THE IMPACT OF FOREIGN REMITTANCES ON THE ECONOMIC GROWTH OF KENYA

LAURA HOPE LIME

X51/69124/2013

A RESEARCH PROJECT PRESENTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF A MASTER OF ARTS IN ECONOMIC POLICY MANAGEMENT DEGREE, UNIVERSITY OF NAIROBI

NOVEMBER 2016

DECLARATION

This economic research is my original work and has not been presented for a degree in any other university.

Signed……. Date…….……

Hope Laura Lime

Registration No: X51/69124/2013

This economic research has been submitted for examination with my approval as the University of Nairobi supervisor.

Signed…… Date……..

Dr. S. M Nyandemo

School of Economics

University of Nairobi

DEDICATION

This research is dedicated to my parents, Mr. Aggrey and Mrs. Salome Lime for their patience and encouragement to me to always aim higher in order to achieve more than they have as far as education is concerned. It is also dedicated to my siblings; Ashley Lime, Joy Lime and Micah Lime for always being there for me during this study and also as a standard for them to apply.

ACKNOWLEDGEMENTS

It has been such a long journey pursuing this master's programme and l am grateful to the Almighty God for this far l have come. I would therefore like to acknowledge all the people who have been of great benefit to me as far as this project is concerned.

First of all, l thank the Almighty God for His guidance and grace that He has endowed me during this research project. I thank the University of Nairobi and the School of Economics for accepting me as a student and enabling me to go through this enlightening course and imparting me with so much knowledge which l now apply with enthusiasm.

I feel privileged therefore to be able to demonstrate my grasp of the course content through this Research work and l look forward to adding to the pool of knowledge on the impact of foreign remittances on the economic growth of Kenya; through this project.

I am also greatly indebted to my supervisor Dr. S.M Nyandemo for his exemplary guidance and support without which, this project would not have been a success.

Last but not least, l am grateful to my entire family for their diligent support and encouragement during this project work and their constant motivation to me to keep on.

ABSTRACT

A booming interest in the topic of foreign remittances has developed over the past few years on the part of academics, donors, international financial institutions, commercial banks, money transfer operators, microfinance institutions and policy makers. The surge of remittances to countries of origin in the last two decades, exceeding aid and foreign direct investment (FDI) to developing countries, has reignited debate on their development potential in receiving countries. Alongside the interest in remittances, there is also growing recognition of the importance of transnational practices in shaping the relationship between migration and remittances. The 2003 World Bank report also noted that remittances are more stable than other kinds of external financial flows and indeed seem to be countercyclical. In times of crisis, whether natural or man-made, migrants tend to send more money to their families to help them survive or recover, whereas foreign investment and lending tend to dry up. The main objective of this study is to determinate the impact of foreign remittances on the economic growth in Kenya. From the discussion of the findings above, it can be concluded that remittances indicators are some of the factors influencing the economic growth in Kenya. Thus it can be concluded that economic growth in the Kenya is largely driven by foreign remittances.

TABLE OF CONTENTS

ABBREVIATIONS

CBK – Central Bank of Kenya

GDP – Gross Domestic Product

FDI – Foreign Direct Investment

IMF – International Monetary Fund

PRGF - Poverty Reduction and Growth Facility Programme

KAIF - Kenyans Abroad Investment Fund

KCA - Kenyan Community Abroad

NPCI - Net Private Capital Inflows

CHAPTER ONE

1.1 Background of the study

Remittances are funds that are sent from a foreign country or nation by a person to his or her country of origin. As a result of the large amounts of funds, foreign remittances are now being considered as a significant contributor to a nation's economic growth and development. Fiery discussions have been held for more than 50 years on what the origin of economic growth are for less developed countries. The recognized origin of economic growth are classified from foreign direct investment (FDI), physical capital, human capital investment, excess labour, changes in technology, foreign aid and an increment arising from venturing into new concepts and research and development.

Scholars such as Sen (1990), Owens (1987) and Kaufmann, Kray and Mastruzzi (2006) have also concentrated on the effect of institutional elements such as the aspect of unstable political environment, freedom in politics, voice and liability on economic growth and development. A large portion of capital flows from the international arena are represented by foreign remittances for many developing countries hence surpassing revenues from exports, aid from foreign countries and foreign direct investment (FDI) (Giuliano and Ruiz-Arranz, 2005).

A study from the World Bank (2006) suggests that foreign direct investment or official development assistance has grown slowly than recorded remittances. As a result, there is increased attention on recent financial flows into developing countries in the form of remittances as a result of their amount and effect on the economies that receive them.

Foreign remittances have a potential to positively impact on recipient countries' economies as well as serve as a development tool (Karagoz 2009). Development effects of remittances can be broken down into their impact on investments, consumption, savings, growth, income distribution and poverty at the macro-economic level. Remittances help to reduce inequalities in opportunities and income, promote entrepreneurial activities, help in acquiring homes and meet educational and health costs at the household level (Karagoz 2009).

1.2 Economic Growth

Economic growth is the expansion in the market value of goods and services which has been adjusted for inflation over time by an economy. It is measured conventionally as the percentage rate of increase in real gross domestic product. The expansion of the ratio of GDP to population (GDP per capita, also known as *per capita income*) is of high significance. *Intensive growth* is referred to as an expansion in growth that is generated by more efficient use of inputs such as population or territory and physical capital. *Extensive growth* is growth in GDP that is as a result of an expansion in the amount of inputs that are available for use.

Economic growth or the theory of economic growth in economics, points out to the growth of potential output which is production at full employment. Growth in an economy can be measured in nominal terms and this includes inflation or can be measured in real terms and this is adjusted for inflation. GDP or GNP per capita should be used for contrasting one nation's economic growth to another since these take into record the differences in population between nations.

The sources of economic growth for less developed countries have erupted fiery debates for more than fifty years (Chenery and Strout, 1996: Schultz, 1979: Romer, 1986: Solow, 1956: Barro, 1991: Denison, 1967: Harris-Todaro, 1970: Easterly, 2001: Myrdal, 1968: Lucas, 1988: Lewis, 1954: and Fields, 1980. The recognized origin of economic growth are classified from foreign direct investment (FDI), investment in physical capital, human capital investment, excess labour, changes in technology, foreign aid and an increment arising from venturing into new concepts and research and development. Scholars such as Sen (1990), Owens (1987) and Kaufmann, Kray and Mastruzzi (2006) have also concentrated on the effect of institutional elements such as the aspect of unstable political environment, freedom in politics, voice and liability on economic growth and development. There has been a categorization into 3 areas of the elements of the rate at which the people's living standards grow into the advancement of science and productive knowledge, the improvement of personal skills and incentives and productive knowledge.

1.3 Foreign remittances

Foreign remittance refers to funds transfer by international migrants to the members of their family in their country of origin. Remittances include accumulated transfers of earnings or stock of wealth by individuals or groups of migrants to their home countries as some sort of contract agreed upon between these migrants and their families. Such transfers are usually meant to support dependents, repay loans, invest or for other purposes.

Remittances can be grouped into four categories according to Wahba (1991);

Potential remittances – left over money with the migrant after all expenditure in the country that one migrated to; Fixed remittances - the minimum amount of funds a migrant needs to transfer to meet the basic needs and obligations of relations back at home; Discretionary remittances – this is

a transfer of funds that is above what has been set as of fixed remittances and; Retained savings – this is the difference between potential remittances and the transferred funds during the period. This categorization of remittances has important policy implications given that each transfer is motivated differently. For example, fixed remittances are occasioned by the need to diversify sources of income and to meet other family obligations. As for discretionary remittances, they depend on the need to maintain reserves in the country that one migrated to or one's home country which also is dependent on the real interest rates differences, general macroeconomic stability, anticipated exchange rate movements and the ability to easily translate one currency into another and the efficiency of payment mechanisms between the host and home countries. Meanwhile saved remittances vary inversely with discretionary remittances. In fact an increase in discretionary remittances tends to reduce the transfer of saved remittances and consequently slows the increase of retained earnings which has the ability to promote development and growth of the migrant's home country.

Remittances from foreign countries are the origin of better health care, quality education and reduction in poverty. In recipient countries, remittances are the core sources of an expansion in consumption and investment. The expansion in consumption and investment is a signal of economic development. Foreign remittances assist in reducing poverty. This assistance mainly goes to the neediest people in the population. In this manner therefore, foreign remittances play a direct part in reducing poverty. These draw positive effect even fully consumed as these are good for a society's welfare. Foreign remittances can therefore make a contribution to higher human capital investment and physical capital investment. However, if remittances are utilized for consumption instead of investment, as is a common practice in the less developed countries, then, this can be dangerous to an economy. This is so because they are unable to create enough reserves

of savings that are required for the growth of an economy. According to Adams (2011), foreign remittances provide for higher investment in health, education, physical assets, reduce poverty through increased incomes and also allow for increased accessibility to greater knowledge pools. There is an accumulation of physical capital when migrant's remittances flow into an economy. This is due to increased accessibility to finance. However, this is dependent on the marginal propensity to consume of the recipients.

