RELATIONSHIP BETWEEN FOREIGN EXCHANGE RATE AND FOREIGN INVESTOR CAPITAL FLOWS IN KENYA

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DECLARATION

This research project is my original work and has not been submitted or presented for examination in any other university, either in part or as a whole.

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

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DEDICATION

I would like to dedicate my research project to my family for their love and support during this study.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS

ANOVA	-	Analysis of Variance
ADF	-	Augmented Dickey Fuller
CBK	-	Central Bank of Kenya
ECM	-	Error Correction Model
EPZ	-	Export Processing Zone
FCI	-	Foreign Capital Inflows
FDI	-	Foreign Direct Investment
FPI	-	Foreign Portfolio Investment
GARCH	-	Generalized Autoregressive Conditional Heteroscedasticity
GDP	-	Gross Domestic Product
GNP	-	Gross National Product
GVD	-	Generalized Variance Decomposition
IMF	-	International Monetary Fund
IRP	-	Interest Rate Parity
KES	-	Kenya Shilling
KNBS	-	Kenya National Bureau of Statistics
OECD	-	Organization for Economic Cooperation and Development
PPP	-	Purchasing Power Parity
SPSS	-	Statistical Package for Social Sciences
UK	-	United Kingdom
UNCTAD	-	United Nations Conference on Trade and Development
US	-	United States
USD	-	United States Dollar
VARs	-	Vector Auto-Regressions

ABSTRACT

This paper sought to establish the relationship between exchange rate and foreign investor capital flows in Kenya. Specifically, the study sought to establish the relationship between exchange rate and foreign investor capital flows; to determine the relationship between commercial tax rate and foreign investor capital flows and to establish the relationship between economic growth rate and foreign investor capital flows. A descriptive research design was adopted in the study. Data for a 10-year period (2006-2015) was collected from KNBS and CBK. The data was analyzed quarterly giving a total of 40 data points. Descriptive, correlation and regression analysis were used to analyze the data. From the descriptive analysis, exchange rate displayed a mean of 81.0950, economic growth rate 5.8758, tax rate 46.39 and foreign investment a mean of 21.5935. The value of adjusted R^2 was 0.639 indicating a variation of 63.9% on foreign investor capital flows dues to changes in exchange rate, economic growth rate and tax rate. All the variables were found to be significant ($p<0.05$). A strong positive correlation was found between exchange rate and foreign investor capital flows as shown by correlation coefficient factor of 0.698. A positive strong positive relationship was also established between economic growth rate and foreign investor capital flows as shown by correlation coefficient of 0.695. However, tax rate and foreign investor capital flows were found to have a negative relationship as shown by correlation coefficient of -0.789. The study concludes that exchange rate and economic growth rate have a positive relationship with foreign investor capital flows in Kenya. However, commercial tax rate displayed a negative relationship. It was recommended that policies would enhance the economic growth be formulated and reduction in the commercial tax rate in Kenya.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Every developing economy needs foreign capital if it can effectively absorb its spill-over effects (OECD, 2002). However, the macroeconomic environment in the host country must be favourable to attract foreign investment and an important factor of an operating monetary policy in any country is the rate of the country's currency against other currencies. The difference in the interest rates can affect capital inflow from a private sector. Lowering the interest rates can lead to interest rates depreciation, thus effected by the action. This means that if a country wants its rates to be low they must be prepared for their currency to be weak compared to other countries currency (Ncube & Ndou, 2011).

Kenya takes foreign capital inflows as an economic growth factor. There has been an increase in the market uncertainty over last decade due to volatility of the foreign rates of exchange which has put the Kenyan shilling low against foreign currencies. Due to this uncertainty, foreign investors who might want to invest in Kenya are discouraged since they are faced with high exchange rate risks (Mwega & Ngugi, 2013).

1.1.1 Exchange Rate

O'Sullivan and Sheffrin (2003) referred to foreign exchange rate as the cost in terms of domestic currency, of one unit of the foreign currency. Some people have rather valued the countries' currencies to another. The expression of a currency in terms of another allows currencies to trade in a common market and thus the common currency which

allows the domination of market when selling or exchanging goods and services (Mouhamed, 2014).

Mishkin and Eakins (2009) defined exchange rate as the price of a currency in terms of another. Howells and Bain (2007) who stipulated that the currencies can either be direct or indirect, noted that direct exchange rate is the amount of money of a certain currency that buys a foreign currency while indirect is home currency used in acquiring foreign currency. Exchange rates which can be classified as per government control can also be classified as spot or forward. Spot deposit can be given by an exchange of deposits in a bank for two days while the forward exchange rate is the transaction of a future day (Mouhamed, 2014).

Madura and Fox (2011) classified exchange rates as either fixed whereby the exchange rates are held constant or only allowed to fluctuate within very narrow boundaries or managed which is the exchange rate system that is in use today whereby the exchange rates can change on a daily basis without being restrained or controlled. The free market exchange rate is another form of exchange rate that is controlled by the existing market forces with no control from the government.

In Kenya, Obondi (2013) in her study of the relationship between foreign exchange rates and the central bank rate determined that when a central bank wants to reduce the rising of a foreign rate it sells its foreign reserves and buys these reserves when the rate is dampening so as reduce the rate variability. According to Erlat and Arslaner (2007), people acquire goods and services that require foreign currencies. These people use foreign exchange rates. International banks, in order to arrive at profits, use exchange

rates. The profits are obtained due to the different rates in the bid and ask prices. Each country works hard to maintain the value of its currency. This is why the central bank of each country has to be interested in the exchange rates. When a country's currency has a high exchange rate, then its currency is weak while if a country's currency exchange rate is low, the reverse is true (Howells & Bain, 2007).

1.1.2 Foreign Investor Capital Flows

Foreign investor capital flows involve the movement of capital into a market or economy (UNCTAD, 2002). Obstfeld and Taylor (2004) classify capital flows into remittances, official flows, commercial loans, foreign portfolio investment (FPI) and foreign direct investment (FDI). Money sent by people working abroad to their countries is known as remittances. This mainly happens to flow from developed to developing nations and represents a major capital flow in developing nations (Lane & Gian, 2001). Official flows are development funding to developing nations from developed ones. Commercial loans are bank loans issued to foreign businesses or governments. FPI involves investment in instruments like bonds or stocks in a foreign country (Obstfeld & Taylor, 2004). FDI involves a foreign investor having a large interest and operating an enterprise in a certain country. This may involve purchase of a factory and improving it or constructing one in the foreign nation (Lane & Gian, 2001).

Technological advancement and changing global politics has led to more capital foreign investment especially to emerging countries, the former Soviet Union and eastern and central European countries (Feldstein & Horioka, 2007). For instance, in 2007, Zambian foreign capital stated as a percentage of the nation's GDP was 75 percent. In other

African countries such as Gambia, Uganda, Tanzania and Cameroon foreign capital stated in percentage of GDP was 30% (Bhinda & Martin, 2009).

