RELATIONSHIP BETWEEN EXCHANGE RATE VOLATILITY AND FOREIGN DIRECT INVESTMENT IN KENYA

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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.

Signed …………………………………………Date:……………………………………

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

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M.Odipo.

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DEDICATION

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LIST OF ABBREVIATIONS

FDI   Foreign Direct Investment

IFE   International Fisher Effect

CBK   Central Bank of Kenya

PPP   Purchasing Power Parity

IRP   Interest Rate Parity

MNC   Multi-national Companies

OECD   Organization for Economic Corporation and Development

KNBS   Kenya National Bureau of Statistics

GDP   Gross Domestic Product

UNCTAD United Nations Conference on Trade and Development

USD   United States Dollar

KES   Kenya shillings

SPSS   Statistical Package for the Social Sciences

USA   United States of America

UK   United Kingdom

ABSTRACT

The purpose of the study was to   assess the relationship between exchange rate volatility and foreign direct investment in Kenya   between the year 2013 to 2017. Kenya, like other developing countries, can on count foreign direct investment as one of the crucial factors in determining its economic growth. Foreign direct investment is essential to a developing economy if it can effectively absorb its spill-over effects.

The study results indicated that average total foreign direct investment remittances from different sectors of economy remained steadily between 2013 and 2015 with a slight decrease between 2014 and 2015 followed by a sharp increase between 2014 and 2016. The per-capita income increased significantly between 2013 and 2014 with a stead movement between 2014 and 2016 while exchange rate measured by Kenya shilling compared to Dollar fluctuates upward between 2013 and 2017 with the highest point been in 2015 and lowest rate recorded in 2013. The findings show that inflation rate recorded an increase between 2013 and 2015 with a slight drop in 2014.

The findings also found that there exists a strong relationship between exchange rate and total foreign direct investment remittances; total foreign direct investment remittances were found to be strongly affected by the inflation rate increase.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Kenya, like other developing countries, can on count foreign direct investment as one of the crucial factors in determining its economic growth. Foreign direct investment is essential to a developing economy if it can effectively absorb its spill-over effects. FDI is a significant source of capital inflows with the positive impact on the host country's economy through direct technology transfer, technological spillover, human capital formulation, international trade integration, and competitive business environment (OECD, 2002). However, the macroeconomic environment in the host country must be attractive to foreign investment, 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).

The current account balance of a host country can be viewed as an indicator of the strength of its currency. A deteriorating current account balance is likely to lead to a depreciation of the hostess country's currency. It is possible that potential multinational investors view current account deficits negatively because such deficiencies may lead to inflation and exchange rate variations. If this is the case, then an increase in the current account deficit may lead to a reduction in FDI inflows. In contrast, if multinational companies take advantage of the current account deficits of the host

country by negotiating more favorable operative terms, then the current account deficits may increase FDI inflows (Mishkin & Eakins, 2009).

Kenya has had a long 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. It serves as the East African business hub for many international companies like General Motors, Proctor & Gamble, Microsoft, Google, Ogilvy and Mather, Coca-Cola and Citibank among others. Foreign investors control 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 global 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 Rate Volatility

For currencies to trade in a common market, one currency must be expressed in terms of the other. An exchange rate is the price of one currency in terms of another (Mishkin & Eakins, 2009). They can either be direct or indirect whereby a direct quotation refers to how much of the home currency is required to buy a unit of the foreign currency while an indirect reference refers to how much a unit of the foreign currency can be obtained for a unit of the home currency (Howells & Bain, 2007). The exchange rate is referred to as the nominal exchange rate when inflation effects are embodied in the rate and as the real exchange rate when inflation influences have not been factored in the rate (Lothian & Taylor, 1997). Before 1972, all countries of the world were operating a fixed exchange rate regime where each country currency had affixed exchange rate relative to the USD.

The significance of the exchange rate is that it allows a continuous adjustment of the exchange rate in line with the demand and supply conditions of foreign exchange in the economy. It equilibrates the demand and supply of foreign exchange by changing the exchange rate rather than the level of reserves. It allows the country to pursue its monetary policy without having to be overly concerned about the balance of payments effects. External shocks and imbalances are reflected in exchange rate movements rather than in reserve movements or Central Bank intervention to control the adjustment process (Ndungu, 2000). The exchange rates are primarily driven by market supply and demand. Using the flexible exchange rate system regime, the price of currencies is determined by the supply and demand of the currency in the forex market.

1.1.2 Foreign Direct Investment

The common goal of all businesses is wealth maximization and companies 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 will gain with the capital flow as well as technology flow that will aid in its development. When a nation seeks to invest in another, the benefit it aims to achieve must be higher than the risks it must deal with. UNCTAD (2002) describes three different types of FDI. These are: equity capital, reinvested earnings 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 a long-term commitment to the host country. It is a preferred form of investment because it has no obligations to the host country.

FDI plays a vital role in the up gradation of technology, skills and managerial capabilities in various sector of the economy that would be difficult to generate through domestic savings, and even if it were not, it would still be difficult to import the necessary technology from abroad, since the transfer of technology to firms with no previous experience of using it is difficult, risky, and expensive (Olson, 2008). FDI creates many externalities in the form of benefits available to the whole economy which the host countries cannot appropriate as part of their own income. FDI is important for developing countries as it makes available the resources that could bring about an optimal level of economic development (Ismaila & Imoughele, 2010). This is because their economies are plagued with problems associated with low domestic savings, low tax revenue, low productivity and limited foreign exchange earnings.

