decline.

Muema (2013) in analyzing the determinants of FDI in Kenya concluded that the mean rate of change in annual average of exchange rates of the Kenyan shilling to the dollar was 7.66%. The highest change in the exchange rates was 80.03% realized in 1992 when the value of the shilling appreciated fromKES58.00/USD to KES32.22/USD. The lowest change was -8.24% realized in 1994 when the Kenyan shilling depreciated to KES56.05/USD from KES51.43/USD. He concluded that there was a strong positive correlation between FDI rate and the change in the rates of exchange indicating that higher FDI inflows were associated with the weakening shilling. The conclusion of his study was that the key factor that determined changes in FDI in Kenya was the exchange rate of the KES to the other currencies proxied by the rate of change to the USD.

Mwenda (2012) provided that the determinants of FDI in the determination of inward FDI and the transfer of technology by information technology MNCs in Kenya, being market availability, political stability, absence of maximum retail price, a stable and growing economy, the availability of human resources and the availability of a strategic

infrastructure. The impediments to FDI on the other hand included delays in licenses and work permits, corruption, political instability and unreliable infrastructure.

2.5 Conceptual Framework



Independent variables Dependent variable

2.6 Summary of Literature Review

The theories advanced on explaining exchange rates can only work in a perfect market. The law of one price goes to ensure that exchange-adjusted prices of identical traded goods and financial assets are within transaction costs worldwide in the absence of arbitrage (Shapiro, 1992).The theories advocate for equilibrium relationships which may not be achieved. This is because the motives of the different players in the market are never the same. While profit making is the ultimate motive for any investor, the other players that include the government are more occupied with a currency that will sustain growth. The theories do not explain the differences that ultimately exchange rates have

on influencing FDI.

Weeks and Mungule (2013) argued that the foreign costs of imports is significantly reduced by an appreciation of a currency, the return required of tradable goods is also bound to reduce through the costs of import and export substitutes. When the local currency is not trading as well as a foreign one, the host country is deemed attractive. Some studies done show that this statement is not always correct (Barell et al, 2003).

Muema (2013) concluded that exchange rates were a determinant of FDI. Ndung'u (2001) focused on the liberalization of the foreign exchange market having looked at the previous regimes of the foreign exchange systems Kenya had before 1997. In view of the above, there exists a gap on the relationship between exchange rates and FDI in the foreign exchange market in Kenya.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter focused on the methodology that was used in gathering data, its analysis and the reporting for a ten year period from 2006 to 2015. It consists of the research design, data specification, data collection and its analysis.

3.2 Research Design

The study used a descriptive-explanatory research design to investigate the relationship between exchange rates and foreign direct investment. An explanatory research seeks to explain the phenomena being studied; to determine the correlation between exchange rates and FDI while a descriptive research design includes fact finding enquiries in order to describe affairs as they exist (Kothari, 2004).

3.3 Data Specification

Data used for the study was the FDI remittances into Kenya per month, average exchange rate per month, inflation rate per month and economic growth per month for the period 2006 to 2015.

3.4 Data Collection

The research 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 2006 to 2015 collected on a monthly basis. Data on exchange rates was collected from the CBK website as the average KES/USD exchange rate for every month from

2006 to 2015. Data on inflation was the CPI while data on economic growth was Kenya's GDP, both collected for every month from 2006 to 2015.

3.5 Data Analysis

Analysis of data was made using MS Excel and SPSS. Regression analysis was used to determine the relationship between exchange rates and the level of FDI (remittances) as indicated in the model below. The regression model was used to test the relationship of exchange rates with FDI. Multiple regression analysis and correlation analysis were used to predict the nature and significance of the relationship.

3.5.1 Analytical Model

The analytical model used for the study took the form:

$Y = \alpha + \beta_1 EX + \beta_2 I + \beta_3 EG + Є_e$

Where

Y = total FDI remittances into Kenya for every month

α = y intercept (the constant)

β = regression co-efficient

EX = prevailing exchange rate in the economy measured by the average KES/USD exchange rate for every month

I = inflation rates as measured by the CPI (%) for every month

EG = economic growth as measured by the GDP for every month

$Є_e$ = error component that represents the deviation of the response from the true relation.