Remittances enable nations with poorly developed financial systems to grow since it provides other ways in which liquidity constraints can be reduced and investment can be financed (Giuliano 2008). Remittances from migrants play a significant role in investment in human capital in the migrant's home country which receives the funds by enabling resource constraints to be relaxed. Calero (2008) points out that foreign remittances decreases the extent of child work by increasing school enrolment. This study also indicates that when households are facing aggregate shocks, remittances are utilized to finance education since they are associated with an increase in work activities. The degree of inequality and poverty are also reduced through the role played by foreign remittances.

Foreign remittances in less developed countries have increased as a result of two factors; a higher number of people are moving abroad and the means by which funds can be transmitted to another nation are now much cheaper, easier and fast enough. This also allows the central banks in the receiving countries to record the funds transferred. Evidence of the impact of the movement of workers abroad for any country is mixed on the level of growth and poverty. The income of the migrant's home country increases through an increase in foreign remittances and as a result poverty is decreased. However, there are social costs that are not put into consideration in these impacts. Work effort is reduced by the inflow of foreign remittances on one hand while on the other hand;

development in the financial sector is improved, which stimulates growth. The credit rating of a nation is positively impacted by foreign remittances. Remittances also reduces panic by investors by providing a stable and great source of foreign currency which assists in dealing with problems of balance of payments and for utilization in projects that are meant for development (Mohapatra, Ratha and Scheja, 2011).

1.4 Relationship between Economic Growth and Foreign Remittances

According to Gupta et al (2007), in as much as remittances lead to growth of the income level in the recipient country, it is not obvious that output increases as a result of remittances and that remittances promote long-term economic growth.

Ways through which foreign remittances could increase economic growth of a country are as follows; firstly, it is anticipated that foreign remittances should impact growth positively if investment is increased through acceleration in remittances. According to Woodruff and Zenteno, (2004) and Funkhouser, (1992), this impact could be huge to the level that foreign remittances clear the constraints of credit that are met by most citizens in less developed nations. In nations where there is poor development of the financial system, the positive impact of foreign remittances on the growth of the economy or on investment is bound to be large. According to Ruiz-Arranz and Giuliano, (2005) and Fajnzylber and Lopez, (2007), this substitutability between financial development and remittances has been found empirically.

Growth impacts as a result of enhanced investment could be maintained if foreign remittances are mainly utilized through consumption instead of being invested. Foreign remittances could

contribute to the investment of a country through lowering the instability of consumption and promoting a macroeconomic environment that is stable, even in this case, Chami et al (2009) while applying a sample of 70 nations for both developed and less developed countries, get results promoting the fact that stabilizing influence on output is provided by remittance flows. The results of this study indicate a threshold effect signifying that this contribution promoted by stability is reached relatively quickly and it would not be very important in nations that receive large amounts of foreign remittances. Development indicators such as accessibility to health of the populations and education are improved as a result of an increase in income due to remittances.

Remittances could hinder growth in GDP, on the other hand, as a result of a number of factors. In recipient countries, currencies could appreciate and this could be detrimental to the long-run economic growth of a country. This is known as the Dutch Disease Effect. For instance, Pozo and Amuedo-Dorantes (2004) discovered that remittances resulted in a sizable appreciation of the real exchange rate in Latin American countries. Above all, remittances may lead to the reduction in the participation of labour market or labour supply of receiving countries. Remittances could be damaging to Sub Saharan Africa's economic development if the negative elements prevail (Jahjah, Fullenkamp and Chemi, 2003). If primarily people who are well educated migrate, then remittances could be linked to adverse developments in the labour market. As this does not illustrate an effect of remittances, the relationship between the variables in the macro economy and remittances may not fully illustrate such effects in the labour market. Much guidance has not been supplied by the theoretical literature on the direction or amount of the effect of remittances on the growth of an economy, even so, the empirical literature is not evident. Per capita real growth on investment is regressed by Jahjah, Fullenkamp and Chami (2003), net private capital inflows (NPCIs), remittances change in addition to regional dummy variables; this results in coefficients

that are positive for both NPCIs and investment. However, remittances coefficients are negative. This therefore suggests that economic growth is unlikely to be advanced by remittances as a result of the problem of moral hazard (that is, a decline in the participation of the labour market) in addition to other elements described above. This questions whether remittances can be the origin of development in capital. Ruiz-Arranz and Giuliano (2005) and Lopez and Fajnzylber (2007) take an approach that is differentiated. They look into situations in which remittances may be productive in triggering the growth of an economy by including terms of interaction between remittances and other variables that may enhance the promotion of growth through remittances.

Per capita real growth is regressed by Lopez and Fajnzylber (2007) on a set of controls with panel data and remittances for Latin American countries. Their specifications are composed of an interaction term between remittances and either depth of finances, institutions or human capital and it is realized that the effect of remittances on the growth of an economy is dependent on the context.

Specifically, the coefficient on remittances is negative but the interaction term becomes positive when human capital or institutions interact with remittances. Remittances do have a positive coefficient, on the contrary. However, a coefficient that is negative is seen with the interaction term and financial depth. The positive task of remittances in economic growth is complemented by accumulation in human capital or improvements in institutional quality. However, remittances are substituted by financial depth in enhancing economic growth. Therefore, according to these conclusions, remittances are realized to be inadequate in enhancing the development of an economy for nations with institutions that are of poor quality or accumulation of human capital is low. Even so, their conclusions also suggest that remittances could be of assistance to the growth of an economy when the financial systems of the recipient nations that are not well developed.

In a study with global scope, Ruiz-Arranz and Giuliano (2005) confirm these results. A model identical to but simpler than the one utilized by Lopez and Fajnzylber (2007) was estimated and it was discovered that the interaction term between financial depth and remittances is negative indicating that they can be applied in place of each other while both financial depth and remittances have coefficients that are positive.

1.5 Kenya's Economic Growth and Foreign Remittances

In East Africa, Kenya is one of the most developed countries. The Kenya National Bureau of Statistics reports the Gross Domestic Product (GDP) in Kenya.

There was a slowdown in economic growth that began in 1997 and continued in 1999. The growth of real Gross Domestic Product (GDP) decelerated from 1.8% to 1.4% during 1998 and further to 0.9% from July 1999 to June 2000. The deceleration was in all sectors of the economy except the transport sector which grew by 0.2 of a percentage point over the previous year (Central Bank of Kenya, 2015).

In the year 2000, the Kenyan economy declined with the real gross domestic product (GDP) declining from a growth of 1.4% to 1.1%. This was a drop by 0.3%. All the economy's major sectors contracted but trade sectors and services recorded some marginal growth (Central Bank of Kenya, 2015).

The economy recovered however modestly in 2001 and expanded to 1.2% in real terms from the decline of 0.3% in 2000. This recovery was mainly motivated by enhanced production in the agricultural sector following suitable weather conditions which promoted economic activities

through linkages mainly in the service and manufacturing sectors. The speed of recovery of the economy was however sluggish as a result of inadequacies associated with the physical infrastructure which is in a poor state and also as a result of low confidence in investors which has been persistent (Central Bank of Kenya, 2015).

During the financial year 2002/3, real GDP is approximated to have grown by 1.4% in comparison to a percentage of 1.2% during the financial year 2001/2. This pointed out that the economy was on the path to recovery however at a slow speed. The economic performance recovery was fortified by advancements in economic and political governance that enhanced investor's confidence and suitable weather conditions that improved agriculture and other related economic activities (Central Bank of Kenya, 2015).

The Kenyan economy advanced during the year 2004 with an improvement in real GDP growth to 1.8% in the year 2003 and further by an approximated annual rate of 2.3% during the first 6 months of the year 2004. Agriculture and services, particularly tourism, telecommunications and financial services came out as the main sectors of growth. During the period, economic growth was established by changes that were positive in economic and political governance, weather conditions that were suitable, enhanced support from donors, macroeconomic environment that was steady and conducive described by interest rates that are low and an exchange rate that was steady. There was an enhancement in the confidence of investors after the restoration of support of IMF under the Poverty Reduction and Growth Facility Programme (PRGF) and agreement signing with the World Bank and other bilateral donors (Central Bank of Kenya, 2015).