A country's appeal for FDI is affected by changes in restrictions, that includes removal of government barriers to trade as well as privatization whereby some governments sell off some of their operations to corporations and other investors. 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 capitalize on that growth by establishing business there. Exchange rates and tax rates are also factors that affect a country's appeal for FDI. Low tax rates on corporate earnings are more likely to attract FDI while firms prefer to direct FDI to countries where the local currency is expected to strengthen against their own.

1.1.3 Foreign Exchange Rate Volatility 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 that will be periodically converted back to the firm's currency at a more favorable exchange rate. Exchange rate movements affect FDI values because they affect the amount of cash inflows received from their investments and the amount of cash outflows needed 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 him to gain in expressing his currency in terms 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 point in time, a currency should exhibit the price at which the demand is equal to that 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 a currency loses its value, FDI is expected to increase while if a currency gains value, FDI is expected to reduce (Madura & Fox, 2011).

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 the 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 no physical goods are being exchanged at any given time, preferably 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 encompasses the conversion of purchasing power from one currency into another, bank deposits of foreign currency, the extension of credit denominated in a foreign currency, international trade financing, trading in foreign currency options and futures contracts, and currency swaps (Eun & Resnick, 2009). These transactions ultimately determine the rate at which currencies are exchanged and will, in turn, determine the cost of purchasing foreign goods and financial assets.

Trading that occurs in the foreign exchange market will determine the rate at which an investor will trade his foreign currency to invest in Kenya. The Central Bank of Kenya Act, Cap 491, Section 28, provides that CBK may engage in foreign exchange transactions with authorized dealers, public entities, foreign central banks 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 growth between 2007 and 2015 was forty percent (40%) with the inflows primarily going into retail and consumer products, telecommunications, technology, media, 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 Ghana, Mozambique, Zambia, Tanzania, Uganda, Nigeria 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 opens its borders for people with different ideas, the host country gets 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 workforce. 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. One of the determinants of FDI is the exchange rate. A nation 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 give 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 fewer dollars thereby making Kenya an attractive location for FDI. This should be the idea 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 keep 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 foreign direct investment 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 to attract these investments and whether the benefits outweigh the costs associated with them. If a currency is weaker, is it evident that FDI will flow into that country? This has not been researched on. Once FDI has been attracted, it is expected to help the economy grow and with its growth, a stronger shilling is supposed to be a characteristic of a country with FDI. This is far from what the country has experienced. Despite being home to many 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 critical element in the reduction of poverty levels in developing countries. He further attests that those factors that are favorable to domestic investment are often likely to propel FDI. This would in effect mean that a weak currency, as a determinant of FDI should also encourage local investments.

Currencies tradings at the foreign exchange market determine the exchange rates to be used as the market is expected to decide which currency is demanded more than it is supplied. The arrival of FDIs would imply that more shillings are required to buy assets as well as set up operations in Kenya. The high demand would be countered by the need for foreign currencies when remitting revenue after activities. As such market forces would determine the exchange rate was holding all other factors constant. This would be the ideal whereby the exchange rates would imply that there will be a significant rise in FDI in a country. Unfortunately, this has not been witnessed. The question that arises therefore is to what level do exchange rates determine FDI?

Ideally, FDI should aid the host country to benefit from the capital invested as well as technological advancements 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 there have been studies on the determinants of FDI (Kinuthia, 2012; Muema, 2013), on the other hand, Otieno (2012) focused on the impact of exchange rate fluctuations on FDI. No known study has been undertaken to determine the relationship between exchange rates and FDI in Kenya. The question that this study seeks to answer is, to what extent do exchange rates influence on FDI in Kenya?

1.3 Research Objective

1.3.1 The objective of this study is to establish the relationship between the exchange rate volatility and foreign direct investment in Kenya.

1.3.2 Specific Objectives

i. To identify how the inflation rate affects the valuation of the national currency.

ii. To determine the impacts of foreign exchange rate volatility on foreign direct investments.

iii. To determine how imports and exports trade affects the exchange rate in Kenya.

iv. To identify the significant factors that affect the levels of foreign direct investments, Gross domestic product and national income of the Kenyan economy.

1.4 Value of the Study

The findings are hoped to be of benefit to policymakers in developing investment strategy policies and developing the necessary 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 results of this study would also be invaluable to researchers and scholars, as it would form a basis for further research. The students and academicians would use this study as a basis 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; it would also help other academicians who undertake the same topic in their studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

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

2.2 Theoretical Review

Kidwell et al. (2008) defined an exchange rate as the price of one monetary unit stated in terms of another currency rate. These theories are differentiated by the long and short run. In the long run, if two countries produce an identical good, holding all factors that include transportation and legal costs constant, the price of that good should be constant throughout the world no matter which country produces it. This is referred to as the law of one price. This law is only relevant in the long run (Mishkin & Eakins, 2009).