The natural logarithms for all the factors were calculated on a monthly basis for the period 2006 to 2015 to be used in the model.

3.5.2 Tests of Significance

Correlation coefficient (r) was determined and used to measure the strength and direction of the relationship between the dependent variable (foreign direct investment) and each of the outlined independent variables. Coefficient of determination (R^2) was used to measure the proportion of variance in the dependent variable that can be explained by independent variables. The F test was used to check whether there is statistical evidence of correlation at 5% level of significance. The t test was used to test for the significance of the relationship between dependent and each of the independent variables.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The focus of this chapter was on the analysis of data collected from the Central Bank of Kenya and Kenya National Bureau of Statistics to show the relationship between exchange rate movement and foreign direct investment for the period between 2006 and 2015. Analysis of the data was made using descriptive statistics, tabulated and presented graphically as will be shown in the following sections.

4.2 Data Validity

The study looked for data that would be able to meet the objectives of the study. The data collected from the various sources i.e. CBK hand books and KNBS was cross checked for errors to test the validity of the data sources. 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.

4.3 Descriptive Statistics

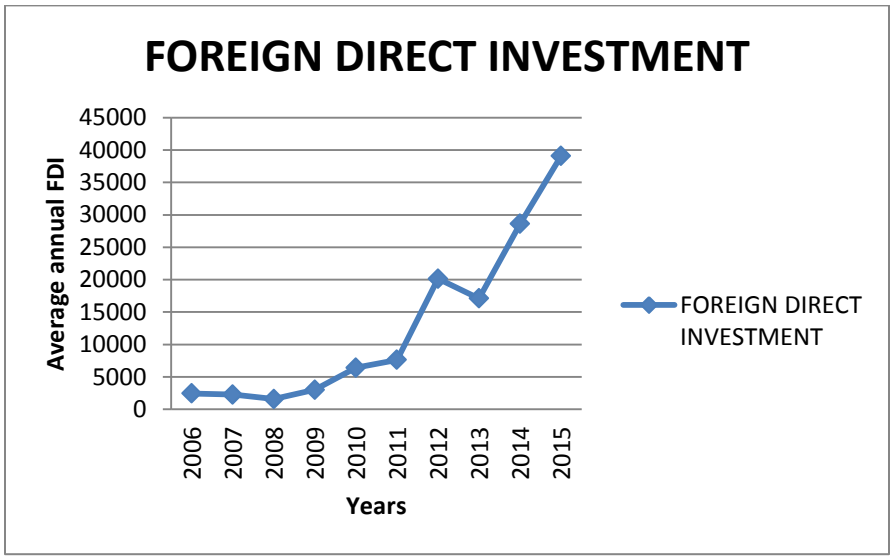
This section presents the descriptive results of this study, measures of central tendency, the trend analysis of foreign direct investment, inflation rate, exchange rate and economic growth as measured by GDP. From the analysis of descriptive statistics the findings clearly reveals that foreign direct investment has a mean of 12.83% with a maximum of

39.92% and minimum of 15.87% and standard deviation of 0.3997, economic growth has a weighed mean of 76.27% with a maximum of 96.45% and minimum of 32.87% and standard deviation of 0.29358, inflation rate has a weighed mean of 9.54% with a maximum of 14.23% and minimum of 5.72% and standard deviation of 0.104 while exchange rate has a weighted mean of 83.00% with a maximum of 98.17% and minimum of 76.21 % and standard deviation of 0.5693.