During the fiscal year 2003/04, the Kenya economy grew by 4.3% and is approximated to have grown further in the financial year 2004/05 by 5%. There was notable performance in most economy sectors, mainly transport and communications by 9.7%, restaurants and hotels by 15.1%,

trade in wholesale and retail by 9.5% and building and construction by 3.5% during the year 2004. Despite the high production cost that was as a result of erratic and high international crude oil prices, the Kenyan economy grew in 2005 by 5.8%. During the same fiscal year, there were relevant monetary and fiscal policies that lead to a steady macroeconomic condition that was investment conducive (Central Bank of Kenya, 2015).

The Kenyan economy grew by 6.1% during the year 2006 in spite of the drought spell that was experienced in the early months of the year. The sectors that contributed largely to this performance were building and construction, agriculture, tourism, telecommunications and manufacturing. The economy continued in an upward momentum in 2007 with 7% growth in real GDP. This was mainly attributed to the buoyancy of the economy, macroeconomic conditions that are stable, enhanced business confidence and a reverberation of the global economy. There were remarkable improvements in transport and communications, mining and quarrying, electricity and water and the tourism sector (Central Bank of Kenya, 2015).

The country's economic growth declined from 7% in the year 2007 to 1.7% in the year 2008 and this restricted growth pointed out the after effects of the post-election violence. The transport sector was paralyzed as a result of high prices of international crude oil which also increased fuel costs and energy resources that are utilized in other sectors of the economy. In addition, there was a further decline in production levels and demand for exports as a result of the global financial crisis that occurred during the end of the year 2008. Also, there was a fall in production in the agricultural sector as a result of insufficient rainfall in most areas of the country (Central Bank of Kenya, 2015).

In 2009, the economy grew by 2.6% as compared to the adjusted growth of 1.6% in 2008. The restoration was poor in the year 2009 as compared to the growth of 7% in the year 2007. It was however modest in comparison to the decline in 2008 to a year low performance. In 2009, the

tourism sector which was heavily impacted jumped back and recorded a 42.8% growth rate from a drop of 36.1% in the year 2008. The economy grew by 4.4% during the first three months of the year 2010. This was a slower speed when compared to the first three months of 2009 which had a growth rate of 5.6%. This growth was majorly attributed to wholesale and retail at 3.7%, agriculture at 4.6%, manufacturing at 7.8%, financial sectors at 11.9% and mining and quarrying at 9% (Central Bank of Kenya, 2015).

In the first three months of the year 2011, the economy continued to perform well and recorded real growth of 4.9% even with the challenges faced by the country during that period. Delayed and inadequate rainfall had a negative effect on production of agriculture and hydro-electric power generation. Quarterly growth of output from agriculture and forestry slowed to 2.2% in the first quarter of 2011 from 5.7% in the same period of 2010, while electricity and water supply sector declined to 3.5% from a decline of 2.5% during the first three months of the year 2010. In 2011, the Kenyan economy expanded by 4.4%. The economy however performed sluggishly in the first three months of 2012, registering real output growth of 3.5% (Central Bank of Kenya, 2015).

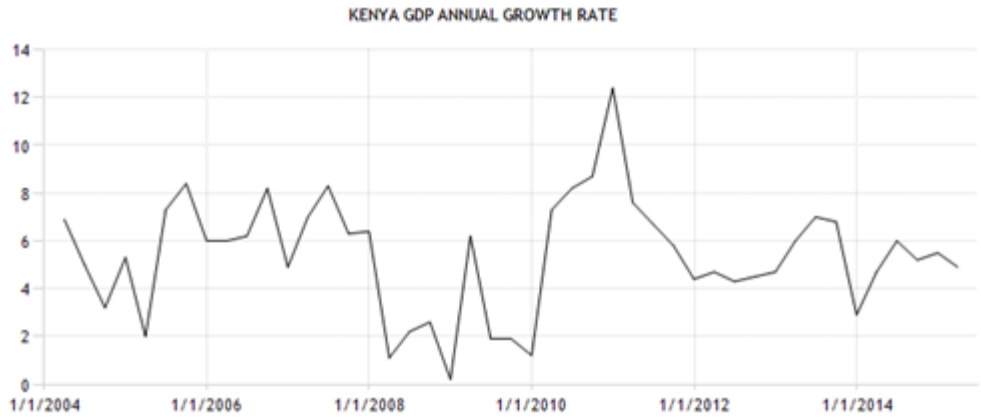
In 2012, the economy expanded by 4.6%. The real output was Kenya Shillings 1.61 trillion in terms of value as compared to the year 2011 which was Kenya Shillings 1.54 trillion. Wholesale and retail trade contributed 11%, transport and communication contributed 12.3% while manufacturing contributed 9.5% in 2012, of the total output produced (Central Bank of Kenya, 2015).

There was a growth of real GDP in 2013 by 5.7% and this totaled to Kenya Shillings 3.63 trillion. The economic sectors that committed a large amount of this growth in the year 2013 were wholesale and retail trade at 7.6%, transport and storage at 6.6%, manufacturing at 11.1%, education at 6.9%, fishing, agriculture and forestry at 22.4%, financial and insurance activities at

5.9% and real estate at 8.1%. In the first six months of 2014, there was an estimated expansion in the production of goods and services by 4.4% and 5.8% respectively (Central Bank of Kenya, 2015).

During the first three months of the year 2015, the country's GDP grew by 4.9%. There was an average of 5.4% in GDP annual growth rate from 2004 to the year 2015 in the country. It reached 12.4% during the last quarter of the year 2010 and a low of 0.2% in the last quarter of 2008 (Central Bank of Kenya, 2015).

The Kenya National Bureau of Statistics reported the GDP Annual Growth Rate in the country.



Source: KNBS, 2014

Table 1: Foreign Remittances in Kenya

Year	Remittances received (USD)	Year	Remittances received (USD)
1980	27,719,999	**1998**	347,820,007
1981	78,540,001	**1999**	431,640,015
1982	67,980,003	**2000**	537,900,024
1983	58,080,002	**2001**	550,000,000
1984	56,759,998	**2002**	433,000,000
1985	66,000,000	**2003**	538,000,000
1986	52,139,999	**2004**	620,000,000

1987	66,000,000	**2005**	424,991,046
1988	76,559,998	**2006**	570,459,274
1989	89,099,998	**2007**	645,207,871
1990	139,259,995	**2008**	667,317,334
1991	124,080,002	**2009**	631,460,883
1992	114,839,996	**2010**	685,757,272
1993	118,139,999	**2011**	934,149,157
1994	137,279,999	**2012**	1,211,021,406
1995	298,320,007	**2013**	1,304,277,242
1996	288,420,013	**2014**	1,440,846,022
1997	351,779,999	**Total**	**14,184,847,562**

Source: World Bank, 2015

1.6 Statement of the problem

There is a conflict in the literature on how remittance s impact recipient countries' economic growth. According to scholars such as Pradhan, Upadhyay and Upadhyaya (2008); Fayissa and Nsiah (2010); de Haas (2005); Dos Santos and Vinay (2003), positive growth effects in recipient economies arise as a result of migrant remittances. Other scholars such as Chami, Fullenkamp and Jahjah, (2003); Karagoz, (2009), indicate the growth effects of remittances which are negative. The latter dispute that positive economic growth comes as a result of remittances since economic growth and remittance are not positively correlated. According to Gapen, Chami, Barajas, Montiel and Fullenkamp, (2009); Rao and Hassan, (2011), remittances have no impact on recipient countries' economic growth. It was noted that there is no causal relationship between economic growth and remittances of undeveloped nations. The available theoretical literature through which economic growth rises as a result of remittances, to a large extent, inform the conflicting empirical results on the expansion impacts of foreign remittances. Subsequently, due to the conflicting and literature that is debated, it is hard for one to close on the impact of foreign remittances on economic growth in a country such as Kenya.

Remittances have a potential to positively impact on recipient countries' economies as well as serve as a development tool (Karagoz 2009). Remittances help to reduce inequalities in opportunities and income, promote entrepreneurial activities, help in acquiring homes and meet educational and health costs at the household level (Karagoz 2009).

1.7 Objectives of the study

The fundamental objective of this research is to determine the impact of foreign remittances on the economic growth of Kenya.

The specific objectives are:

i) To determine the causal relationship between foreign remittances and economic growth in Kenya.
ii) Draw necessary conclusions and recommendations.

1.8 Significance of the study

The study will be useful to the Kenyan government. Remittances serve the nation in a number of ways such as assisting to negate the country's current account and steadying the Kenyan shilling. This study will help the government and other institutions (both public and private) to establish a structure in which facets that are positive in the migration economic growth relationship can be enhanced and the effect of the negative aspects diminished. The study will also guide the government in setting up structures in administration and instruments for government to form a basis directly from diaspora foreign inflows as a resource for national development as well as investment.