According to Feldstein (2009) capital from foreign investors benefit the host countries since they increase domestic savings supply especially in countries that are attractive to foreign investors. Even when the marginal product of capital is high, countries that import capital can still benefit even if the equity yields and interest rates for foreign investment is high. In spite of this observation, many countries still experience low capital inflows compared to domestic saving volumes (Feldstein & Horioka, 2007). Domestic savings in most countries provide the money to invest in real estate and purchasing of equipment and plants for businesses. This shows that current accounts deficits are low and the capital inflows that can be supported by the international capital market (Feldstein, 2010).

Both portfolio and direct investments are the varied forms of foreign capital inflows. When foreign capital is used for domestic construction of projects such as investing in new production lines, coming up with joint ventures and building of plans among others, this is referred to as direct investment (Howells & Bain, 2007). Foreign direct investments have advantages such as improving competition in the host countries among firms, transferring technological knowledge from one country to another and the formation of capital. Such advantages enable the creation of an attractive investment climate which leads to more investors investing in such countries, it also leads to improved economic development and growth (Srikanth & Kishore, 2012). Foreign direct investments positively affect a country in the long term and it does not enable transfer of

capital alone. Foreign firms also transfer management techniques, technology and their marketing means (Bird & Rajan 2012).

When investment is for a short period of time in corporate bonds or domestic stocks then it is referred to as portfolio investment. FPI does not increase the country's foreign currency debt but finance the gap between domestic savings and investment (Mishkin & Eakins, 2009). The flows from Portfolio investment are also termed as 'hot capital' and the investors of this kind of investment move from one country to another and invest where there are high returns and better investment conditions.

Portfolio investments are often seen to be more volatile, and this is usually not with the case of direct investment. When the portfolio investment is done in terms of equity, it does not necessary affect real investment as sharers are usually bought in the secondary market and not the primary market (Mishkin & Eakins, 2009). Portfolio investment reversal can greatly affect the domestic capital market as it would affect the prices of shares and bonds. Thus, all the financial markets which include the credit market, the securities market, the foreign exchange markets and the money markets are affected by any speculative foreign flows as the risks associated with such flows affect all markets and this often leads to loss of employment and outputs (Srikanth &Kishore, 2012).

International capital flows are of a great gain to investors. They increase market access to firms, lower cost of inputs and increase efficiency which lower production costs. (Madura & Fox, 2011). Investors choosing to invest in portfolio investment can diversify their risks and also attain higher yields which can decrease the risk of the investor's portfolio compared to their industrialized countries where the case is different. Diversifying risks

internationally have great benefits making financial economists wonder why individuals and firms do not take advantage of this opportunity (UNCTAD, 2002).

Investors who are afraid of political risks in foreign countries, which can cause tax changes and default in debt leading to low yield in investments, are more comfortable not diversifying their risks rather than investing in foreign markets where they can obtain an optimal investment strategy (Kiyota & Urata, 2004). Asian countries for instance have undergone changes that have led to equity value and currency fluctuations which have never been experienced in the history of these countries. Further, optimal portfolio models that have been used to describe expected variances of equity prices and currency values have been of little help in this case as their predictions were wrong that were guided by historic risk measures (Mishkin & Eakins, 2009).

1.1.3 Exchange Rates and Foreign Investor Capital Flows

According to different studies conducted in the past, exchange rates have been seen to have an effect on the foreign capital flows. (Kiyota & Urata, 2004; and Ruiz, 2005). 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 returned to the firm currency when the rate will be more favorable. The buying and selling of the currencies by the central banks are but attempts of currencies trading to determine the exchange rate.

Mowatt and Zulu (2009) in their study on foreign investment in Nigeria and South Africa posits that one of the major foreign investment barrier is exchange rate. Jenkins and Thomas (2002) in a similar study found that the risk associated with exchange rate does

determine the foreign investment from investors. The foreign exchange market is not like other markets because when the currencies are exchanged; the impact is not only felt along telecommunication networks but instead, it is felt in the prices of local goods and services. Anything causing nations imports and exports to change usually leads to shifts in the country foreign currency demand and supply curves changing such a country currency price in the foreign exchange market (Kidwell et al, 2008).

1.1.4 Exchange Rates and Foreign Investment Capital Flows in Kenya

Were et al. (2011) noted that the exchange rate is key to economic management and price stability in a country. In making investment decisions in the foreign arena, the exchange rate is very important. The Kenya forex market was liberalized in the 1990s through the exchange rate regime. This led to changes in the foreign investor flows in the country. The capital investment into the country was attracted by the exchange rate that rose in the 1990s.

According to Kimotho (2010) appreciation in the exchange rate leads to an increase in net investment capital flows. Changes in the economy together with donor funding has led to increased volatility of exchange rates in Kenya (Were et al, 2011). The difference in the exchange rates has been found to drive the private capital inflows. This has called for a policy that would reduce the interest rates in line with the exchange rate depreciation (Musau, 2011). This led to withdrawal of foreign investment in the country and created economic challenges.

Foreign capital flows into Kenya have been on the decrease in the recent years. The exchange rate of the Kenya shilling has been rising in the recent past which can be

attributed to low economic growth (Kimotho, 2010). The exchange rate hit the 100 shillings' mark against the dollar in 2015 (CBK, 2015). Falling foreign capital flows into Kenya increased the exchange rate of the Kenyan shilling against major currencies like the dollar (Mwega & Ngugi, 2013). This calls for a study to investigate whether there is a relationship between the rate of the Kenya shilling against the dollar and the change in foreign capital investor flows.

1.2 Research Problem

Foreign capital investment allows resources to flow from industrialized to developing countries. So of the advantage obtained from this investment include new jobs, technological advancement, better productivity and learning of new managerial skills (Blomström & Kokko, 2007). Since most developing countries lack enough capital, and the fact that these investments bring about benefits to these countries, this kind of investment should be encouraged so as to improve the growth and development of economies (Naudé & Krugell, 2007).

Exchange rates are important because where the local currency is of higher value compared to other currencies, the goods sold in terms of other currencies are more affordable for the locals as they become cheaper (Goldberg & Kolstad, 2010). There has been controversy on how the exchange rates relates to the foreign capital flows. With some studies (Durham, 2008; Prasad, Rajan, & Subramanian, 2007) finding a negative relationship, other studies (Vita & Kay, 2009; Macias & Massa, 2009) find a positive relationship between the two.