Table 1 Descriptive Statistics

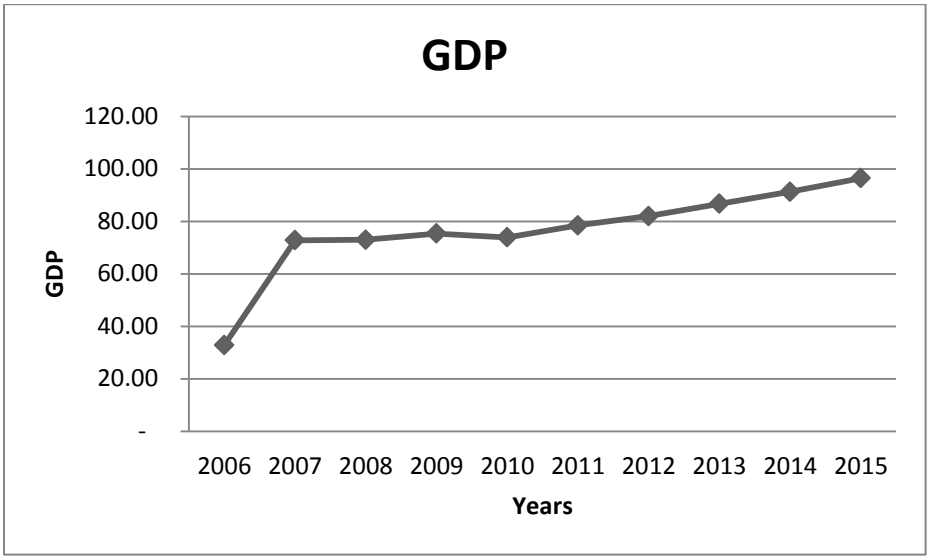
	N	Minimum	Maximum	Mean	Std. Deviation
FDI (%)	120	15.87	39.92	12.833	0.3997
Exchange rate (%)	120	76.21	98.17	83.0020	0.5693
Inflation rate (%)	120	5.72	14.23	9.5450	.10400
Economic growth (%)	120	32.87	96.45	76.2720	.29358
Valid N (listwise)	120				

Figure 1 Foreign Direct Investment Trend



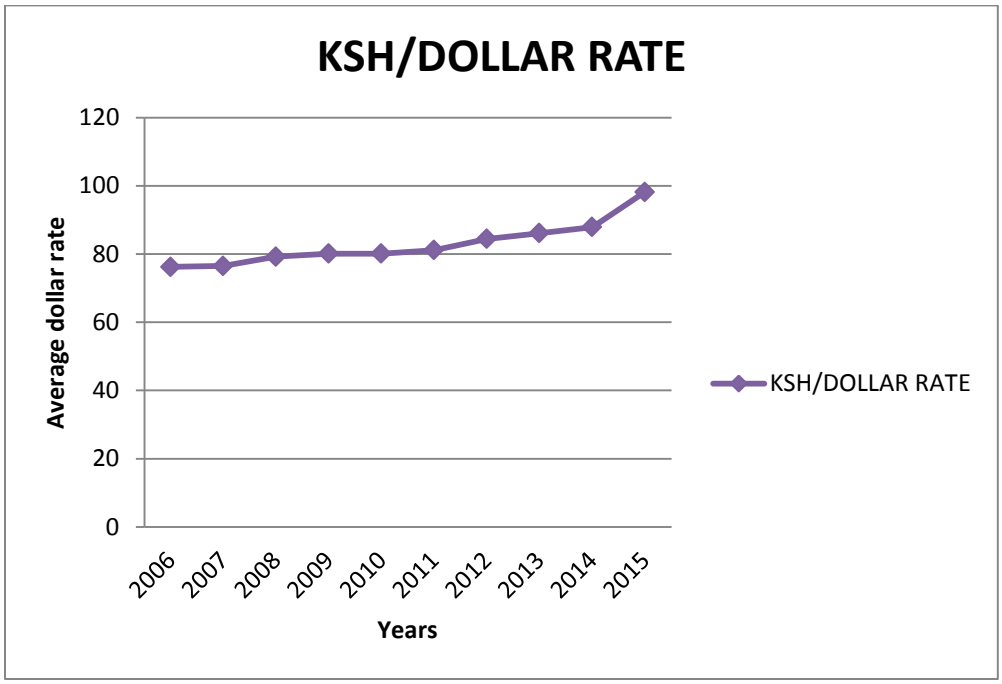
From the analysis of foreign direct investment between 2006 and 2015, it was found that average foreign direct investment from different sectors of economy remained steadily between 2006 and 2008 with a slight decrease between 2007 and 2008 followed by a slight increase in 2009 to 2011. Foreign direct investment increased sharply between 2011 and 2012 followed by a decrease between 2012 and 2013. The results also revealed that foreign direct investment increased significantly from 2013 to 2015.