Financial institutions are also beneficiaries of this study since remittances contribute effectively to the development of capacities of financial systems more so in the banking sector. A number of

studies have indicated in a large number of endogenous growth models, where the reinforcing of financial systems in less developed countries is a significant element of growth. If we examine for example Mexico and the United States of America, the significance of streams of remittances inspires the banks to intercede in transferring these streams which are also enticing from the State's point of view. In 2005, a study by Taparia indicates that in the instance of a number of nations such as Morocco, the rise of foreign remittances concerns a rising liquidity of banks, a state that can be advised if banks utilize these monies to lend to small and medium-sized enterprises quite easily. However, banks prefer to purchase treasury bonds instead of financing private companies that are small in size. Institutions engaged in the development of economies usually concentrate on the utilization of remittances from a number of viewpoints. Studies from the Institute for Development Studies points that consolidate remittances into the economy of a country; apply the macroeconomic behaviour of remittances to impact feedback to productive forces (for example in trade and investment); and determine the effect of remittances on economic growth at a national level.

This research is of great importance to Kenyans in the diaspora. The government sounds to have identified the power held by Kenyans in the diaspora with regards to this and would like to take it a notch higher. In the recent months, there has been a rush of activity by the government to speak, attract and convince Kenyans in the diaspora to participate in the economic growth of the country. The information has been in duplicate: the Kenyans abroad can become agents that impact the streams of foreign investment in the nation by participating more in direct investment.

The Kenyans abroad feel much nearer to their homeland and therefore have become much more engaged in the proceedings of their home country. Kenyans Abroad Investment Fund (KAIF) was started recently by the Kenya Community Abroad (KCA). A source of capital for investment will

be provided by the fund for the government, companies or individuals targeting the country. The community trusts that there are opportunities in all facets of the economy and in areas such as tourism, education, transportation, real estate, agriculture, construction, technology and other areas. They also believe that an identical fund could give the required framework in focusing on investment in the nation; give effectiveness in the assemblage of funds for investment and selection of targets for investment. This research is important to the Kenyans abroad for their making of decisions on investing in the Kenyan economy.

1.9 Justification of the study

Policy makers and academics have broadly discussed the effect that remittances has on poverty and economic growth. More research on this subject is still needed despite the broad exploration of the subject in order to reach a global understanding associated with the appeal of remittances for the growth of the economy and decline in poverty levels. Thus the logic for this research is to figure out the effect of remittances from Kenyans abroad on the country's economic growth.

CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

This chapter gives a brief summary of literature on remittances and economic growth and is organized as follows. This section develops a theoretical model to evaluate this field and thereafter discuss the empirical studies done by others on the topic and the results. It finally gives a summary and conclusion.

2.1 Theories of Remittances

A number of studies on remittances and migration analyze the factors that influence the decision of persons abroad to transfer funds to their countries of origin which make up the recipient countries. Lucas and Stark (1985) and Stark (1991) therefore make an important effort to come up with a systematic theory of remittances for less developed countries. These theories are classified into pure Altruism, tempered altruism and pure self-interest or enlightened self-interest.

2.1.1 Pure Altruism Theory

This theory states that the worker abroad draws fulfilment from the satisfaction of the rest of his or her family members in the country of origin which is in this case, is the home country. The fulfilment in terms of satisfaction that a household derives depends on its consumption averagely.

The migrant's fulfilment in terms of satisfaction is dependent on his or her own consumption as an individual and on the average satisfaction of the rest of the family members in the recipient country. In this context, the migrant would choose the quantity of remittances that would maximize his or her satisfaction function. From this theory, we contend that remittance money increases with the migrant's wage level and that remittances to less well-off households are higher.

This implies that whether the effect of household size on the level of remittances is positive or negative depends on either economies or diseconomies of scale in consumption, the change in marginal utility of home consumption and on the consideration if the migrant is inclined to some members of the household in the country of origin.

2.1.2 Pure Self-Interest Theory

According to the Pure Self-interest theory, there are three motives for remittances. The first motive indicates that the migrant believes that transferring money to the household in the recipient country, a substantial portion of the wealth of the family would ultimately be his or hers. Succeeding this motive, the greater the prospective inheritance, the greater the remittances to the household are. The second motive is to amass assets in the form of houses, land and livestock at home and appoint one family member as an agent to manage the property. The third motive is the wish to relocate back home and invest or carry out developmental projects more so if the migrant has political aspirations. Ultimately, remittances are motivated by altruistic and self-interest reasons.

2.1.3 Tempered Altruism Theory

In 1985, Stark and Lucas advanced a tempered altruistic theory of remittances as a result of the inability of the two theories above to sufficiently explain the nature of remittances.

This theory states that remittances are part of an inter-temporal and mutually beneficial contractual plan that is established between the migrant and the household in the recipient country with the prospect of carrying out investments and taking some risks. The family in the recipient country educates the migrant worker and anticipates yields in the form of remittances as they consider the education as their investment. This indicates that remittances for educated migrants are greater

than those of in-laws or even spouses. It is noted that less developed countries' insurance markets and financial markets are not well established and proceeds particularly from agriculture are greatly declining. As a result, migration is seen as a sensible choice which makes it possible to expand and diversify the recipient family's wealth. The prevailing conditions of the economy in both the country of origin and the host country influence to some extent the flow of remittance money. When the home country is facing adverse conditions such as natural disasters, the migrant tends to remit relatively more. On the other hand when the migrant is in difficulties such as being unemployed the family at home makes some transfers to him or her.

2.1.4 Enlightened Altruism

So far, the theory of enlightened altruism makes a number of observations between the structure/performance of the economy, education and other considerations on one hand and stream of remittances on the other. As concerns the structure of the economy , it is shown that in an economy with high ratio of agriculture to GDP, a decline in key industries, a prevalence of natural disasters would tend to be associated with higher rates of migration and consequently a greater level of remittance money. Here, an unfavourable economic situation in the host country would reduce remittance flow. Also, migration is greater for more educated members of the household and so too remittance flow is higher for this category of migrants. The level of remittances positively varies with the household size in the recipient country and negatively varies with the age of the migrant and the period of time abroad. When gender is concerned, male migrants tend to transfer remittances for inheritance relates purposes while female migrants remit more for household care.

2.2 Remittances and growth

The following three ways indicate how remittances influence growth;

The rate of accumulation of capital is influenced by remittances. Remittances reduce capital cost in the country of origin in addition to quickening the accumulation rate of both physical and human capital. This may lead to a rise in supplementary borrowing and hence higher levels of debt. Remittances may also have a part in reducing volatility and steadying the economy and as a result reduce the risk premium that is demanded by investors.

Remittances affect the growth of the labour force. Gains from remittances have an effect that is negative in the cooperation of the labour force by substituting income from remittance for income from labour and by generating more recreation with the achievement of reduced work.

Total factor productivity of growth is influenced by remittances. According to Barajas et al, (2009), the effectiveness of investment is influenced by remittances and is dependent on who makes the decision on investment. A decision made by the person receiving the funds on behalf of the person sending the funds will not be as effective as a decision that is made by a proficient financial broker in cases of official capital streams. Large financial development may be brought about by remittances. However, changes in exchange rates can also emerge. 'Dutch disease' which is appreciation in currency and hence a decline in exports can also emerge as a result of streaming in of funds.

2.3 Review of Empirical Studies

A small number of empirical studies have explored the part played by remittances in poverty reduction founded on data from household surveys from a number of African nations (Lucas and Stark, 1985; Adams, 1991; Sander, 2004; Azam and Gubert, 2005; Adam, 2006). Two reasons

have been put forward for overlooking the macroeconomic influences of remittances. One theory proposes that foreign remittances are majorly utilized for the purposes of consumption and therefore have less influence on investment. Remittances are extensively seen as redeeming transfers between household members who lost proficient workers as a result of migration.

The utilization of remittances for consumption purposes may have an influence that is positive on growth as a result of their potential multiplier effect, Arnold and Stahl, (1986). In addition, remittances react to investment opportunities in the receiving nation as much as it reacts to charitable and insurance motives. Most workers abroad spend their reserves on real estate, small businesses or other assets in their home countries since their understanding of their local markets is much better than that of the countries hosting them or possibly anticipating to return in the near future. Remittances are majorly guided by profits in two-thirds of less developed countries and improve in response to good economic conditions in the home country. The Institute of Development Studies, Insights, January 2006 points out that such foreign monetary streams are especially utilized for investment where the sector of finance does not accommodate the local entrepreneurs' credit requirements.