2.2.1 Purchasing Power Parity Theory

PPP was first stated by the Swedish economist Gustav Cassel in 1918 using it as a basis for recommending a new set of official exchange rates at the end of World War I to allow for the resumption of normal trade relations (Shapiro, 1992). This theory was founded on the law of one price which is held to be true in the absolute version. PPP states that exchange adjusted price levels should be identical worldwide, that is, a unit of the home currency should have the same purchasing

power around the world. The theory bases its prediction of exchange rate movements on the changing patterns of trade due to different inflation rates between countries.

Kidwell et al (2008) argue that exchange rates tend to move to levels at which the cost of goods in any country is the same in the same currency. If PPP holds for exchange rates, all goods cost the same 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 without international trade barriers and transport costs, consumers shift their demand to wherever prices are low; suggesting that prices of the same basket of products in two different countries should be equal when measured in a common currency (Madura & Fox, 2011). If one currency is undervalued, goods produced in that country tend to cost less than similar goods produced elsewhere 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 when the rate of depreciation of the home currency relative to the foreign currency matches the difference in aggregate price inflation between the two countries in point (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 more commonly used. PPP is not a complete theory of exchange rate determination because deviations from PPP have prevailed throughout the history of the world (Shapiro, 1992).

The PPP theory suggests that the exchange rate will not remain constant but will instead adjust to maintain the parity in purchasing power. The percentage change in the foreign currency should change to maintain parity between the new price indexes of the two countries. This theory cannot fully explain exchange rates because the assumption that all goods are identical as well as the fact that transportation costs and trade barriers 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 is an exchange-rate model 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 monetary or nominal rate is approximately the sum of the real and inflation rates. The theory uses interest rate rather than inflation to explain why interest rates change over time. High inflation is almost always accompanied by high interest rates. The assumption is that when investors in different countries require the same real (non-inflation) return for the same level of risk, the only reason why interest rates should differ for a given risk is the difference in expected inflation. It suggests that foreign currencies with relatively high interest rates will depreciate in the same way as 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 efficient. The relationship between interest rates and inflation rates may not always hold and exchange rates can be affected by other factors other than interest rates (Madura & Fox, 2011). IFE essentially provides 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 rate of exchange. 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 when securities are quoted in a common currency, identical securities should have the same price in all the markets. It is defined as an equilibrium state that exits when market forces cause interest rates and exchange rates to adjust (Madura & Fox, 2011). This occurs when the forward rate differs from the spot rate at equilibrium by an amount equal to the interest differential between 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 capital is mobile and when

assets are perfect substitutes, if the expected return on a local asset is above that of a foreign asset, both locals and foreigners will want to hold only local assets and will be unwilling to hold foreign assets (Mishkin & Eakins, 2009).

Conversely, if the expected return on foreign assets is higher than on local assets, both foreigners and locals will not want to hold any local assets and will want to hold only foreign assets. The domestic interest rate equals the foreign interest rate minus the expected appreciation of the domestic currency. When the domestic interest rate is higher than the foreign interest rate, there is a positive expected appreciation of the foreign currency which will in turn 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 mean that all currencies must have the same interest rate. A currency experiencing high inflation and high interest rates can neutralize the effects of other 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 take an active role in the management of 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 countries are more successful than others in attracting FDI. A large number of studies have been conducted to identify the determinants of FDI but no consensus has been reached. The different approaches to the determinants of FDI do not replace each other but instead explain different aspects of the same phenomenon (Kinuthia, 2010).

2.3.1 Inflation

Inflation rate is considered a proxy for the quality of macroeconomic management and fiscal governance. The inflation rate is measured by the changes in the consumer price index which is a weighted average of price of goods and services consumed (CBK, 2013; Nwankwo, 2006). A high inflation rate indicates high economic tension in a country, and reflects the inability or unwillingness of the government to conduct a stable economic policy. It can be argued that if foreign investors are risk-averse (or risk-neutral); a higher inflation rate may lead to a reduction in FDI in the host country, because investors will not risk profits expected from investment (Kadongo, 2011).

As long as there is uncertainty, foreign investors will demand a high price to cover their exposure to inflation risks, and this, in turn, will decrease the volume of investment. Thus, to encourage investment, the stability of the inflation rate is important (Gastanaga et al., 1998). Nwankwo (2006) has stressed macroeconomic policy failures as deflecting FDI flows from Africa; he posits that, irresponsible fiscal and monetary policies have generated unsustainable budget deficits and inflationary pressures, raising local production costs, generating exchange rate instability and making the region too risky a location 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 role of growth in attracting FDI has also been the subject of controversy. Charkrabarti (2001) states that the growth hypothesis developed by Lim (2001) maintains that a rapidly growing economy provides relatively better opportunities for making profits than the ones growing slowly or not growing at all. Mishkin and Eakins (2009) find a significantly positive effect of growth on FDI, while Gastanaga et al. (1998), obtains a strong support for the hypothesis over the period 1983 to 1986, but only a weak link from 1975 to 1978.