Figure 2 GDP Trend



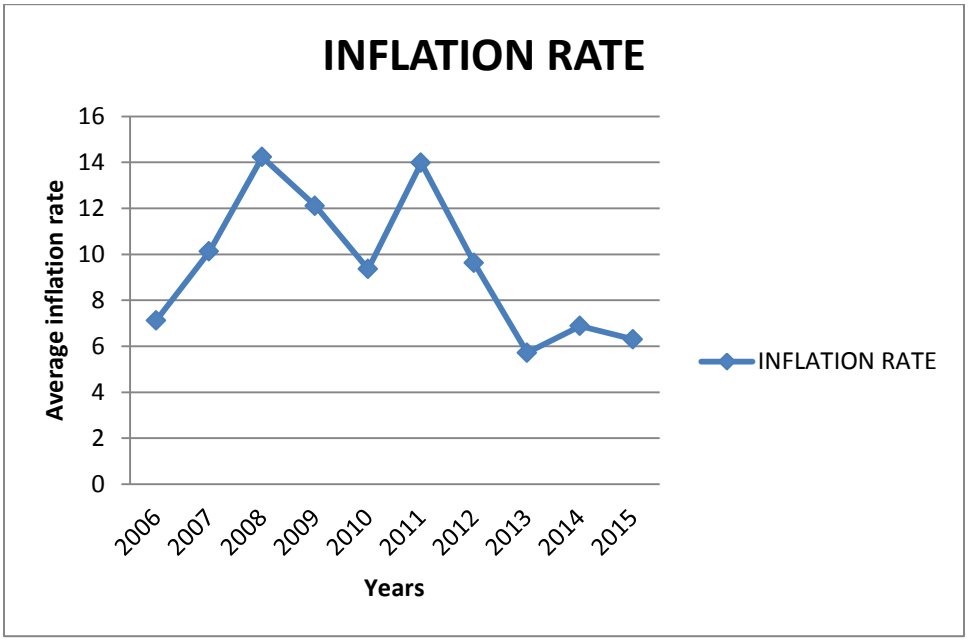
From the analysis of gross domestic product, the results shows that GDP increased sharply between 2006 and 2007 with a stead movement between 2007 and 2010 followed by a significant increase between 2010 and 2015 respectively.

Figure 3 Kenya Shilling and Dollar Rate Trend



From the analysis of exchange rate measured by Kenya shilling compared to dollar it was found that the exchange rate fluctuates upward between 2006 and 2015 with the highest point being in 2015 and lowest rate recorded in 2006.

Figure 4 Inflation Rate Trend



From the analysis of inflation rate between 2006 and 2015, the findings shows that inflation rate recorded a sharp increase between 2006 and 2008 with a slight drop in 2009 followed a slight increase in 2011. The rate dropped significantly between 2012 and 2013 with insignificant increase in 2014 followed by slight decrease in 2015.

4.4 Correlation Analysis

Correlation analysis is used to establish if there exists a relationship between two variables which lies between (-) strong negative correlation and (+) perfect positive correlation. Three variables were generated using SPSS (exchange rate, inflation rate and economic growth).

Table 2 Correlation Analysis

	FDI	Exchange Rate	Inflation Rate	Economic growth
FDI	1.000	.960**	-.616	.688*
Exchange Rate	.960**	1.000	-.514	.739*
Inflation Rate	-.616	-.514	1.000	-.102
Economic growth	.688*	.739*	-.102	1.000

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

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

From correlation analysis, the study showed the existence of a strong positive correlation between exchange rate and foreign direct investment ($p = .960$, $p > 0.05$). This goes to show that the exchange rate determined by market forces influence on the foreign investors decisions. The relationship between foreign direct investment and inflation rate was found to be strongly negative ($p = -.616$, $p > 0.05$). This implies that movement in the inflation rate is negatively correlated to foreign direct investment. The study also showed that there exist a strong positive correlation between foreign direct investment and the growth in the economy ($p = .688$, $p > 0.05$). This shows that economic growth significantly influences foreign direct investment. This study also found that there exist a strong positive correlation between exchange rate and economic growth ($p = .739$, $p >$

0.05) while the correlation between exchange rate and inflation was found to be strongly weak ($p = -.514$, $p > 0.05$).