The effect of remittances on growth is investigated in 84 receiving nations on the basis of annual observations that occurring during the years 1970 to 2004, Barajas et al. (2009). The instrument applied is the remittances ratio to the GDP of all other remittance receiving countries which takes note of the impact of global reductions in costs of transactions and other macroeconomic elements of remittances. In a number of instances, a negative sign is found on remittances while there is a strong relationship between remittances and the growth of an economy in other cases.

The nature of remittances is compensatory and increases with the altruism degree and declines as the wages of the recipient rise in the stage of high output.

The nature of remittances is that they are compensatory and increase with the level of altruism and decrease as the receiving person's earnings increase in the stage of high output, Chami, Fullenkamp and Jahjah's (2005). This is as a result of the fact that the relationship between the level of remittances and the recipient's income is negative. If remittances performed as flows of investments, then this is the opposite of what would have taken place. An externality that is negative is also pointed out by the model on both the remittance receiving and sending parties. An impact that is negative is seen on the aggregate output with the moral hazard problem whereby workers slacken as they receive larger remittances. Chami, Fullenkamp and Jahjah (2005), controlled for lagged interest rate and income gap on the basis of data from 113 countries for a period of more than 29 years, that is, 1970 to 1998 between the United States and the home country as elements of remittances and pointed out that funds from migrants possess a significant and negative impact on growth which is constant with the moral hazard issue.

The effect of remittances on economic growth and poverty in Asia (using annual data) is explored by Vargas-Silva, Jha and Sugiyarto, (2009). According to their details, the growth rate of GDP and the gap ratio of poverty are indicated as a function of remittances (remittances' logarithm as a percentage of GDP), introductory GDP per capita's logarithm, the rate of completion in primary school, trade openness, formation of gross capital logarithm and the deflator of GDP. The effect of remittances is positive on growth and negative on poverty. An increase of about 0.9% - 1.2% in annual growth is brought about by a 10% remittance increase in a specified year as a share of GDP. Additionally, the poverty gap is decreased by around 0.7% - 1.4% by an increase of 10% in remittances (as a GDP percentage). The impact of remittances of workers on economic growth is

explored by Pradhan, Upadhyay and Upadhyaya (2008) utilizing panel data from 39 less developed countries for the period 1980-2004; they concluded that there is a positive effect on growth.

The impact on poverty by migration that is international in the less developed countries is a study carried out by Adams and Page (2005). Focus is granted to remittances' endogeneity and migration utilizing variable instruments which encompass government stability, level of education and the area between the country that is remitting funds and that which is receiving. The importance of this research in comparison to existing literature is that the analysis of econometrics is built on a set of data that is large of 71 middle and low income less developed countries covering poverty, inequality, remittances and migration. The indices of poverty are regressed on the income distribution Gini coefficient, GDP per capita, migrants share in the population and per capita official remittances. Additionally, regional dummies are utilized. The two variables have an important negative effect on poverty after taking into consideration the remittances and international migration's endogeneity. The effect of remittances on the development of the financial sector is assessed by Aggarwal et al. (2011) by applying data for the period 1975 – 2007 for 109 countries. The development in the financial sector is measured as the bank deposits share or the bank credit to the private sector ratio and it is indicated as a GDP percentage. The issue of reverse causality is addressed by this research. The results point out that there is a positive relation between remittances to the measures of financial development. The bank deposit to GDP ratio's coefficient is bigger while the coefficient of bank credit to GDP is smaller. The findings are correct even for a smaller sample of countries such as 42 whose remittances are composed of remittances received through unofficial or other sources other than the banks. Economic position of countries sending remittances and immigration policies and views is applied in rectifying the remittances' endogeneity and this results in the stage two finding indicating a positive relationship between

remittances, deposit and credit ratios. Giuliano and Ruiz-Arranz (2009) in line with this research, explored the relationship between growth and remittances by utilizing data for the period 1975-2002 for over 100 countries and controlling for the endogeneity of financial development and remittances. They discovered that remittances enhanced growth in countries that were not developed financially. Instability in consumption in less developed countries is also reduced by the help of remittances. Remittances acts as an ex-ante risk avoidance tool and a mechanism for ex-post risk management (for example remittances go up after a natural disaster has impacted an area). In order to approximate the effect of remittances on the instability of consumption, Combes and Ebeke (2011) analyzed 87 less developed countries using cross sectional panel data over the period 1975 – 2004. They discovered that remittances reduce this instability with the effect being stronger in countries that are poorly developed financially. However, the stabilizing effect goes down at levels of remittance that are higher. Shocks' resilience is also increased by remittances for instance natural disasters such as floods and macroeconomic events such as collapse of the export markets.

2.4 Overview of literature

The literature review on the association between economic growth and remittances of remittance receiving countries is not conclusive in responding to the study question about the effect of remittances on the growth of the economy in recipient countries. The literature has helped in identifying the motivations for remittances and has also been significant in highlighting the growth effects of other external sources of capital. This comes as a result of the clashing theories and literature on how migrant's funds effect the growth of the economy of remittance receiving countries.

Migration optimists observe that through improved physical and human capital investments, a positive effect from remittances is observed on growth of the economy while migration pessimists have an opposite opinion as they claim that migrant's funds have an effect which is negative on the growth of the economy as a result of consumption that has improved and has moral hazards and impacts that are inflationary and that brings about a reduction of labour supply and declining education enrolment. According to Fayissa and Nsiah (2010a), Fayissa and Nsiah (2010b) and Pradhan *et al* (2008), they conclude that there is a positive growth effect with remittances while Singh *et al (*2010) and Chami *et al (*2003) summarize that negative effects are seen on remittances. Other scholars, Barajas *et al (*2009) and Rao and Hassan (2011), hold the conclusion that migrant's funds have no effect on the growth of an economy.

There is need for further empirical research on this subject. There still is a challenge in data coverage and quality in many countries as far as observation of the part played by remittances in economies. There is no agreement that is accepted globally on how the effect of remittances in less developed countries is measured. These limitations in data are linked to informal means of channeling remittances to migrant sending countries and improper procedure of capturing remittance statistics.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the conceptual structure, modeling and data analysis. The conceptual framework provides the variables that will be helpful in analyzing the data. It will also give direction towards the achievement of the set objectives.

3.2 Research Design

A quantitative research design in the form of an econometric model is employed for this study. The effect of remittances on the growth of the economy in Kenya is assessed by time series data. An econometric model is used because it highlights whether a relationship exists between remittances and the growth of an economy. This approach also makes it possible for the researcher to explore whether the association between remittances and the growth of an economy is statistically significant or insignificant. Besides showing the statistical significance of the association between the economic variables of interest, the econometric research method will also indicate whether there is a positive or negative relationship.

In addition, the level of negativity or positivity of the relationship between remittances and the growth of the economy will be quantified by the design of the research. The reported coefficients will estimate how a particular change in the explanatory variables will affect the dependent variable. An empirical analysis that is detailed was significant for responding to the research questions of this study hence the major motivation for employing the methodology.

3.3 Population

The study focuses on the Kenyan economy.

3.4 Data collection

The sample of the study constituted 1 year period averages taken for the analysis over the past 35 year period using the latest available data for the period 1980 to 2014. This is selected because remittances to Kenya as well as economic growth seems to have increased in this period and therefore, remittances could have contributed to economic growth. Also, data that is readily available covered the same period and a study of the recent times would be more beneficial to the users of this research.

Secondary data is used in the research. Data on foreign remittances is drawn from the World Bank website. Data on GDP, investment, inflation, trade openness, population growth and consumption by the government is accessed from the IMF's World Economic Outlook Database (2015). Data on secondary education enrolment is accessed from the KNBS key facts and figures reports.

3.5 Model Specification

The model used in this study can be specified as:

$$Y = \alpha + \beta 1Pop + \beta 2I + \beta 3Enrl + \beta 4Infl + \beta 5Open + \beta 6Govt + \beta 7\ Rem + e$$

Where Y is the variable that is dependent, economic growth. This research used per real GDP growth as the measure for growth of an economy since economic growth rate is the percentage change in the quantity of goods and services produced from a particular year to the next and equals the growth rate of per capita real GDP.

3.6 Variables

3.6.1 Dependent Variable

3.6.1.1 Economic Growth

GDP growth rate has been used by various literatures as the proxy for a country's level of overall economic development. A higher level of overall development means that many engage in income generating activities. The economic growth in Kenya will be used in measuring the impact of foreign remittances. It is obtained from IMF World Economic Outlook database.

3.6.2 Independent Variables

3.6.2.1 Population

Population is the number of persons in the country. It is expected that an increase in population will negatively impact economic growth since little resources will have to be shared out between many individuals and hence result in slowed development.