Once foreign capital flows into Kenya, the economy growth increases and leads to a stronger shilling (Mwega & Ngugi, 2013), which is by far different from what Kenya has experienced. She has been hit with depreciating value of the shilling with 100 shilling compared to the dollar in July 2015 (KNBS, 2015). This is despite Kenya being a home of foreign investment. According to the survey, the private foreign investment in Kenya improved in 2013 compared with 2012, and largely reflected the FDI and private foreign borrowings. FDI flows to Kenya have been on the increase reaching Ksh. 454,576 million in 2013, this was 20.7% increment in 2013. Kenya has also experienced an elevation in the number of portfolio investments which rose by 75.8% in 2013 to Ksh. 58,951 million. Portfolio Investment inflows increased by Ksh. 38,646 million to Ksh. 92,978 million while outflows increased by Ksh. 34,817 million to Ksh. 67,415 million in 2013.

Study conducted by Otieno (2012) showed a real relationship observed between fluctuations in exchange rate and how they affected Kenyan foreign direct investment as explained by the inferential analysis done. A weak relationship was found between foreign direct investment and exchange rate fluctuations and obtained through inferential analysis. The current study widens the scope compared to Otieno's study by adding portfolio investment to the research.

Mwega and Ngugi (2013) in their study indicated that the foreign capital flows in Kenya have been majorly affected by the fluctuation in the Kenya Shilling exchange rate driven by the environment and the performance of the Kenya economy. Politics also played a major role in the fluctuations. Other factors that affect foreign capital inflows included growth rate of GDP, credit availability, domestic investment, the exchange rate and internal rate of return. This study not only focuses on the foreign direct investment and its

determinants but also focuses on the relationship to the exchange rate. This gives the difference to the current study. This creates a research gap that should be filled by answering the question does foreign investor capital flows relate to exchange rate in Kenya?

1.3 Research Objective

To determine the relationship between exchange rate and foreign investor capital flows in Kenya

1.4 Value of the Study

This study will be useful in the determination of the relationship between exchange rate and foreign capital flows. It will be useful for key players in the foreign market which will enable them to establish the level of trading at any given time. Institutions that make policies such as the Central Bank of Kenya will benefit from study. It will create an understanding on how foreign capital flows and exchange rate are related. This will enable the policy makers to come up with policies that will reduce exchange rates so as to help in raising foreign capital inflows.

Investors will benefit from the study in that it will show how the exchange rates relate to foreign capital inflows. This will help them make relevant decisions concerning investment based on the exchange rate of the Kenyan shilling against major currencies in the world. This study will be useful as a reference point and for further research purposes. This study will be used as a reference point by scholars. It will provide a reliable source of information for further studies on exchange rate and capital flows.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

In this chapter past studies on exchange rates and foreign capital investment are looked into. The specific areas covered are theoretical review, determinants of foreign capital investment flows and the empirical review.

2.2 Theoretical Review

The theoretical review section of this paper will try to uncover whether or not existing theories suggest a relationship between foreign exchange rate and foreign investor capital flows. There are two theories that attempt to explain the correlation between foreign exchange rate and foreign investor capital flows, the purchasing power parity and interest parity theories.

2.2.1 Theory of Purchasing Power Parity

Gustav Cassel a Swedish economist was the first to explain the concept of Purchasing Power Parity Theory (PPP) in 1918 (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 theory, worldwide levels of exchange adjusted price should be the same meaning that a home currency unit purchasing power should be similar the world over.

When the difference in the aggregate price between two countries is matched by the depreciation in the home currency relative to the foreign currency, then PPP is said to

exist (Sarno & Taylor, 2002). This means in effect that issues such as transportation costs, tariffs and quotas are taken into account. PPP is not a complete exchange rate calculation theory as the deviations from the theory have continued to exist throughout the world history (Krugman & Obstfeld, 2009). The theory states that exchange rates are determined by considering the trade patterns changes that take place due to the difference in inflation rates across countries.

The theory states that the exchange rate will keep on changing so as to maintain the purchasing power parity (Schreyer & Koechlin, 2002). The changes in foreign currency stated in percentages should change in such a way that they maintain parity between the two countries new price indices. The challenge of the theory is in its explanation of how exchange rates relate to the barriers to trade and the type of goods from a country. The theory assumes that all goods are the same in different countries and that barriers to trade together with transportation costs are always low in different countries. This can't be true (Sarno & Taylor, 2002).

With PPP, ideal situations are observed. In perfect conditions, foreign capital investment flows 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 (Krugman & Obstfeld, 2009).

2.2.2 Theory of Interest Rate Parity

Keynes, in 1930, was the first person to develop the theory of interest rate parity (IRP). It is based on one price law that states that similar securities are priced the same in such that

identical securities should have the same price if priced in the common currency. IRP is an equilibrium that comes about when market forces causes the adjustment of the interest and exchange rates (Madura & Fox, 2011). When the interest differential between countries equals the difference between forward rate and spot rate, IRP is at equilibrium.

This arbitrage condition holds with international financial markets 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 assets are perfect substitutes and capital is mobile, and the return on the foreign asset is below that expected on a local asset, both locals and foreigners will be unwilling to hold foreign assets and want to hold only local assets (Mishkin & Eakins, 2009).

Investors only tend to hold on higher value assets with both local and foreigners holding onto foreign assets and not local assets when the returns expected on the foreign asset is of a higher value. If the domestic interest rate is higher than the foreign one a positive appreciation is expected. This will compensate for lower foreign interest rates (Mishkin & Eakins, 2009). The domestic interest rate can be calculated by subtracting expected appreciation of domestic currency from foreign interest rates.

This theory is important as it describes the situation whereby an investor decides on which country to invest in. IRP doesn't mean all currencies must have same interest rate. Effect of other currencies can be neutralized by a currency experiencing high inflation and interest rates by devaluation (Madura & Fox, 2009).

2.3 Determinants of Foreign Capital Investment Flows

Foreign capital investor flows are determined by foreign exchange rate, commercial tax rate and economic growth rate.

2.3.1 Exchange Rate

Exchange rate is a key factor that relates to flow of private capital into a country. Risk aversion theory states that increased volatility in the exchange rate decreases foreign capital inflows into a nation (Brink & Viviers, 2003). When a country has a relatively poor exchange rate in comparison with another country, its foreign capital inflow is unfavourably affected. The effect of the exchange rate is a contributory factor to foreign capital inflows. Currency has been seen to appreciate in response to increased capital investor flows.

Exchange rate risk is an important factor of foreign investment in South Africa (Jenkins & Thomas, 2002). An investor seeks a country with a local currency expected to strengthen against his own in order to periodically convert back earnings at a more favourable exchange rate. An investor serving local market knows that trade and foreign capitals are substitutes with the relationship. Foreign capital inflow increases with an increase in value of the currencies due to the increased purchasing power of the local consumers (Bennassy & Fontagne, 1999). On one hand, since the relative wealth of foreign firms increases due to depreciation which shows increase in capital flow thus the capacity to invest (through reduction in capital cost).