4.5 Regression Analysis and Hypotheses Testing

Table 3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.971[a]	.943	.915	37.90431

a. Predictors: (Constant), Economic growth, Inflation rate, Exchange rate

Table 3 above indicates that there is a R^2 value of 94.3%. This value indicates that the three independent variables explain 94.3% of the variance in the foreign direct investment. It's very clear that these independent variables influence to a large extent the foreign direct investment. It is therefore sufficient to conclude that these variables significantly influence foreign investors decision given the unexplained variance is only 5.7%.

Table 4 ANOVA Analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1432.90	3	2784.31	3.294	.000[a]
	Residual	860.42	117	436.37		
	Total	2292.32	120			

a. Predictors: (Constant), Economic growth, Inflation rate, Exchange rate

b. Dependent Variable: FDI

Given 5% level of significance, the numerator df = 1 and denominator df = 5, critical value 2.74, table 4 above shows computed F value as 3.294. This confirms that overall the multiple regression model is statistically significant, in that it is a suitable prediction model for explaining how the selected independent variables affects the foreign direct investment.

Table 5 Regression Analysis

Model		Un-standardized Coefficients		Standardized Coefficients	T	Sig.
		Beta	Std. Error	Beta		
1	(Constant)	63.565	280.687		-4.145	.006
	Exchange rate	16.013	3.775	.809	4.242	.005
	Inflation rate	-8.084	5.408	-.193	-1.495	.116
	Economic growth	.524	1.237	.070	.423	.047

a. Dependent Variable: FDI

Using a significance level of 5%, any independent variable having a significant value greater than 5% is considered not statistically significant. This study found that exchange rate and GDP which measures economic growth are statistically significant, with inflation rate having significance of more than 5% not statistically significant.

4.6 Discussion of Research Findings

The study sought to determine the relationship between exchange rates and foreign direct investments in Kenya. Exchange rates, economic growth as measured by GDP and inflation as measured by CPI were the independent variables while foreign direct investment (FDI) was the dependent variable. The effect of each of the independent variable on the dependent variable was analyzed in terms of strength and direction.

The Pearson correlation coefficients between the variables revealed that a strong positive correlation exists between exchange rates and foreign direct investments. The relationship between economic growth measured by GDP and foreign direct investment was found to be strongly positive. The study also showed that there exist a strong negative correlation between inflation rates as measured by CPI and foreign direct investment.

The model summary revealed that the independent variables: exchange rates, inflation rates, and economic growth have a correlation of 94.3% with the dependent variable as indicated by the value of R^2 which implies that they are significant predictors of foreign direct investments in Kenya. The model is fit at 95% level of confidence since the F-value is 3.294. This confirms that overall the multiple regression model is statistically significant, in that it is a suitable prediction model for explaining how the selected independent variables affects foreign direct investments in Kenya.

The findings of this study are in line with Behera (2008) who found that volatility in exchange rates leads to uncertainty on the returning transaction plan from the investing countries. Osinubi and Amaghionyeodiwe (2009) on FDI and volatility of exchange rates in Nigeria, using secondary data from 1970 to 2004, argued that there is a positive relationship between inward FDI and exchange rates. The findings implied that the depreciation of the naira increased real inward FDI which has been confirmed by the current study when applied locally.

Muema (2013) also concluded that there was a strong positive correlation between FDI

rate and the change in the rates of exchange indicating that higher FDI inflows were associated with the weakening shilling. The conclusion of his study was that the key factor that determined changes in FDI in Kenya was the exchange rate of the KES to the other currencies proxied by the rate of change to the USD. The current study has confirmed Muema's conclusions by finding a strong correlation between foreign direct investments and exchange rates.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The purpose of this study was to investigate the relationship between exchange rates and foreign direct investments in Kenya. This chapter presents a summary of findings of the previous chapter, conclusion, limitations encountered during the study. This chapter also elucidates the policy recommendations that policy makers can implement to achieve high levels of foreign direct investments. Lastly the chapter presents suggestions for further research which can be useful to future researchers.