3.6.2.2 Investment

Investment is expected to have a positive effect on the growth of an economy. Investment in various sectors such as real estate and housing, infrastructure and education is expected to have a positive effect on the growth of an economy as remittances will be utilized to spur development.

3.6.2.3 Enrolment in Secondary education

This enrolment is utilized as a human capital proxy. It is expected that an increase in secondary education enrolment will positively impact economic growth since a higher level of literacy will result in appropriate use of foreign remittances received.

3.6.2.4 Inflation

This is a country's Consumer Price Index annual percentage change. It is expected that a higher inflation will impact negatively on economic growth since the cost of living will be high and therefore slow down economic development.

3.6.2.5 Openness

This is a measure by the total of imports and exports as well as the government's fiscal balance (fiscal) which is specifically related to investment and the growth of an economy and the value of claims of the private sector as a proxy for the development of finance.

3.6.2.6 Government expenditure

It is expected that an increase in government expenditure will positively impact economic growth especially if the expenditure is on development expenditure.

3.6.2.7 Foreign remittances

This is the main variable of the study being a worker's remittances and compensation of an employee received. It is expected that an increase in foreign remittances will positively impact economic growth.

The variables applied above in the model are as follows;

α is the constant.

$\beta 1, \beta 2, \beta 3, \ldots, \ldots, \ldots, \ldots, \beta 7$ are the coefficients of regression which predisposes the independent variable's contribution.

Pop is the logarithm of growth of the population. In this context, population growth is included as a proxy for labour supply.

I represents investment. The study used real investment as a share of GDP to represent investment.

Enrl represents human capital. The study used the total percentage in gross secondary education enrolment as a proxy for human capital.

Infl is inflation, which is included as an indicator of macroeconomic stability. Data is presented as annual averages for inflation.

Open is openness, expressed as the percentage of the total value of imports and exports as GDP's share. The variable is included to identify the impact of trade policy on growth.

Govt is the logarithm of government consumption. It is communicated by applying data for general government final expenditure on consumption as a GDP percentage.

Rem is the logarithm of real per capita remittance. It is the main variable of the study being a worker's remittances and compensation of an employee, received, expressed in log form.

e = error (or residual) value.

The real per capita GDP's growth which is applied in the model is a measure of growth of an economy (growth) and the gross fixed formation of capital divided by GDP as an investment measure (inv).

The following variables were incorporated since they are specifically linked to the growth of a country's economy: the degree of openness (open) which according to Giuliano and Ruiz-Arranz is measured by the total of imports and exports and the government's fiscal balance (fiscal) which

is specifically linked to investment and growth of an economy and the total of claims of the private sector as a financial development proxy, inflation (inf) as a measure of the instability of a country. All the previous variables were measured as a GDP share with an exception of inflation which is a country's Consumer Price Index annual change in percentage. In conclusion, the number of years in education (school) and growth in population (pop) measured as the average years of secondary schooling in total population were also encompassed. These variables with an exception of gross secondary education enrolment and remittances were taken from the World Economic Outlook Database of IMF (2015). The study also explored the channels through which remittances impact growth as discussed in the literature. The study investigated scenarios where one of two important control variables, enrolment and investment, are dropped in the model. The study assessed any significant changes in the association between remittances and the growth of an economy when one of the above variables is either included or excluded in the model. Foreign remittances were likely to possess a statistically significant positive impact on growth when both investment and enrolment or one of the variables is not included in the model. It was however inappropriate to run a regression without both investment and enrolment as this would result in a mis-specified model. The data was empirically analyzed in STATA version 12.0.

3.7 Empirical Tests

3.7.1 Stationarity

Stationarity refers to a case where the mean of the data is time independent. Unit root tests are used to detect non stationarity in all the variables. If variables are non- stationary, there is a tendency of the estimates to change over time. This characteristic leads to spurious estimates. Therefore, if variables are found to be non-stationary, successful differencing is applied until the

bias is eliminated. The null hypothesis in this situation is that the variable under consideration is non-stationary. Augmented Dickey Fuller (ADF) test will be used in testing for stationarity (Gujarati, 2004).

3.7.2 Cointegration

Other than stationarity of the variables, there is a need to have a relationship that is long-run between the variables that are dependent and explanatory variables, a notion called Cointegration. In the absence of Cointegration, the forecasting power of the model will be compromised. The Engle- Granger test is employed to this effect (Gujarati, 2004).

3.7.3 Multicollinearity

Multicollinearity is also common in time series data since variables may be following a particular trend. Multicollinearity refers to a situation where some of the explanatory variables are related. The variables may be increasing or decreasing over time. Multicollinearity makes the coefficient of regression to be indeterminate. In this study, exchange rate and inflation rate are the variables likely to be related. This is based on the fact that increased exchange rate results to a higher aggregate demand which causes demand pull inflation. Multicollinearity may be common among variables, but what matters is the degree (Gujarati, 2004). To check for the presence of multicollinearity, the study will use the variance inflation factors (VIF) test (Nachtscheim, 2004).

CHAPTER FOUR

DATA FINDING, ANALYSIS AND DISCUSSION

4.1 Introduction

In this chapter, the study provided two types of data analysis; namely descriptive analysis and inferential analysis. The descriptive analysis helps the study to describe the relevant aspects of the phenomena under consideration and provide detailed information about each relevant variable. The regression estimates the relationship between the effects of foreign remittances on the growth of an economy. Furthermore, in examining if the effect of diaspora remittances is significantly different from that of economic growth, the t Test statistics was used.

4.2 Descriptive Statistics

Table 4.1: summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
y	35	14.50363	0.336181	13.93459	15.15856
i	35	2.951964	0.186568	2.496011	3.244933
infl	35	4.051432	1.116384	2.070779	5.623562
open	35	10.68394	17.26177	-23.9	48.67
pop	35	3.304723	0.282193	2.790981	3.759501
rem	35	5.503638	1.101385	3.322154	7.272986
govt	35	4.841168	1.692265	0	7.284155
enrl	35	3.767103	0.242591	3.376277	4.254946

Source: Author's computation

Table 4.1 summarizes the natural logarithm of the variables used in this study. Most of the variable's values are close to the mean given their small standard deviation. Mean natural

logarithm of GDP and remittances for the years considered 14.5 and 5.5 respectively, reflecting a close relationship of the two, in terms of values.

4.3 Correlation of variables

Table 4.2: Correlation matrix

Variables	y	i	infl	open	pop	rem	govt	enrl
y	1							
i	-0.1664	1						
infl	0.9588	-0.3779	1					
open	0.3429	0.0447	0.346	1				
pop	0.9882	-0.2655	0.9878	0.3454	1			
rem	0.9483	-0.3125	0.9699	0.2474	0.9665	1		
govt	0.9215	-0.3231	0.9319	0.3592	0.9394	0.8911	1	
enrl	0.947	0.0553	0.8525	0.4024	0.9095	0.8257	0.8533	1

Source: Author's computation

Table 4.2 indicates that remittances possess a very high positive correlation with GDP (0.9483), indicating as remittances increases, GDP of Kenya also increases. This indicator reflects close to a perfect linear relationship between remittances and GDP. Both remittances and GDP have a very small negative correlation with investment -0.1664 and -0.3779, reflecting an inverse relationship brought about by investment rates. Remittances have positive correlation with inflation rates and population growth, implying a similar pattern of growth amongst the variables with remittances. GDP has a positive and significant correlation with all the variables under study apart from investment. Notable positive relationship is between remittances and school enrolment, showing as levels of foreign remittances increases; levels of school enrollment increases as well. Due to these high correlations; there are signs of high levels of multicollinearity.

4.4 Test for Multicollinearity

Multicollinearity test was carried out by utilizing the method of variance inflation factor. From table 4.3; the mean VIF of 55.5 indicated high levels of multicollinearity for all the variables apart from openness to trade. Multicollinearity was corrected by converting; investment, remittances, school enrolment, government expenditures and inflation rates to their 1st differences. After transformation of the variables; mean VIF became 1.23, indicating a removal of multicollinearity among the variables. Each variable's VIF was below 4, thus reflecting removal of multicollinearity of the variables.

Table 4.3: Variance Inflation Factor

Variables	VIF	1/VIF	Variable	VIF	1/VIF
pop	184.46	0.005421	pop	1.34	0.748908
infl	143.44	0.006972	di	1.33	0.751243
rem	26.62	0.037565	drem	1.27	0.787859
enrl	18.3	0.054653	open	1.2	0.830715
govt	9.88	0.101233	denrl	1.19	0.83935
i	4.25	0.235427	dgovt	1.16	0.862081
open	1.58	0.633987	dinfl	1.15	0.871033
Mean VIF	55.5		Mean VIF	1.23	

Source: Author's computation

4.5 Test of Stationarity

Unit root test was undertaken to establish the stationarity of the variables under study. An augmented dickey fuller test was used.