On the other hand, Aoki (2007) reports a weak positive correlation for the less developed economies and a weak negative correlation for the developed countries. Asiedu (2002) finds a positive effect with lagged growth for the full sample and for the non-Sub-Saharan African countries, but an insignificant effect for the Sub-Saharan Africa sample. Gastanaga et al. (1998) found positive significant effects 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 first suggested by Asiedu (2002). Asiedu argued that the existence of different currency areas would generate FDI. Dunning considered that the greater the fixed capital stake of an investment, the more important it is to take account of possible movements in future 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 directly contributes to uncertainty on the returning transaction plan from the investing countries (Behera, 2008). The exchange rate affects the relative currency prices of closely matched manufactured goods produced in different countries.

2.4 Empirical 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 does increase the share of 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

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also concluded that a real depreciation of the currencies of the South East Asian countries with respect to the yen both increased FDI to these countries from Japan and decreased FDI investment to these countries from USA while increasing imports from Japan which largely consisted of inputs to production.

Ndung'u (2001) concluded that when the local currency starts sliding, capital flows in to take advantage of the weak shilling. Interest rate differential increases with real exchange rate appreciation. He argued that volatility of capital flows and the changes in the foreign interest rate account for almost half of the historical innovations of the real exchange rate movements. His conclusion was that the volatility of private capital flows drives the exchange rate movements via the risk premium.

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 while investigating foreign private investment and economic growth in Nigeria that foreign private investment, domestic investment growth and net export growth were positively related to 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 period of thirty years from 1981 to 2010 concluded that the impact of exchange rate fluctuations on FDI is insignificant. 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 the impact of the exchange rates, exchange rate volatility and the expectations of exchange rates on FDI flows from 1994 to 2008. The results suggested that exchange rates and expectations of the exchange rates are positively related with FDI. The positive and significant coefficient corresponding to the exchange rate (home per host currency) variable suggests that an appreciation of the home currency encourages outward FDI from the OECD member 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 from KES58.00/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.

Gikungu (2012) in his study the impact of macroeconomic variables on the performance of Nairobi Securities Exchange (NSE) concluded that there was a general rise in share prices, money supply, exchange rate, inflation, and interest rate over the period under study. The study also found that money supply and inflation rate had positive but insignificant effects on share prices while interest rate had a negative but insignificant effect on share prices. Further, exchange rate has a negative and significant effect on share prices.
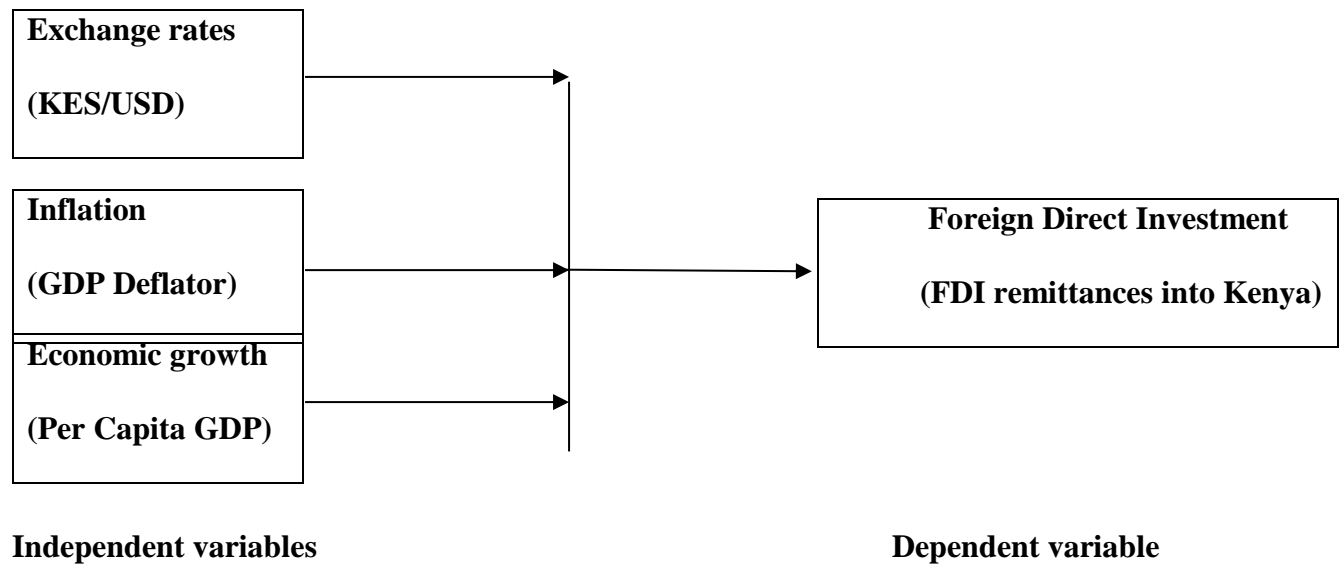
Illo (2012) conducted a study on effect of macro-economic factors on financial performance of commercial banks in Kenya. The study use ROA which was regressed against the macroeconomic

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variables including GDP growth rate, exchange rate (US dollar) the money supply (M3), inflation (CPI), and lending rate of the selected commercial banks. The study found out that financial performance of commercial banks as measured by ROA was found to be positively correlated with money supply (M3), lending interest rate of individual banks, GDP growth and inflation but negatively correlated with exchange rate.