Froot and Stein (2001) claimed that the exchange rate in a nation may influence FPI flows. Depreciation of a foreign currency increases the relative wealth of foreigners which makes the host country attractive for investment due to cheap acquisition of assets in the host country. Campa (2009) states that expectations of profits drive the decision to invest in a foreign country. If the exchange rate is high and rising investors expect higher profits in the host country hence the more the currency appreciates the more the foreign capital flows into the country. Findings of Gorg and Wakelin (2001) show that change in exchange rate of the dollar is positively related to capital outflows and a negative to capital inflows.

2.3.2 Commercial Tax Rate

This is the percentage of all the taxes that accrues to firm (Reynolds, 2008). To get commercial tax rate, tax payable is divided by commercial profits. Foreign investment capital is attracted to countries with low commercial tax rates (Madura & Fox, 2011). There is ambiguity in the relationship between commercial tax and foreign capital investment with some studies establishing a negative relationship (Cassou, 2007; Kemsley, 2008). Some studies show no relationship (Wheeler & Mody, 2011; Jackson & Markowski, 2007; Porcano & Price, 2009; and Yulin & Reed, 2008). Otherwise, Swenson (2012) gives a positive relationship.

Hartman, (2007) analysed the influence of domestic tax policy on foreign capital investor flows in the U.S. He found out that foreign capital investor flow is strongly affected by domestic taxes. The policy included both the incentive to increased investment through reduction of commercial taxes and incentive for saving through reduction in the

individual tax. Agostini and Tulayasathien (2006) found a negative relationship where that increase in commercial tax rate increase decrease foreign capital investor inflow. Therefore, foreign capital investor flow was found to be quite sensitive to states' commercial tax rates.

Further the findings of Bellak and Leibrecht (2009) tax rate relate positively with foreign capital inflows. A negative relationship is established on relative tax on foreigners compared to citizens. Slemrod (2007) in his found that the commercial tax rate determines the amount of foreign investment capital flow. However, Devereux and Freeman (2009) in their study concluded that commercial tax has no statistically significant effect on decisions whether to invest at home or abroad but it influences decisions in which foreign capital flows to emerging economies.

2.3.3 Economic Growth Rate

Economic growth rate is defined as the increase in industrial income as a percentage of the GDP (Dollar & Kraay, 2000). Ancharaz (2003) finds economic growth and prosperity as a leading factor in foreign capital attraction. Current account deficit financing is enabled by import of foreign capital. Gastanaga, Nugent and Pashamova (2008) found growth on foreign investment with positive significant effects.

Kimotho (2010) found a positive relationship. Borensztein, Gregorio and Lee (2008) indicated that an increase in the economic growth rate of a country causes foreign capital investor inflows. However, Agiomirgianakis, Asteriou and Papathoma (2012) found no conclusive evidence on the impact of economic growth on foreign capital investor flows.

Ancharaz (2003) finds economic growth and prosperity as a leading factor in foreign capital attraction. Current account deficit financing is enabled by import of foreign capital. This gives the country more time to transform structurally. Economy restructure is linked with growth of unemployment, economic recession and social disturbances which could make foreign investors avoid such country (Gastanaga, Nugent & Pashamova, 2008).

Countries that show a potential to grow are a determinant of foreign investment capital because the investors seek countries that show a potential of growth as their businesses are likely to grow as well. Any investor would want a country that seeks to increase his worth. A business may be established in a country that is seen as having the potential to grow (Madura & Fox, 2011). Controversial statements have risen over the role of growth in attracting foreign investment. Ancharaz (2003) established a positive effect for the non-Sub-Saharan African countries with lagged growth. However, Gastanaga, Nugent and Pashamova (2008) found growth on foreign investment with positive significant effects.

2.4 Empirical Studies

Empirical studies related to the topic of study have been conducted in various jurisdictions; internationally, regionally and locally.

2.4.1 Global Studies

Parajuli (2012) study done from 1994 to 2008 examined the relationship that existed between trade and investment from foreign capital. The study was based in Mexico from

the Organization for Economic Corporation and Development (OECD) countries and how exchange rates, exchange rates volatility and investors' expectations of these rates. According to the study results the expected exchange rates and the exchange rates have a positive impact on investment that are foreign capital in nature. Meaning that when the home currency appreciates, foreign capital flows outward to Mexico from the OECD member countries.

Due and Sen (2008) looked at the nexus existing among fiscal and monetary policy indicators of surplus and the level and volatility of capital flows in the country of India. The study used quarterly data from 1994 to 2004. According to the study results, there was co-integration among the variables while every variable was shown to granger cause the real exchange rate. Analysis of Generalized Variance Decomposition (GVD) showed that the level and volatility of capital flows affected real exchange rate the most, the other factor that also affected this rate was the expenditure of the government followed by current account surplus and lastly money supply. Foreign capital inflows do affect exchange rate as shown by another study done by Chakraborty (2003) in India from 1993 to 2001 that used quarterly data.

A study was conducted by Goldberg and Klein (2008) to investigate the relationship existing among real exchange rate, trade and FDI in Latin America, Japan, South East Asian countries, and United States. Bilateral exchange rates affected FDIs in the US, Japan and Asian countries. Further, foreign direct investment did affect trade between the countries that were part of the sample. The conclusion of the study was that depreciation of South East Asian countries in respect to the yen led to an increase of FDI of the

countries from Japan and led to a decrease in FDI investment from the United States and also increasing imports from Japan. Most of Japan imports were production inputs.

Caporale, Alia and Spagnolo (2013) looked at how uncertainty in exchange rates affected developed countries flows of international portfolio. A bivariate model that used bilateral data was estimated. The model used bilateral data from the US and compared the data to data from Sweden, the UK, Canada, the euro area, Australia and Japan in the year 1988 to 2011. According to The study's results uncertainty in exchange rate led to lowering of equity inflows in the UK, Sweden and the euro area while these inflows increased in Australia. The results showed that the inflows decreased in all countries except Canada where bond flow increased. This shows that uncertainty in exchange rates leads to a decrease in financing by investors whose wish is to maximize their returns and to minimize their investments exposure to uncertainty. Since the volatility of exchange rates and variance of capital flows are related, financial and economic stability can be achieved by controlling of exchange rates and credit lines on the capital flows.

Klein and Rosengren (2013) did a study on the relationship between the exchange rate and foreign FDI in the United States. The study was conducted by looking at the determinants that affected the United States four measurers of inward foreign direct investment from seven industrial countries from 1999 to 2011. The study concluded that exchange rate did affect inward foreign direct investment of the US. These results were fitted to the sampled countries and also the tax codes changes.