Table 4.4: Augmented Dickey-Fuller test results

Variables				1st differences			
Variables	Test statistic	5% Critical	Conclusion	**Variables**	Test statistic	5% Critical	Conclusion
I	-2.231	-2.975	Non- stationary	DI	-7.643	-2.978	Stationary
Inflt	-1.884	-2.975	Stationary	Dinflt	-3.083	-2.975	Stationary
Open	-4.322	-2.975	Stationary	Open	-4.322	-2.975	Stationary
Pop	-5.439	-2.975	Stationary	Pop	-5.439	-2.975	Stationary
Rem	-1.235	-2.975	Non- stationary	Drem	-8.241	-2.978	Stationary
Govt	-3.041	-2.975	Stationary	Dgovt	-6.212	-2.975	Stationary
Enrl	0.232	-2.975	Non- stationary	Denrl	-4.95	-2.978	Stationary

Table 4.4 shows that among the variables under study; remittances, investment rates and school enrollment variables in their initial levels are non-stationary, while the others were stationary. In using all the variables corrected for multicollinearity; they all became stationary including openness to trade and population which exists without 1st differences. The stationary variables under study without differencing shows that they only have a short run relationship with GDP, and cannot explain GDP in the long run.

4.6 Test of Cointegration

Johansen test of cointegration was carried out to identify if the variables were cointegrated and at which order.

Table 4.5: Johansen test of cointegration

maximum rank	eigenvalue	max statistic	critical value
0	.	.	51.42
1	1	926.0251	45.28
2	1	901.716	39.37
3	1	858.3973	33.46
4	1	809.3034	27.07
5	1	0	20.97
6	0	0	14.07
7	0	0	3.76
8	0		

Source: Author's computation

Table 4.5 shows that all the variables were not cointegrated at any order, implying that there was no relationship that was long-run between the variables chosen under study and GDP. As such an Ordinary least square regression was carried out to determine the impact of each variable on GDP, because all the relationships are in the short run.

4.7 Regression Model

Openness to trade, could not be converted to natural logarithm because of existence of many negative values, as such this study used a log-linear regression model to explore the relationship between the explanatory variables and the regressand. From table 4.3; the regression results showed that GDP had a relationship of the form:

Y = 10.53072 - 0.0257922DI - 0.032629DInflt + 0.0000969Open + 1.200072Pop + 0.0438046DRem + 0.0246127DGovt - 0.095212DEnrl

R squared statistics, show that the variables chosen for this study explain 97.7% of changes in GDP growth rates. The results of the regression, show that holding everything constant in this

analysis; GDP of Kenya stands at 10.53%, which translates to 486168.6 billion. Remittances being the main independent variable under study showed that; an increase by one percent in previous period's remittances to Kenya, led to a growth of GDP in the current period by 0.044%. Though this is the case; the variable remittances in explaining GDP is not statistically significant.

The variables also show that, an increase by one percent in previous period's rate of inflation reduced economic growth rate by 0.033%. Openness to trade had a very small impact on GDP, with a unit increase in the country's openness to trade increasing economic growth by 0.0000969%, which is approximately a 0.0001% increase.

Notably in Kenya from the results; school enrollment has negative impact to economic growth, with 1% increase in levels of enrollment leading to a reduction of economic growth by 0.0952%. Probably this can be questioned from the view of quality of education provided in Kenya, since it was anticipated that the variable enrollment is positively related to the growth of an economy. But the negative effect is not statistically significant at 5% significance level.

Table 4.3 Regression results

Number of obs	34				
F(7, 26)	158.86				
Prob > F	0				
R-squared	0.9771				
y	Coef.	t	P>t	95% Confidence interval	
di	-0.0257922 (0.0821337)	0.33	0.756	-0.19462	0.143036
dinfl	-0.032629 (0.1423657)	2.03	0.821	-0.32527	0.260008
open	0.0000969 (0.0006062)	1.43	0.874	-0.00115	0.001343
pop	1.200072 (0.0411654)	2.94	0.000	1.115456	1.284689
drem	0.0438046 (0.0405213)	0.98	0.29	-0.03949	0.127097
dgovt	0.0246127 (0.0202866)	3.18	0.236	-0.01709	0.066312
denrl	-0.095212 (0.2185729)	-1.25	0.667	-0.5445	0.354071
_cons	10.53072 (0.1420341)	1.36	0	10.23877	10.82268

Source: Author's computation

Population growth in Kenya has an effect that is positive on the growth of the economy, with an increase of 1% in the population rate resulting to a rise in economic growth by 1.2%, this reflects a one to one association between population growth rates and economic growth rates in Kenya.

Though all the explanatory variables have both negative and positive impacts on economic growth; population growth is the only statistical significant variable at 5% significance level.

CHAPTER FIVE
FINDINGS AND CONCLUSIONS

5.1 Summary of key findings

From the results in chapter four, there is a positive effect on the growth of an economy from remittances. These positive results are also found by Suffian and Chong (2008) who explored the effect of diaspora remittances on the growth of GDP in Philippines.

The results of this study also conform to (Stahl and Arnold, 1986) who argued that the utilization of remittances for consumption may have a positive impact on the growth of an economy because of their possible multiplier effect. Other variables like population in this study have a very big impact on Kenya's economic growth. From the study, there is a general consensus on the direct contribution of migration and remittances to the growth of the economy in Kenya. Remittances improve the wellbeing and survival of families in the remittance receiving country. Remittances invested on government securities provide huge external financing to the recipient country which has enhanced infrastructural development, growth of real estate and the tourism sector in Kenya. The population in Kenya uses remittances for activities that are productive which result in growth of the economy for the country.

In further relation to other studies reviewed, there is a general consensus on the direct contribution of remittances and migration to economic growth in the recipient countries. Elyor (2009) argued that well invested diaspora remittances have a stronger impact on the growth of an economy.

The results of this study indicate that Kenyans have made good use of remittances for the years under consideration. Economic growth is considered as not only an increase in the capacity of

production but also as an enhancement in the life quality of the inhabitants of that economy. Remittances improve the livelihoods and survival of families left behind. Remittances invested on government securities provide huge external financing to the recipient country which has enhanced infrastructural development, growth of real estate and the tourism sector in Kenya.

5.2 Conclusion

This research explores the impact of foreign remittances on the growth of the economy of Kenya from 1980 to 2014. The results show that remittances positively impact economic growth through human capital investment such as education .This means that the Kenyan government should focus on improving its human capital level in order to improve its foreign remittance flows into the country. This will enable the foreign remittances to not only be cushioned against exogenous shocks, but also to take full advantage of business opportunities as they arise and increase their growth in the process. Another variable identified to be significant in explaining economic growth in Kenya is population growth. This indicates an interrelationship between remittances, population and economic growth.

5.3 Recommendations to Policy and Parties

The study recommends government agencies to establish policies that make it safe, cheap and easy to receive remittances as well as create efficient, effective and official modes for receiving and sending remittances. The government should also contemplate on taking up institutions that assist in amplifying the effects of growth of remittances into sustainable economic growth.

To positively increase levels of foreign remittances, channels used in the transfer of remittances should be formal. In this regard, the government should create incentives to make remittance of

money using formal channels cheaper as compared to the informal ones. As such, banks and other traditional financial institutions will have access and control to this source of investment capital.

The country should contemplate on coming up with a way of prompting the households receiving remittances to maintain reserves of their income so that the earnings can be spread to the economy's critical sectors. For example, policies promoting the rise in the use of remittances in funding business activities in the economy could be formulated. This will also need to be a system of distribution that is efficient and effective. That is, a system of finance which is vibrant and one that can mobilize remittance funds and distribute them as an investment capital to unfunded entrepreneurs.

5.4 Limitations of the study

The study broadly explores the effect of remittances on the growth of an economy but has not narrowed down to examine the welfare effects of these remittances. Welfare is important in Kenya, as it can indicate the categorical importance of an economic growth.

The other limitation of this study is that it only uses formal records of remittances omitting informal remittances that are not captured in government records. These remittances could be high enough to alter the results of this study.

5.5 Suggestions for further study

Other studies could consider breaking down the welfare effects of remittances in Kenya and also carrying out a research on informal remittances in order to integrate the outcomes with the ones of this study.

REFERENCES

Adams, R.H. (1991). *The Effects of International Remittances on Poverty, Inequality, and Development in Egypt.* Washington DC: IFPRI.

Adams, R.H. & Page, J. (2005). Do international migration and remittances reduce poverty in developing countries? *World Development, 33*(10), 1645-1669.