Mwangi (2013) conducted study on effect of macroeconomic variable on financial performance of aviation industry in Kenya. The macroeconomic variables included real exchange rate (USD/Ksh) GDP growth rate, exchange in money supply (M3), and average annual lending interest rate as computed by CBK and inflation rate measured by annual percentage changes in the consumer price index/CPI. The study revealed that ROA of aviation has a weak positive insignificant correlation with GDD growth and annual change in money supply M3; it also found that ROA has a weak negative significant correlation with exchange rate, annual average lending rate and annual average inflation.

Muya (2013) investigated factors that determine financial performance of insurance companies in Kenya and concluded that fluctuations in interest rates affect the financial performance of insurance companies both ways, because it affects the rate of borrowing as well as the rate of return on investments. Profitability as an indicator of financial performance enables insurance companies to invest in viable ventures while avoiding the too risky ones. Competition was found to have an effect on insurance company's financial performance especially through the prices and innovation in new products. Liquidity affects financial performance of insurance companies and this is why the insurance companies have liquid investments.

2.5 Conceptual Framework

```
┌─────────────────────┐
│ Exchange rates      │
│                     │──────────────────┐
│ (KES/USD)           │                  │
└─────────────────────┘                  │
                                         ▼
┌─────────────────────┐     ┌────────────────────────────────┐
│ Inflation           │     │ Foreign Direct Investment      │
│                     │────▶│                                │
│ (GDP Deflator)      │     │ (FDI remittances into Kenya)   │
├─────────────────────┤     └────────────────────────────────┘
│ Economic growth     │                  ▲
│                     │──────────────────┘
│ (Per Capita GDP)    │
└─────────────────────┘
```

Independent variables   Dependent variable

Fig 2.1

2.6 Research Gap

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.

2.7 Summary of the Literature Review

The theories advanced on explaining exchange rates can only work in a perfect market. The law of one price in the absence of market impactions arbitrage ensures that exchange-adjusted prices of identical traded goods and financial assets are within transaction costs worldwide (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 while an appreciation of a currency reduces the foreign exchange cost of imports, it also reduces the rate of return to tradable goods, in part through the foreign exchange cost of exports and import 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 focuses on the methodology that will be used in gathering data, its analysis and the reporting for a ten year period from 2013 to 2017. It consists of the research design, data specification, data collection and its analysis.

3.2 Research Design

The study will use 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 will be the FDI remittances into Kenya per month, average exchange rate per month, inflation rate per month and economic growth per month for the period 2013 to 2017.

3.4 Data Collection

The study will use secondary data from KNBS publications as well as from the CBK website. The quantitative data collected will include total FDI remittances into Kenya from 2013 to 2017collected on a monthly basis. Data on exchange rates will be collected from the CBK website as the average KES/USD exchange rate for every month from 2013 to 2017. Data on inflation will

be the GDP deflator while data on economic growth will be the total per capita GDP, both collected

for every month from 2013 to 2017.

3.5 Data Analysis

Data will be analyzed using MS Excel and SPSS. Regression analysis will be used to determine

the relationship between exchange rates and the level of FDI (remittances) as indicated in the

model below. The regression model will be used to test the relationship of exchange rates with

FDI. Multiple regression analysis and correlation analysis will be used to predict the nature and

significance of the relationship.

3.5.1 Analytical Model

The analytical model will be as follows;

$$Y = \alpha + \beta_1 EX + \beta_2 I + \beta_3 EG + \mathcal{C}_e$$

Where

Y= total FDI remittances into Kenya for every month

α = y intercept (the constant)

β = regression co-efficient

EX = Standard deviation of the difference between real and nominal exchange rate

I = inflation rates as measured by GDP deflator (%) for every month

EG = economic growth as measured by total per capita GDP for every month

$\mathcal{C}_e$ = error component that represents the deviation of the response from the true relation.

The natural logarithms for all the factors will be calculated on a monthly basis for the period 2013 to 2017 to be used in the model.

3.6.2 Tests of Significance

Correlation coefficient (r) will be determined and used to measure the strength and direction of the relationship between the dependent variable (foreign direct investment) and each of the independent variables. Coefficient of determination (R^2) will be used to measure the proportion of variance in the dependent variable that can be explained by independent variables. If F calculated will be less than the table value, then the decision will be there will be no statistical evidence of correlation at 5% level of significance. T test will be used to test for the significance of the relationship between dependent and each of the independent variables.

3.7 Diagnostic Tests

The assumptions behind linear regression model include auto-correlation tests, multi-collinearity and multivariate normality tests.

3.7.1 Auto-Correlation Tests

This test will be carried out taking the dependent variable and all independent the variables together. The Durbin-Watson test acceptable range for this study will be 1.5 to +2.5 to prove whether the data is a time series one or stationary which allows utilization of regression for this study.

3.7.2 Multicollinearity Tests

Previous research studies have adopted techniques like simple correlation matrix and variable inflation factor for detecting the presence of multicollinearity (Akhtar Uddin et al., Hossain & Hammami (2009). In recognition of simple correlation and variable inflation factor, the presence of multi-collinearity will be tested using the tolerance value suggested by Gujrati (2004).

3.7.3 Multivariate Normality Tests

This study will adopt Shapiro–Wilk (1965) test, to test for normality through adjustment of not normally data using a non-linear and log-methods.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter focused on the analysis of the data collected from the Kenya Bureau of Statistics and Central Bank of Kenya to establish the relationship between exchange rate volatility and total foreign direct investment remittances for the period between 2013 and 2017. The results were analyzed using descriptive statistics, inferential statistics such as correlation & regression analysis, tabulated and graphically presented as shown in the following sections.

