

**EFFECT OF FOREIGN INFLOWS ON THE ECONOMIC GROWTH OF  
EAST AFRICAN MEMBER COUNTRIES**

**BY**

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**DECLARATION**

This paper is my original work and has not been formerly published or submitted for award of a degree. It covers no content written or published by other people apart from where due reference is made and author appropriately recognized.

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## **DEDICATION**

This work is dedicated to my family. My heart felt appreciation goes to my beloved husband, Samson for his great support and encouragement. To my daughters Gianah and Ella and my niece Neddy, I appreciate them for their understanding every time I traded our time together with my studies. Special gratitude to my parents for great support and sacrifices to offer me education, words of encouragement and prayers. I know you are proud of me.

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## TABLE OF CONTENTS

<b>DECLARATION</b> .....	I
<b>DEDICATION</b> .....	II
<b>ACKNOWLEDGEMENT</b> .....	III
<b>TABLE OF CONTENTS</b> .....	IV
<b>ABBREVIATIONS AND ACRONYMS</b> .....	IX
<b>OPERATIONAL DEFINATION OF TERMS</b> .....	X
<b>ABSTRACT</b> .....	XI
<b>CHAPTER ONE</b> .....	1
<b>INTRODUCTION</b> .....	1
<b>1.1 Background of the study</b> .....	1
1.1.1 <i>Foreign Inflows</i> .....	4
1.1.2 <i>Economic Growth</i> .....	6
1.1.3 <i>East African Member Countries</i> .....	6
<b>1.2 Statement of the problem</b> .....	7
<b>1.3 Study objectives</b> .....	10
1.3.1 General objective.....	10
1.3.2 Specific objectives.....	10
The specific objectives of this study were:.....	10
<b>1.4 Hypothesis of the study</b> .....	10
<b>1.5 Significance of the study</b> .....	10
1.5.1 <i>East African Community member states</i> .....	11
1.5.2 <i>Policy Makers</i> .....	11
1.5.3 <i>Investors</i> .....	11
<b>1.6 Scope of the study</b> .....	12
<b>CHAPTER TWO</b> .....	13
<b>LITERATURE REVIEW</b> .....	13
<b>2.1 Introduction</b> .....	13
<b>2.2 Theoretical Review</b> .....	13
2.2.1 <i>Debt overhang Theory</i> .....	13
2.2.2 <i>Internationalization Theory</i> .....	15
2.2.3 <i>Utility Theory</i> .....	17
<b>2.3 Empirical Literature Review</b> .....	18

2.3.1 Foreign Direct Investment and Economic growth .....	20
2.3.2 Remittance and Economic Growth .....	21
2.3.3 External Debt and Economic Growth.....	23
2.4 Conceptual framework.....	26
2.5 Operationalization of variables .....	27
<b>CHAPTER THREE.....</b>	<b>28</b>
<b>RESEARCH METHODOLOGY.....</b>	<b>28</b>
<b>3.1 Introduction.....</b>	<b>28</b>
<b>3.2 Research Design.....</b>	<b>28</b>
<b>3.3 Target Population.....</b>	<b>28</b>
<b>3.4 Research Instrument.....</b>	<b>28</b>
<b>3.5 Data Collection procedure.....</b>	<b>29</b>
<b>3.6 Data Processing and Analysis.....</b>	<b>29</b>
<b>3.7 Diagnostic Tests.....</b>	<b>30</b>
3.7.1 Test for linearity.....	30
3.7.2 Test for Multicollinearity.....	30
3.7.3 Test for Stationarity.....	30
3.7.4 Test for Heteroscedasticity.....	31
3.7.5 Normality test.....	31
<b>CHAPTER 4.....</b>	<b>31</b>
<b>RESEARCH FINDINGS AND DISCUSSIONS.....</b>	<b>31</b>
<b>4.1 Introduction.....</b>	<b>31</b>
<b>4.2 Descriptive statistics.....</b>	<b>32</b>
<b>4.3 Diagnostic Tests.....</b>	<b>33</b>
4.3.1 Exploration for dependent variable-GDP growth.....	33
4.3.2 Test for linearity.....	36
4.3.3 Test for multicollinearity.....	38
4.3.4 Test for Stationarity.....	39
4.3.5 Model specification.....	41
4.3.6 Test for Heteroscedasticity.....	43
4.3.7. Test for normality.....	43
<b>4.5 Regression results.....</b>	<b>44</b>
<b>4.6 Discussion of the Findings.....</b>	<b>46</b>
<b>4.7 Hypothesis testing.....</b>	<b>52</b>