Guluzar (2015) study that was based in Turkey looked at the relationship between foreign investment and macroeconomic indicators from 2003-2013. This analysis was done using

Granger causality analysis. In the Borsa Istanbul Index a relationship between real exchange rate and interest was established with FPI and FDI.

Jayasekara (2013) investigated the effect of exchange rate, exchange rate volatility, and expected exchange rate on foreign direct investment and the factors, which are influential on exchange rate volatility in Sri Lanka during the period 1978-2012. Two equations were fitted and estimated using Zellner's seemingly unrelated regression model. Results revealed that standard deviation of exchange rate, total electricity provision and trend were significant on foreign direct investment. According to the equation two, inflation, trade shocks and foreign direct investment affected exchange rate volatility in the years 1978-2012. The results indicated that stability of exchange rate and improved infrastructure facilities were important to attract foreign direct investment.

2.4.2 Regional Studies

Ng'ambi (2015) did a study to show 'the effect of Exchange Rate Volatility on Capital Flows in South Africa' from the first quarter of 2000 to the third quarter of 2014. The Generalized Autoregressive Conditional Heteroscedasticity (GARCH) model was used. The findings statistically revealing significant negative impact of exchange rate vitality on aggregated capital flow to South Africa was done by multiple regression analysis. It established that there is a relationship between exchange rate volatility and capital flows.

Omorokunwa and Ikponmwosa (2014) did a study on 'exchange rate volatility and foreign private investment in Nigeria'. The relationship was investigated between 1980 and 2011. Error Correction Model (ECM) was employed in the study. It was found that the exchange rate volatility has a weak positive effect on FDI and FPI in the long run.

Kodongo and Ojah (2013) use panel data across 9 African countries to explore the influence real exchange rates exert on cross–border capital flows into Africa. The evidence presented by the paper show conflicting results on the direction of the relationship. On one hand, the exchange rate depreciation led to an increase in FDIs and reduction in portfolio flows. Kodongo and Ojah (2013) suggest that the direct relationship observed with exchange rates and portfolio flows is driven by the perception of investors, that a reduction of the exchange rate may be signaling further future depreciations therefore, withdrawal of funds is imperative to maintain the value of the portfolio.

Ogunleye (2010) examined the relationship between the foreign direct investment and Exchange rate volatility in Sub-Saharan Africa in reference to South Africa and Nigeria. The two-stage least squares methodology system was adopted. The GARCH model was used to establish the exchange rate volatility. In Nigeria there was a strong significant negative statistical relationship between the variables of the study. In South Africa, a weak relationship was established.

2.4.3 Local Studies

Muema (2013) analyzed 'the determinants of foreign direct investment' in Kenya. The study was done using secondary data on exchange rates, taxes, inflation, levels of GDP and openness for the 21 years from 1991 to 2012. The study was a multiple linear regression with the annual rate of change in FDI as the dependent variable and exchange rates, taxes, inflation, levels of GDP and rate of openness as the independent variables. The results show that the coefficient of annual rate of change in exchange rates was

significant. The coefficient of tax rate was not significant; the coefficient of GDP growth (economic growth) was not significant. The whole regression was statistically significant with an indication that the variation in the five variables, namely, Exchange Rate, Tax Rate, Inflation, GDP, Growth and Openness explained the variation in the rate of change in FDI. It is, therefore, concluded that exchange rate is the factor that determines the rate of change in the FDI inflows into Kenya.

Sifunjo and Mwasaru (2012) did a study on 'relationship between exchange rates and stock prices' from November 1993 to May 1999. The data set; Nairobi Stock Exchange, stock price index and the nominal Kenya shilling per US Dollar change rates, were monthly observations. They found 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 may be due to the falling investor confidence in the two markets and the decline in the financing capacity of the investors.

Muthoga (2012) did a study on 'determinants of foreign direct investment'. The study used data from 1967-1999 period, partly because after independence (1963), there was the start of the development process. The least square model (GLS) was used in the interpretation of the result. The estimated linear regression model showed economic openness being most significant determinant of foreign direct investment inflows in Kenya. Other significant determinant of FDI inflows included growth rate of GDP, credit availability from the monetary authority, domestic investment, the exchange rate and internal return rate. The remaining variables in the estimated model were statistically not significant. These include: external debt; inflation rate; trade balance; university enrolment rate and gross domestic savings.

Otieno (2012) investigated 'the impact of exchange rate fluctuations on FDIs in Kenya' for thirty years of 1981 to 2010. The data was collected from the World Bank and CBK. The standard deviations for the exchange rates were derived for each year under study to determine the fluctuations. The absolute figures of the foreign direct investments data to Kenya was transformed through logarithmic transformation for normalization purposes. The relationship was examined using Pearson moment correlation over the period of study. The variables were plotted against on a graph and a best line of fit determined to generate the linear statistical model for their relationship.

A strong relationship was established between the variables by the correlation analysis. A weak relationship was found to exist between the exchange rate fluctuations and foreign direct investments by inferential analysis. The best line of fit also revealed a positive for exchange rate fluctuations plotted against the logarithm of net foreign direct investments in current prices of tens of millions of United States dollars.

2.5 Conceptual Framework

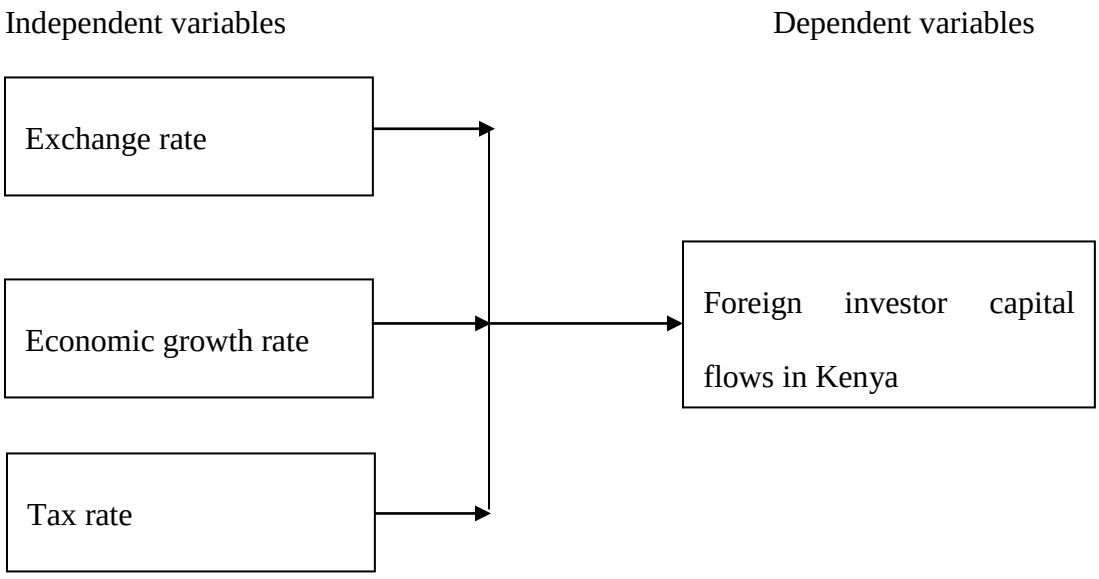

Figure 2.1: Conceptual framework

The relationship between exchange rate and foreign investor capital flows is conceptualized with the determinants of foreign investor capital flows as the independent variables with foreign investor capital flows as the dependent variable. The exchange rate, the tax rate and the economic growth rate are considered as the dependent variables with the dependent variable being foreign investor capital flows in Kenya.