4.2 Findings

This section presents the descriptive results of this study, measures of central tendency, the trends analysis Kenya shillings compared to Dollar, inflation rate, exchange rate and economic growth measured by capita income.

Table 4.1 Descriptive Statistics

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

From the analysis of descriptive statistics the finding clearly reveals that foreign direct investment measured by the total foreign direct investment remittances has a mean of 12.83% with a maximum of 39.92% and minimum of 15.87% and standard deviation of 0.399, economic growth measured by the total percapita GDP for every month has a weighted mean of 76.27% maximum of 96.45% and minimum of 32.87%, inflation rate measured by GDP deflator percentage has a weighted mean of 9.54% maximum of 14.23% and minimum of 5.72% and standard deviation of 0.104% and exchange rate measured by the standard deviation of the difference between real and nominal exchange rates has a weighted mean 83.00% maximum of 98.17% and minimum of 76.21 % and standard deviation of 0.569.

Figure 4.1 Total foreign direct investment remittances trends
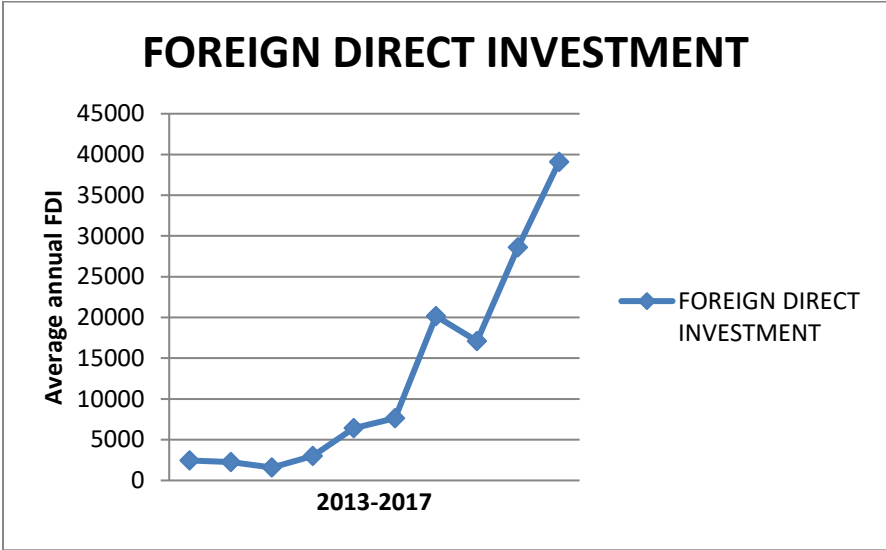
From the analysis of total foreign direct investment remittances between 2013 and 2017, it was found that average total foreign direct investment remittances from different sectors of economy remained steadily between 2013 and 2014 with a slight decrease between 2014 and 2015 followed by a slight increase in 2016 to 2017. Total foreign direct investment remittances increased sharply

between 2015 and 2016 followed by a decrease in 2018. The results also revealed that total foreign direct investment remittances increased significantly between 2014 and 2015 respectively.

Figure 4.2 Per-capita income trends
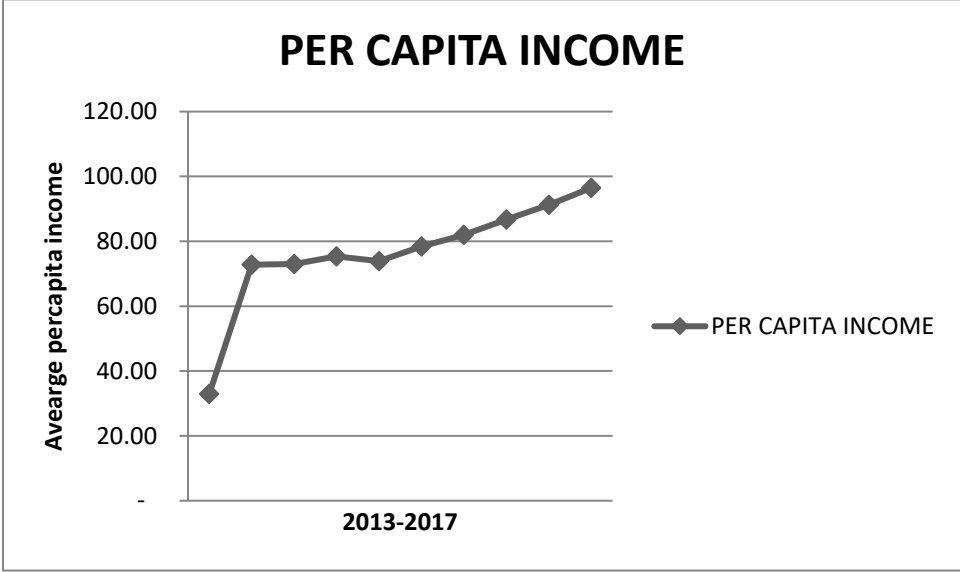
From the analysis of total income compared to total population, the results shows that per-capita income increased sharply between 2013 and 2014 with a stead movement between 2014 and 2015 followed by a significant increase between 2015 and 2017 respectively.