5.2 Summary of Findings

The objective of this study was to establish the relationship between exchange rate movement and foreign direct investment for the period between 2006 and 2015. From the analysis of the findings it was found that average foreign direct investment from different sectors of economy remained steadily between 2006 and 2008 with a slight decrease between 2007 and 2008 followed by a slight increase in 2009 to 2011 with a sharp increase between 2011 and 2012. GDP increased significantly between 2006 and 2007 with a stead movement between 2007 and 2010 while exchange rate measured by Kenya shilling compared to dollar fluctuated upward between 2006 and 2015 with the highest point being in 2015 and lowest rate recorded in 2006. The findings show that inflation rate recorded an increase between 2006 and 2008 with a slight drop in 2009.

The findings also found that there exists a strong relationship between exchange rates and

foreign direct investment; foreign direct investment was found to be strongly negatively affected by the inflation rate increase. The study also showed that there exist a strong relationship between foreign direct investment and economic growth which influences about 68% of foreign direct investments. This shows that GDP significantly influences foreign direct investment.

5.3 Conclusion

The impact of FDI is felt in the country not only as a source of foreign exchange but also as a source of new technology, a way of opening the borders of a country. The impact of exchange rates on the other hand is not only felt by foreign investors but also in the domestic market whereby the local currency is affected by exchange rates in the prices of goods and services accessed in the domestic market as investors will seek to ensure profits are made.

From the findings, the study concludes that foreign exchange rates determine the levels of FDI in Kenya. This relationship has been determined in the study that one affects the other whereby an increase in exchange rates increases FDI. In instances whereby the exchange rates are higher than the remittances, it can be explained as that period whereby they serve as a means of attracting FDI as the periods after show an increase in FDI whereby the exchange rates are almost on the same level with FDI.

This study concludes that independent variables selected for this study economic growth, exchange rate and inflation rate influence to a large extent the foreign direct investment.

It is therefore sufficient to conclude that these variables significantly influence foreign investor's decisions. This indicates that overall the multiple regression model is statistically significant, in that it is a suitable prediction model for explaining how the selected independent variables affects the foreign direct investment. The fact that the three independent variables explain 94.3% of changes in foreign direct investment implies that the variables not included in the model only explain 5.7% of changes in FDI.

5.4 Recommendations

There is need for the government to use various economic stimulus programs in order to boost the country's gross domestic product as this will positively influence foreign direct investment. The government should also provide a conducive environment that will encourage FDI and this may include boosting infrastructure and beefing up security in the country. The study recommends that there is need for central bank to regulate the exchange rate in the country as it was found that the flow of goods and services and of capital in a country is influenced by exchange rates exerting pressure on the balance of payment, inflation and other macroeconomic variables which strongly influence foreign direct investment inflow, stabilization of the exchange rate would therefore be a necessary condition for attracting more FDI.

The state of the country also determines the exchange rates and ultimately the remittances. The trend analysis shows that during the elections and other turbulent periods experienced in the country, the remittances and the exchange rates are low. It is imperative that an atmosphere conducive for trading be maintained in the country. There

is need for a stable and conducive atmosphere that will encourage investors and thus increase remittances to Kenya.

5.5 Limitations of the Study

This study was conducted over a ten year period from 2006 to 2015. Had the period been extended, various other periods showing economic variances such as booms and recessions would have been captured. As a result, the study would have a longer focus with broader dimensions to the problem being studied.

The data used was based on exchange rates and remittances available on KNBS as well as CBK, any data not recorded by these two bodies was not considered for the purpose of this study. While the data was reliable, it may still be prone to shortcomings.

The last but not the least limitation of the study is that monthly data on FDI and GDP was not available and so quarterly (3 month periods) data was used. The researcher had to assume they were equally distributed among the three months.

5.6 Suggestions for Further Research

The study only focused on exchange rates, inflation and economic growth as the determinants of FDI in Kenya. There may be other factors that influence the level of FDI remittances into Kenya. Therefore, more research needs to be carried out on the other determinants of FDI with each factor being studied individually to determine the impact it has on FDI and its remittances.

There is need to undertake a research on the determinants of exchange rates so as to determine to what extent they can be used to influence investments in the country. This study found a positive and significant relationship between exchange rates and FDI in Kenya. It therefore recommends another study to be conducted to further analyze the determinants of exchange rates in order to gain a better understanding on how they can be used to influence investments in Kenya.