Adams, R.H. (2011). Evaluating the economic impact of international remittances on developing countries using household surveys: A literature review. *Journal of Development Studies, 47*(6), 809-828.

Amuedo-Dorantes, C. & Pozo, (2004). Worker's Remittances and the Real Exchange Rate: A Paradox of Gifts. *World Development*, 32(8), 1407-1417.

Barajas, A., Gapen, M.T., Chami, R., Montiel, P. & Fullenkamp, C. (2009). Do workers' remittances promote economic growth? *IMF Working Paper* WP/09/153. Washington, DC: International Monetary Fund. 22 pp.

Calero, C. (2008). Remittances, Liquidity Constraints and Human Capital Investments In Ecuador. *World Development*

Chami, R., Fullenkamp, C. & Jahjah, S. (2003). Are Immigrant Remittances Flows a Source of Capital for Development? *IMF Working Paper* 3(189) (Washington: International Monetary Fund).

Chami, R., Fullenkamp, C. & Jahjah, S. (2005). Are Immigrant Remittance flows a source of capital for development? *IMF Staff Paper*, 52(1), 55-81.

Chami, R., Hakura, D. & Montiel, P. (2009). Remittances: An Automatic Output Stabilizer. IMF Working Paper 09/91 (Washington: International Monetary Fund).

Combes, J. & Ebeke. C. (2011). Remittances and household consumption instability in developing countries. *World Development*, 39(7), 1076-1089.

Fajnzylber, P. & Lopez, J. H (2007). Close to Home: The Development of Impact of Remittances in Latin America. Mimeo (Washington: World Bank).

Fayissa, B. and Nsiah, C. (2008). The impact of remittances on economic growth and Development in Africa. Middle Tennessee State University. *Department of economics and finance working paper series*.

Funkhouser, E. (1992). Migration from Nicaragua: Some recent Evidence. *World Development*, 20(8), 1209-1218.

Giuliano, P. & Ruiz-Arranz, M. (2005). Remittances, Financial Development, and Growth. IMF Working Paper 05/234 (Washington: International Monetary Fund).

Giuliano, Paola and Marta Ruiz-Arranz (2008). Remittances, Financial Development and Growth. *Journal of Development Economics*

Giuliano, P. & Ruiz-Arranz, M. (2009). Remittances, financial development and growth. *Journal of Development Economics* 90(1), 144-152.

Gujarati, D.N. (2004). *Basic Econometrics* 4th edition. McGraw-Hill, Book companies, NewYork.

Gupta, S., Catherine, P. & Smita, W. (2007). Making Remittances Work for Africa. *Finance and Development*, 44(2), 1-9.

Gupta, S., Catherine, P. & Smita, W. (2007). Impact of Remittances on Poverty and Financial Development in Sub-Saharan Africa. IMF Working Paper 7/38. (Washington: International Monetary Fund).

Jongwanich, J. (2007). Workers' remittances, economic growth and poverty in Developing Asia and the pacific countries, *UNESCAP working paper*. WP/07/01

Lucas, R. E., & Stark, O. (1985). Motivations to Remit. Evidence from Botswana. *Journal of Political Economy* 93(5), 901-918.

Nachtscheim, C.J. & Neter, J. (2004). *Applied Linear Regression Models*, 4th edition. Boston: McGraw-Hill Irwin.

Pradhan, G., Upadhyay, M. & Upadhyaya, K. (2008). Remittances and economic growth in developing countries. *European Journal of Development Research* 20(3), 497-506.

Ratha, D., Mohapatra, S. & Scheja, E. (2011). The impact of migration on economic and social development. *World Bank Policy Research Working Paper* No. 5558. Washington, DC: World Bank.

Shahbaz M., Quresht, N. M., Aamir, N. (2007). Remittances and Financial Sector Performance Under Two Alternative Approaches. *International Research Journal of Scientific Research ISSN* 1450-2216X 25(1) (2009), 130-144 EuroJournals Publishing, Inc. 2007

Stahl, Charles, W. & Fred, A. (1986), Overseas Workers' Remittances in Asian Development. *International Migration Review* 20(4), 899-925.

Stark, & Lucas, R. (1988). Migration, Remittances and Family. *Economic Development and Cultural Change* 31(1), 191-196

Stark, O., (1991). Migration in LDC's: Risk, Remittances, and the Family. *Finance and Development* 28(4), 41-44.

Stark, O., Taylor J. E. & Yitzhaki S., (1988). Migration, Remittances, and Inequality: A Sensitivity Analysis Using the Extended Gini Index. *Journal of Development Economics*, 28, 309–332.

Karagoz (2009). Workers' Remittances and Economic Growth: *Evidence from Turkey*

Taylor, J.E. (1992). Remittances and Inequality Reconsidered; Direct, Indirect and International Effects. *Journal of Policy Modeling*, Vol.14 (2); 187-208

Vargas-Silva, C., Jha, S. and Sugiyarto, G. (2009). Remittances in Asia: Implications for the fight against poverty and the pursuit of economic growth. *AsDB Economics Working Paper Series* No. 182. Manila: Asian Development Bank.

Woodruff, C. & Zenteno, R. (2004). Remittances and Microenterprises in Mexico. IR/PS *Working Paper* (Graduate School of International Relations and Pacific Studies, University of California – San Diego).

Central Bank of Kenya (2015). *Diaspora Remittances*. Retrieved from https://www.centralbank.go.ke/index.php/rate-and-statistics/diaspora-remittances

APPENDIX

Years	Y	DI	DInfl	Open	Dpop	Drem	Dgovt	Denrl
1980	1126463			12.4				
1981	1172648	1.314	0.626	-23.9	0.608	50.82	0	-0.68029
1982	1231895	-2.306	1.182	-14.3	0.614	-10.56	22.184	-0.06029
1983	1251519	-0.403	1.13	-16.9	0.626	-9.9	0.418	1.25849
1984	1271545	-1.385	2.247	18.8	0.649	-1.32	3.219	1.457581
1985	1323334	5.498	1.494	-0.4	0.677	9.240002	4.882	7.649239
1986	1415730	-2.267	1.503	26.6	0.698	-13.86	4.628	-0.54743
1987	1497994	0.705	2.096	14.2	0.715	13.86	4.409	2.045387
1988	1589234	0.375	0.875	12.9	0.728	10.56	6.032	-0.6631
1989	1661612	-5.709	1.453	12.876	0.733	12.54	8.135	-0.22781
1990	1730298	4.876	2.3	12.667	0.733	50.16	11.678	-0.125
1991	1753471	-2.622	4.363	-1.534	0.712	-15.18	5.681	-0.545
1992	1734531	-5.555	7.435	-5.707	0.69	-9.24001	16.643	-1.656
1993	1732887	1.51	15.924	-0.58	0.663	3.300003	30.46	0.189
1994	1776750	-1.3	14.569	44.786	0.634	19.14	17.676	2.224
1995	1852917	0.129	1.012	48.67	0.601	161.04	9.837	0.879
1996	1927238	-2.119	5.861	13.017	0.606	-9.89999	15.718	-0.213
1997	1931480	0.741	8.586	-8.887	0.61	63.35999	23.08	-1.9
1998	1995807	-0.56	5.412	-5.244	0.579	-3.95999	11.972	-0.086
1999	2043845	-1.73	4.947	-12.402	0.645	83.82001	-9.049	-0.45442
2000	2056093	5.92	9.054	1.834	0.676	106.26	16.351	0.789959
2001	2137902	1.349	5.824	30.071	0.815	12.09998	23.937	1.040428
2002	2148195	-2.966	2.282	7.218	0.838	-117	17.807	0.631462
2003	2211544	0.441	6.468	5.321	0.862	105	23.476	2.131508
2004	2314051	0.639	9.602	16.292	0.885	82	19.284	4.033852
2005	2445134	0.698	9.714	30.434	0.909	-195.009	53.85	0.689468
2006	2588279	0.419	8.088	10.039	0.935	145.4682	57.622	2.15443
2007	2765596	1.823	6.055	34.424	0.96	74.7486	75.415	2.516632
2008	2772019	-0.844	22.355	3.968	0.988	22.10946	91.436	6.6455
2009	2863688	-0.28	17.979	7.292	1.014	-35.8565	95.709	0.943378
2010	3104401	1.508	8.117	38.145	0.8	54.29639	104.869	1.107801
2011	3294455	0.861	27.552	4.158	1	248.3919	110.918	3.555
2012	3441133	-0.128	21.01	25.504	1.2	276.8722	151.955	2.202441
2013	3638763	-1.652	14.01	7.687	1.1	93.25584	174.841	1.797559
2014	3830690	2.628	17.818	24.489	1.127	136.5688	251.957	1.667