Figure 4.3 Difference between real and nominal exchange rate

Difference between real and nominal exchange rate
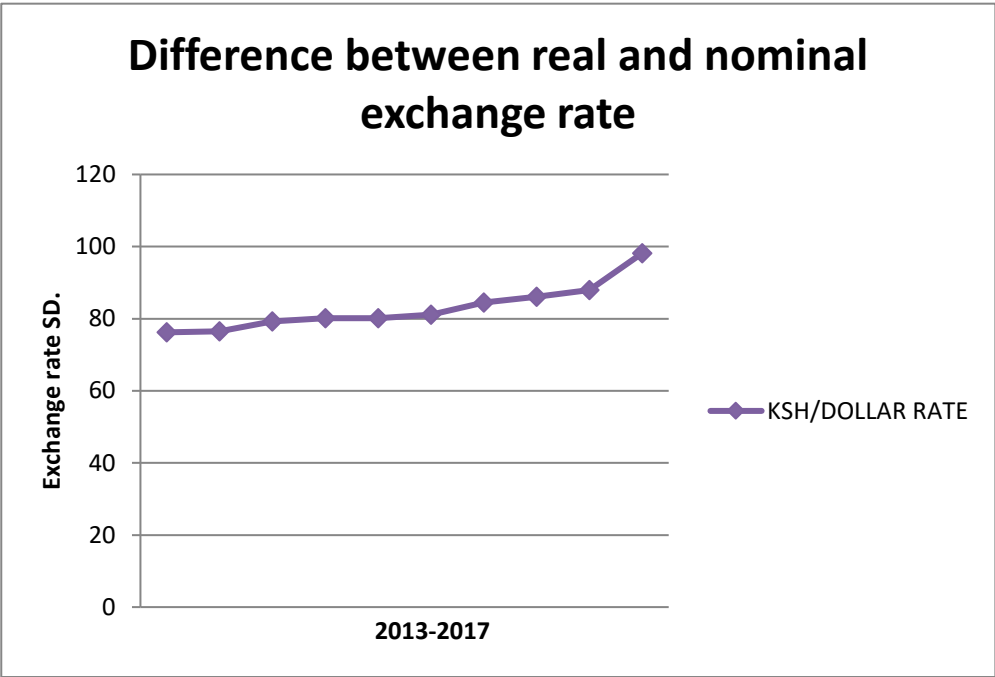
From the analysis of exchange rate measured by standard deviation of the difference between real and nominal exchange rates it was found that the exchange rate fluctuates upward between 2013 and 2017 with the highest point been in 2015 and lowest rate recorded in 2013.

Figure 4.4 Inflation rate trend
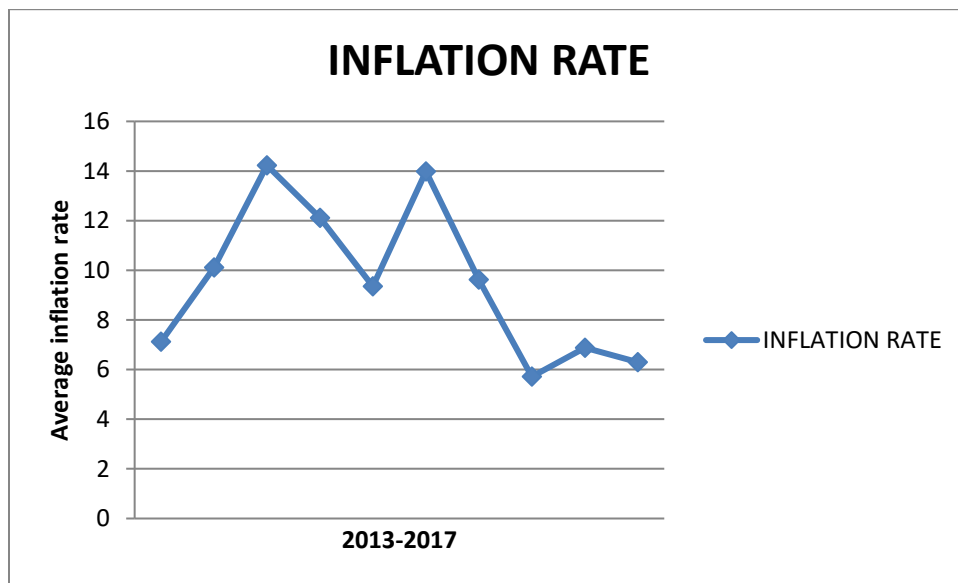
From the analysis of inflation rate between 2013 and 2017, the findings shows that inflation rate recorded a sharp increase between 2013 and 2014 with a slight drop in 2015 followed a slight increase in 2016. The rate dropped significantly between 2016 and 2017 with insignificant increase in 2017.

Table 4.2 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).