This study was carried out on Kenya as a whole. Due to the fact that the study did not focus on any industry or sector, more research may be carried out with more emphasis on a single sector. Different sectors may yield different results from this study. The study therefore recommends other studies to be done on the relationship between exchange rates and FDI in Kenya while focusing on the different sectors in the country to determine if different results may be observed.

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APPENDICES

APPENDIX I: Raw Data Used for the Study

(Sources: Kenya National Bureau of Statistics and Central Bank of Kenya)

Quarterly FDI – USD Thousands

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Quarter 1	24.37	33.66	18.23	25.99	42.19	18.47	17.89	89.93	27.07	62.29
Quarter 2	31.22	49.22	24.36	17.48	65.11	62.42	52.70	49.20	52.18	59.45
Quarter 3	19.78	39.47	42.29	22.56	53.43	42.27	210.92	47.24	79.83	150.67
Quarter 4	23.22	25.44	54.85	66.67	52.68	18.36	66.02	42.39	48.79	57.49

KES/USD Monthly Exchange Rates

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
January	71.982	70.537	70.561	79.544	75.886	81.272	84.588	87.611	86.236	91.674
February	73.198	69.733	68.978	79.687	76.897	82.364	82.971	86.236	86.326	91.423
March	71.872	68.781	62.848	80.431	77.331	82.989	83.056	85.639	86.441	92.335
April	71.158	68.306	62.136	78.662	77.266	83.419	83.216	83.821	86.871	94.600
May	72.270	66.966	62.029	78.348	79.745	85.704	86.825	85.124	87.797	97.781
June	73.880	66.564	64.694	77.158	81.917	89.864	84.233	86.008	87.627	98.639
July	73.617	67.509	67.318	76.607	80.23	91.100	84.213	87.280	87.804	102.521
August	72.624	66.989	68.733	76.233	81.071	93.622	84.321	87.597	88.394	103.870
September	72.679	66.971	73.219	74.999	80.778	99.832	85.283	86.646	89.279	105.293
October	72.020	67.114	79.653	75.239	80.787	99.778	85.178	85.147	89.352	101.800
November	69.948	64.424	77.881	74.907	80.974	89.721	85.935	86.993	90.179	102.114
December	69.397	62.675	77.711	75.820	80.752	85.068	86.029	86.310	90.598	102.311

Monthly CPI (%)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
January	8.15	4.63	7.93	13.33	7.52	5.42	18.31	3.67	7.21	5.53
February	8.89	3.12	11.04	14.62	5.18	6.54	16.70	4.45	6.86	5.61
March	8.26	2.31	12.53	14.44	3.97	9.19	15.61	4.11	6.27	6.31
April	4.94	2.00	16.83	12.10	3.66	12.05	13.06	4.14	6.41	7.08
May	3.99	2.09	18.70	9.88	3.88	12.95	12.22	4.05	7.30	6.87
June	4.06	4.05	16.79	9.86	3.49	14.48	10.05	4.91	7.39	7.03
July	4.04	5.39	15.33	10.33	3.57	15.53	7.74	6.02	7.67	6.62
August	4.81	5.19	15.98	9.76	3.22	16.67	6.09	6.67	8.36	5.84
September	5.79	5.45	16.32	9.19	3.21	17.32	5.32	8.29	6.60	5.97
October	6.31	5.32	16.70	8.80	3.18	18.91	4.14	7.76	6.43	6.72
November	6.13	5.98	17.56	7.14	3.84	19.72	3.25	7.36	6.09	7.32
December	7.32	5.60	15.48	8.02	4.51	18.93	3.20	7.15	6.02	8.01

Quarterly GDP – KES Millions

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Quarter 1	602,998	624,990	629,058	702,855	739,896	806,377	843,933	892,137	932,363	982,717
Quarter 2	609,876	634, 985	642,518	711,723	761,606	814,748	846,617	899,618	947,744	1,004,755
Quarter 3	618,372	637,313	645,343	722,388	790,837	827,188	863,924	920,000	960,310	1,019,196
Quarter 4	617,659	639,558	640,551	726,699	809,998	848,757	897,047	937,505	977,719	1,051,810