2.6 Summary of Literature Review

Theories of exchange rates were used in supporting this research. The theories were the purchasing power and interest parity theory. The theories are relevant though fail to recognize other elements of exchange rates that may explain foreign capital inflows. The determinants of foreign capital inflows have been explained as tax rates, economic

growth rate and government restrictions. However, there may be other factors that may affect the foreign capital investment.

The empirical studies reviewed by the study have focused mainly on foreign direct investment despite portfolio investment being part of the foreign investment capital flows. The local studies reviewed in the literature have focused on exchange rates and stock prices (Sifunjo & Mwasaru, 2012) and exchange rate fluctuations and FDI (Otieno, 2012). The studies covered the period from 1981 to 2010. This differs from the current study which will cover the period 2007-2015. The studies done on the same have found conflicting results with some finding a positive relationship, negative relationship while others find a negative relationship. This shows that a research gap exists.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methods that were used in the study. It explains the research design adopted by the study. The methodology shows the population, data collection and the analysis procedures.

3.2 Research Design

A descriptive research design was used in this study. A descriptive design enables an investigation that utilizes numerical data to show the link between variables. Kunga (2015), used the descriptive research design to determine the relationship between financial leverage and profitability of firms listed at the Nairobi securities exchange.

Descriptive survey is preferred because it allows for analysis and variables relation in the study. The study sought to establish the relationship between variables which made the research design suitable for the study.

3.3 Population

The population of the study was foreign capital inflows (FCI) and exchange rates of the USD/KES from 2006 to 2015. This involved tax rates, exchange rates based on the Kshs/USD, economic growth rate, FDIs and portfolio investment. These were considered annually in order to give a general picture on the relationship.

The exchange rate between the Kenya shilling and the USD was used as the dollar is the standard currency used in international investment. All the data analyzed was collected for the period starting 2006 to 2015. This was done through analysis of the secondary data collected for the study. Averaging and totalling was done to get the value that was used in analysis.

3.4 Data Collection

Secondary data was collected for the study. This was collected from the World Bank database, Central Bank of Kenya as well as the Kenya National Bureau of Statistics on all the variables under review. The data was collected for a 10-year period from 2006 to 2015. Quarterly data was used in this study. The data collected in this regard was portfolio investment inflows, FDI, tax rate, economic growth rate, and exchange rate.

3.5 Data Analysis

Regression analysis was used as indicated in the model below. A multiple regression model is fit to the data set and an analysis was carried out to examine the relationship between exchange rate and foreign capital flows and at the same time computing the degree of association between the two.

3.5.1 Analytical Model

Both descriptive and inferential statistics were used in the analysis of the data. Descriptive statistics involved the use of mean and standard deviation while inferential statistics involved regression and correlation analysis. The Correlation analysis involved

the use of Pearson's product moment correlation co-efficient, r. All factors were calculated on an annual basis. The analysis was done by the use of Statistical Package of Social Sciences (SPSS) V.20. Multiple regression was done using the model shown:

$$Y = \beta_0 + \beta_1 Ex + \beta_2 Tx + \beta_3 Eg + \varepsilon$$

Where;

Y	= Foreign capital inflows in Kenya (natural log)
Ex	= Exchange rate based on the Ksh/USD
Tx	= Tax rate as per the Kenyan commercial tax rate
Eg	= Economic growth rate
β_0	= Constant
$\beta_1, \beta_2, \beta_3, \beta_4$	= Beta Coefficients
ε	= Error term

Analysis of variance (ANOVA) was used to test significance of the variables of the study. The data was presented in form of tables for ease of explanation.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents the research findings on the relationship between exchange rate and foreign investor capital flows in Kenya. The data was based on a period of 10 years (2006-2015) clustered quarterly. This gave a total of 40 data points.

4.2 Descriptive Statistics

Table 4.1: Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Exchange rate (Kshs per USD)	40	62.60	102.90	81.0950	9.87522
Economic growth rate (%)	40	4.00	8.30	5.8758	1.10212
Commercial tax rate (%)	40	37.10	49.80	46.3900	4.93848
Foreign investor capital flows (Kshs. Millions)	40	19.09	23.33	21.5935	1.04239
Valid N (listwise)	40				

On the descriptive statistics presented in table 4.1, exchange rate displays a mean of 81.0950. Economic growth rate shows a mean of 5.8758, commercial tax rate a mean of 46.39 and foreign investment a mean of 21.5935. Exchange rate and the commercial tax

rate have a high standard deviation showing that they varied so much compared to the tax rate and the economic growth rate.

4.3 Correlation Analysis

Table 4.2: Correlations

		Foreign investment	Exchange rate	Growth rate	Commercial tax rate
Foreign investment	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	40			
Exchange rate	Pearson Correlation	.689**	1		
	Sig. (2-tailed)	.000			
	N	40	40		
Growth rate	Pearson Correlation	.695**	-.213	1	
	Sig. (2-tailed)	.000	.187		
	N	40	40	40	
Commercial tax rate	Pearson Correlation	-.789**	-0.061	.150	1
	Sig. (2-tailed)	.000	0.709	.354	
	N	40	40	40	40

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

From table 4.5 a strong positive correlation was found between exchange rate and foreign investor capital flows as shown by correlation coefficient factor of 0.698. A positive strong positive relationship was also established between economic growth rate and

foreign investor capital flows as shown by correlation coefficient of 0.695. However, commercial tax rate and foreign investor capital flows were found to have a negative relationship as shown by correlation coefficient of -0.789. The relationship between the variables was significant at the 0.01 significance level.

4.4 Regression Analysis

In this study, a multiple regression analysis was conducted to test the influence among predictor variables. The research used statistical package for social sciences (SPSS V 20) to code, enter and compute the measurements of the multiple regressions.

Table 4.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.817[a]	.667	.639	.62614

a. Predictors: (Constant), exchange rate, economic growth rate, tax rate

From table 4.2, the value of adjusted R^2 was 0.639 an indication that there was variation of 63.9% on foreign investor capital flows dues to changes in exchange rate, economic growth rate and commercial tax rate.