		FDI Remittances	Real-Nominal E/R	GDP Deflator %	Total percapita GDP
FDI Remittances	Pearson Correlation	1	.960[**]	-.616	.688[*]
	Sig. (2-tailed)		.000	.058	.028
	N	10	10	10	10
Real-Nominal E/R	Pearson Correlation	.960[**]	1	-.514	.739[*]
	Sig. (2-tailed)	.000		.129	.015
	N	10	10	10	10
GDP Deflator %	Pearson Correlation	-.616	-.514	1	-.102
	Sig. (2-tailed)	.058	.129		.779
	N	10	10	10	10
Total percapita GDP	Pearson Correlation	.688[*]	.739[*]	-.102	1
	Sig. (2-tailed)	.028	.015	.779	
	N	10	10	10	10

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

From the analysis of the correlation analysis, it was found that there exist a strong positive correlation between exchange rate and total foreign direct investment remittances (p= .960, p>0.05). This implies that the exchange rate determined by market forces influence on the foreign investors decisions. The relationship between total foreign direct investment remittances and inflation rate was found to be strongly negative (p= -.616, p>0.05). This implies that movement in inflation rate has implications on the negative implications on the total foreign direct investment

remittances. The study also showed that there exist a strong positive correlation between total foreign direct investment remittances and economic growth (p= .688, p>0.05). This shows that total foreign direct investment remittances significant influences per-capita income. 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 week (p= -.514, p>0.05).

Table 4.3 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 4.3 above indicates that there is an R^2 value of 94.3%. This value indicates that the three independent variables explain 94.3% of the variance in the total foreign direct investment remittances. It's very clear that these independent variables influence to a large extent the total foreign direct investment remittances. It is therefore sufficiently to conclude that these variables significantly influence foreign investors decision given the unexplained variance is only 5.7%.

Table 4.4 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	6	436.37		
Total	2292.32	9			

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 4.4 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 total foreign direct investment remittances.

Table 4.5 Regression analysis

Model	Un-standardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	63.565	280.687		-4.145	.006
Real-Nominal S.D	16.013	3.775	.809	4.242	.005
GDP Deflator %	-8.084	5.408	-.193	-1.495	.116
Total Percapita GDP	.524	1.237	.070	.423	.047

a. Dependent Variable: FDI
Remittances

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 per-capita income which measures economic growth are statistically significant with inflation rate having significance of more than 5% not statistically significant.

CHAPTER FIVE

SUMMARY, CONCLUTION AND RECOMMENDATIONS

5.1 Introduction

This chapter tends to give the summary of the results in this study, conclusions and recommendations for practice and areas for further research.

5.2 Summary

The objective of this study was to establish the relationship between exchange rate volatility and foreign direct investment measured by the total foreign direct investment remittances for the period between 2013 and 2017. From the analysis of the finding it was found that average total foreign direct investment remittances from different sectors of economy remained steadily between 2013 and 2015 with a slight decrease between 2014 and 2015 followed by a sharp increase between 2014 and 2016. The per-capita income increased significantly between 2013 and 2014 with a stead movement between 2014 and 2016 while exchange rate measured by Kenya shilling compared to Dollar fluctuates upward between 2013 and 2017 with the highest point been in 2015 and lowest rate recorded in 2013. The findings show that inflation rate recorded an increase between 2013 and 2015 with a slight drop in 2014.

The findings also found that there exists a strong relationship between exchange rate and total foreign direct investment remittances; total foreign direct investment remittances was found to be strongly affected by the inflation rate increase. The study also showed that there exist a strong relationship between total foreign direct investment remittances and economic growth which influences about 68% of the economic growth. This shows that total foreign direct investment remittances significant influences per-capita income. This study also found that there exist a strong

positive relation between exchange rate and economic growth which influences about 73% of economic growth.

5.3 Conclusions

This study concludes that independent variables selected for this study par-capita income, exchange rate and inflation rate influence to a large extent the total foreign direct investment remittances. It is therefore sufficiently 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 total foreign direct investment remittances exchange rate and per-capita income which measures economic growth was found to be statistically significant.

5.4 Recommendations for the Policy

The study recommends that clear financial management strategies should be set aside to address key critical investment decisions arising in the country particularly developing good financial management technique to provide adequate responses to challenges and problems by focusing on internal business processes and internal controls.

Kenya should in addition have clear framework on how credit decisions are made and the protocol to be followed to make sure the right decisions are made to meet the benefit of the investors and maintain the companies going concern. This will enable to minimize any conflict of interest which might lead to disservice or dissatisfaction which can indirectly hurt the economy.

5.5 Limitations for the Study

Limited time used and resource constraints, which is includes finances move from one point to another when collecting data for this study was inevitable and thus only data collected from CBK and KNBS was considered for this study.

Another limitation in the course of the study was the limited access to the information especially the primary data which led to the use of secondary data in this study which was difficult and challenging to edit code and analyze.

5.6 Suggestions for Further Study

For this kind of research, more time need to be spent to be able to collect adequate information and analyze it to provide more variables which influence the movements of exchange rate which directly influences foreign direct remittances.

The study mainly used secondary data to gather information for the research project. Further researches should be done using both primary and secondary data. Secondary data analysis is reduces time that would otherwise be experienced when using primary data alone.

This study also suggest that further study especially a comparative study can be conducted by comparing the factors affecting the exchange rate volatility and foreign direct investment from different geographical areas and remedies for the same and more advanced analysis model

employed to show the exact relationship and differences on the volatility such as t-test, chi-square

and correlation analysis which captures many factors possible.

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