Table 4.4: ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.263	3	9.421	24.030	.000[a]
	Residual	14.114	36	.392		
	Total	42.377	39			

a. Predictors: (Constant), exchange rate, economic growth rate, tax rate

b. Dependent Variable: foreign investor capital flows

From table 4.3, the calculated F value (24.030) was higher than the critical with the level of significance being below 0.05. This shows that exchange rate, economic growth rate and commercial tax rate influence changes in the foreign investor capital flows of the country (F critical =2.09095).

Table 4.5: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	24.451	2.37		10.319	.000
	Exchange rate	.292	.114	.031	2.56	.016
	Growth rate	.327	.093	.087	3.516	.008
	Tax rate	-.599	.128	-.126	-4.679	.000

a. Dependent Variable: Foreign capital investment

$Y = 24.451 + 0.292X_1 + 0.327X_2 - 0.599X_3$

From regression equation established from table 4.4, holding exchange rate, economic growth rate and tax rate to a constant zero, foreign investor capital flows of 24.451 would be displayed. A unit increase in exchange rate increases foreign investor capital flows by 0.292. A unit increase in growth rate leads to an increase in foreign investor capital flows by 0.327 and a unit increase in the commercial tax rate would lead to a decrease in foreign investor capital flows by 0.599. All the variables were significant ($p<0.05$).

4.5 Discussion of Findings

The findings were based on a descriptive research carried for a 10-year period from 2006 to 2015. The research established that for the period, the mean exchange rate stood at

81.0950, economic growth rate at 5.8758, tax rate at 46.39 and foreign investment at 21.59 million Kenya shillings. From the descriptive statistics exchange rate and the commercial tax rate have a high standard deviation showing that they varied so much compared to the tax rate and the economic growth rate. This also indicates that the foreign capital investment in the country was low in the period under study.

From the regression holding exchange rate, economic growth rate and commercial tax rate to a constant zero, foreign investor capital flows of 24.451 would be displayed. This shows that change in foreign capital flows would be positive if the determinants considered in the study did not change. It also indicates that there are other major factors influencing foreign capital investor flows in the country. From the model summary, there was variation of 0.639 in foreign investor capital flows dues to changes in exchange rate, economic growth rate and tax rate.

From the ANOVA, the calculated F value of 24.030 was higher than the critical (2.09095) with the level of significance being below 0.05. This shows that exchange rate, economic growth rate and commercial tax rate influence changes in the foreign investor capital flows. This was supported by Froot and Stein (2001) on exchange rate, Gastanaga et al. (2008) on growth rate and Devereux and Freeman (2009) on tax.

The correlation coefficient factor of 0.698 show that there exists a strong positive relationship between the exchange rate and the foreign investor capital flows. The findings support those of Campa (2009) who noted that the higher the level of the exchange rate the higher the foreign capital investment. However, they differ with Gorg and Wakelin (2001) who found a negative relationship.

The correlation coefficient of 0.695 indicate that a strong positive relationship existed between growth rate and foreign investor capital flows in the country. This shows that the foreign investor capital flows in Kenya would increase if the economic growth rate change positively. This calls for policies and activities that would increase economic growth in the country. The findings concur with those of Kimotho (2010) and Gregorio and Lee (2008) who established a positive relationship.

Tax rate had a strong negative relationship with foreign investor capital flows. This was based on the correlation coefficient of -0.789. This shows that the capital investor flows into a country decrease with the increase in the commercial tax rate charged to foreigners in Kenya. The commercial tax rate should be controlled to attract foreign investors. The findings are in line with those of Agostini and Tulayasathien (2006). However, they differ with those of Bellak and Leibrecht (2009) who established a positive relationship between the two.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter was based on the objectives of the study. The conclusions and recommendation together with a summary of the findings given.

5.2 Summary of Findings

From the descriptive statistics, the mean established indicated that exchange rate displayed a mean of 81.095, economic growth rate a mean of 5.8758, commercial tax rate a mean of 46.39 and foreign investment a mean of 21.5935. Exchange rate and the commercial tax rate were found to have a high standard deviation showing that they varied so much from the mean compared to the tax rate and the economic growth rate.

From the model summary, there was variation of on foreign capital investment flows dues to changes in exchange rate, economic growth rate and commercial tax rate at 95% confidence interval. The variation was high as the value of adjusted R2 more than 50%. The effect was found to be significant as the value of the p-value was below 0.05. From the Anova table, the calculated F value was found to be higher than the critical with the level of significance below 0.05. The influence of exchange rate, economic growth rate and commercial tax rate on the changes in the foreign investor capital flows of the country existed and was significant.

From the regression coefficients, an increase in exchange rate and growth rate led to an increase in the foreign capital investment flows. However, the findings indicate that an increase in foreign investor capital flows due to the increase in exchange rate and economic growth rate is weak as the values are below 0.5. A unit increase in the commercial tax rate was found to lead to a decrease in foreign investor capital flows a value of more than 0.5. This shows that the foreign capital flows increase by a large proportion due to a unit change in commercial tax rate in the country.

The p-values of the variables was found to be less than 0.05, an indication that the relationship between the variables and foreign capital investor flows was significant. The relationship between the tax rate and foreign capital investor flows was significant at the 0.01 significance level as the p-value was below 0.01. Commercial tax rate was the most significant variable in the study. This was followed by economic growth rate and lastly exchange rate which were significant at the 0.05 significance level.

From the correlation analysis, a strong positive correlation was found between exchange rate and foreign capital investor flows. This was shown by a positive coefficient that is more than 0.5. A positive strong positive relationship was also established between economic growth rate and foreign capital investor flows. The coefficient was found to be positive and more than 0.5. However, commercial tax rate and foreign capital investor flows were found to have a negative relationship. This was shown by regression coefficient of more than 0.5.

5.3 Conclusions

From the descriptive findings the study concludes that the exchange rate of the Kenyan shilling against the dollar has varied so much from 2006 to 2015. This may be due to the change in the economic conditions of the country. Commercial tax rate has a high standard deviation which leads to the conclusion that the rate has been varying so much in the period under study. This may be due to change in economic policies.

From the Anova table, the study concludes that the model fits the data. The model summary leads to a conclusion that the variables considered in the study contributes a large portion on the change in foreign capital flows. However, there are other variables affecting the same as the value of R2 was less than 1. From the regression analysis a conclusion was made that exchange rate leads to a positive change to foreign capital investment flows in Kenya though in a small proportion.

The research further concludes that the economic growth rate positively changes the foreign capital investment of the country. This is shown by the regression coefficient which displays a small change in foreign capital flows due to change in economic growth rate. Growth rate is key to foreign capital flows as its increase displays a positive change on the capital flows.

An increase in the commercial tax rate leads to decreased foreign capital investment flows in Kenya. This increase is small as the regression coefficient was below 0.5. There is need to control the commercial tax rate in order to attract foreign investment into the country. The study further concludes that exchange rate, economic growth rate and tax rate contributes the highest proportion change in the foreign capital investment flows of

the country. Commercial tax rate is the main factor influencing foreign capital investment flows in Kenya.

From the correlation analysis a strong positive relationship exists between exchange rate and FCI flows in Kenya. This is based on the correlation coefficient which is more than 0.5. The relationship is significant as shown by the p-value. Economic growth rate in Kenya has a strong positive relationship with foreign capital flows. This relationship is significant. However, the study concludes that commercial tax rate has a strong negative relationship with foreign capital investment flows in Kenya. This significant relationship is displayed through the correlation coefficient which is more than 0.5.

5.4 Recommendations for the Study

The study establishes that exchange rate positively relates to foreign investor capital flows. The government establish with policies that would increase the exchange rate against major currencies like the dollar in order to attract foreign investors. The CBK should come up with strategies that would control the exchange rate of the shilling against the dollar. This would increase the foreign capital inflows in the country.

The government should formulate and implement policies that would enhance economic growth of the country. This may involve coming up with programmes that would encourage domestic investment especially in the rural areas. The government can also enhance growth through increased spending on research and development. This would enhance economic growth in the country leading to increased foreign investment. The

increased growth rate would attract foreign capital investors into the country and hence increased foreign investment.

There is need for the government to control the commercial tax rate. This is because it has a negative relationship with foreign capital investors. Its decrease, therefore, would stimulate foreign capital investment in the country. Reduction in the commercial tax rate in Kenya would encourage more foreigners to invest in the country. This would increase the capital inflows into the country.

5.5 Limitations of the Study

The study was limited to the relationship between exchange rate and foreign capital investment flows. The study was based on 10-year study period of 2006 to 2015. This means that the findings may differ with others done over a different period. A longer period may have produced better results as the data would be more hence giving more credible results.

Secondary data was collected from the Kenya National Bureau of Statistics and Central Bank of Kenya. When accessing some data some bureaucracy was involved and this led to much time being spend on obtaining data. This was overcome by having an introduction letter and getting an appointment with the concerned parties. This enabled the researcher to access data from the sources. The precision of the data also limited the study. This is because it was hard to confirm the credibility of the data despite it coming from the KNBS.

The ethical aspects of research also created limitations to the study. Some respondents did not want to provide the data to the researcher. This was due to the fear that the data might be misused by the researcher or any other person who may have access the data. This was overcome by having an introduction letter signed by the university. The researcher also gave an assurance that the data would purely be used for academic purpose only.

5.6 Areas for Further Research

From the findings the variables under consideration in the study were found to affect foreign capital investor flows strongly. However, they did not contribute a 100% change in capital flows. This means that there are other factors that affect the dependent variable. This calls for an investigation into other factors that affect foreign capital investor flows in Kenya.

The study combined portfolio investment and FDIs in determining the effect of exchange rate on foreign capital investor flows. This means that the relationship between exchange rate and the individual foreign capital investor flows was not established. A study on portfolio flows and their relationship to exchange rate should be done. A relationship of exchange rate and FDIs should also be established through research.

The study was based on the exchange rate between the US dollar and the Kenyan shilling. The results of the study may be different if the exchange rate with another currency like the pound or the Euro. The researcher recommends a study on the exchange rate and foreign capital investor flows based on currencies like the Euro, Pound, or China Yuan

Renminbi. This will enable the researcher to establish whether the relationship between exchange rate and foreign capital investor flows is the same for all currencies.

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APPENDICES

Appendix I: Introductory Letter

From: Joshua Gitonga Munene

To: Respondent

Dear Respondent,

RE: Data collection

I am a student at University of Nairobi pursuing Masters of Business Administration. I am carrying out a study on the **RELATIONSHIP BETWEEN FOREIGN EXCHANGE RATE AND FOREIGN INVESTOR CAPITAL FLOWS IN KENYA.** You are kindly requested to complete the attached data collection sheet to enable me accomplish the study. Please, note that all the information given shall be used purely for academic purposes and shall be treated with the utmost confidentiality. Your time and co-operation is highly appreciated.

Yours sincerely,

Joshua Munene

Student

University of Nairobi, Kenya

Appendix II: Data

Year	Quarter	Exchange rate (Kshs@USD)	Economic growth (%)	Tax rate (%)	Foreign capital flows (Kshs. Millions)
2006	Q1	72.1	6.00	49.8	196
	Q2	72.2	6.20	49.8	226
	Q3	73.1	8.20	49.8	1,314
	Q4	71.0	4.90	49.8	445
2007	Q1	69.6	7.10	49.8	1,580
	Q2	67.4	8.30	49.8	1,681
	Q3	67.0	6.30	49.8	1,830
	Q4	65.6	6.40	49.8	2,624
2008	Q1	67.9	4.91	49.3	2,570
	Q2	62.6	5.80	49.3	1,789
	Q3	68.5	5.20	49.3	935
	Q4	77.6	4.90	49.3	1,025
2009	Q1	79.6	6.20	49.3	690
	Q2	78.4	4.00	49.3	863
	Q3	76.7	6.10	49.3	1,418
	Q4	75.1	5.90	49.3	1,668
2010	Q1	76.5	5.10	49.3	746
	Q2	79.0	6.10	49.3	1,443
	Q3	80.9	7.20	49.3	1,357
	Q4	80.6	8.30	49.3	1,648
2011	Q1	82.3	7.55	49.3	2,140
	Q2	86.2	6.70	49.3	5,850
	Q3	93.1	5.84	49.3	2,738
	Q4	93.9	4.37	49.3	2,362
2012	Q1	84.1	4.67	48.9	1,448
	Q2	84.2	4.34	48.9	3,141
	Q3	84.3	4.50	48.9	2,672
	Q4	85.5	4.71	48.9	3,605
2013	Q1	86.7	5.80	43.7	5,838
	Q2	84.6	7.55	43.7	4,593
	Q3	87.2	6.34	43.7	5,413
	Q4	85.9	5.60	43.7	6,627
2014	Q1	86.3	4.72	37.4	8,030
	Q2	87.2	5.94	37.4	10,396
	Q3	88.2	5.16	37.4	7,620
	Q4	89.8	5.51	37.4	9,187
2015	Q1	91.5	4.97	37.1	8,034
	Q2	96.1	5.91	37.1	13,579
	Q3	102.9	6.01	37.1	12,433
	Q4	102.4	5.73	37.1	9,813

Source: World Bank, Central Bank of Kenya and Kenya National Bureau of Statistics