<b>CHAPTER FIVE</b> .....	53
<b>SUMMARY, CONCLUSION AND RECOMMENDATIONS</b> .....	53
<b>5.1 Introduction</b> .....	53
<b>5.2 Summary</b> .....	53
5.2.1 <i>Foreign Direct Investments</i> .....	53
5.2.2 <i>Remittances</i> .....	54
5.2.3 <i>External Debt</i> .....	55
<b>5.3 Conclusion</b> .....	56
5.3.1. <i>Foreign direct investment</i> .....	56
5.3.2 <i>Personal remittances</i> .....	57
5.3.3 <i>External Debt</i> .....	57
<b>5.4 Recommendations</b> .....	58
5.4.1. <i>Policy recommendation</i> .....	58
5.4.2 <i>Investment recommendation</i> .....	59
<b>5.5 Recommendations for future research</b> .....	59
<b>5.6 Limitations of the study</b> .....	60
<b>REFERENCES</b> .....	61
<b>Appendix I: Data Collection sheet</b> .....	65

## LIST OF TABLES

TABLE 1	2.1 OPERATIONALIZATION OF VARIABLES .....	27
TABLE 2	4.1 DESCRIPTIVE STATISTICS .....	32
TABLE 3	4.2 PANEL DATA.....	33
TABLE 4	4.3 CORRELATION MATRIX.....	38
TABLE 5	4.4 VIF.....	39
TABLE 6	4.5 STATIONARITY FOR GDP .....	40
TABLE 7	4.6 STATIONARITY TEST FOR EXTERNAL DEBT.....	40
TABLE 8	4.7 STATIONARITY TEST FOR PERSONAL REMITTANCE.....	41
TABLE 9	4.8 STATIONARITY TEST FOR FDI .....	41
TABLE 10	4.9 FIXED EFFECT TEST RESULTS.....	42
TABLE 11	4.10 BREAU SCH-PAGAN LM TEST RESULTS .....	43
TABLE 12	4.11 HETEROSCEDASTICITY TEST RESULTS.....	43
TABLE 13	4.12 REGRESSION COEFFICIENTS .....	44

## LIST OF FIGURES

FIGURE 1	2.1 CONCEPTUAL FRAMEWORK .....	26
FIGURE 2	4.1 GROWTH PLOTS .....	34
FIGURE 3	4.2 OVERLAIN PLOT FOR GDP .....	36
FIGURE 4	4.3 Q-Q PLOT REMITTANCE.....	37
FIGURE 5	4.4 Q-Q PLOT FDI .....	37
FIGURE 6	4.5 Q-Q PLOT EXTERNAL DEBT.....	38
FIGURE 7	4.6 HISTOGRAM.....	44
FIGURE 8	4.7 P-P PLOT FDI.....	47
FIGURE 9	4.8 P-P PLOT EXTERNAL DEBT .....	48
FIGURE 10	4.9 P-P PLOT PERSONAL REMITTANCE.....	50

## **ABBREVIATIONS AND ACRONYMS**

<b>EAC:</b>	East African Community
<b>EAMU:</b>	East African Monetary Union
<b>EC:</b>	Economic Growth
<b>ED:</b>	External Debt
<b>EUT:</b>	Expected Utility Theory
<b>FDI:</b>	Foreign Direct Investment
<b>GDP:</b>	Gross Domestic Product
<b>GNI:</b>	Gross National Income
<b>HIPCS:</b>	Heavily Indebted Poor Countries
<b>IMF:</b>	International Monetary Fund
<b>LLC:</b>	Levin-Lin-Chu test
<b>MNEs:</b>	Multinational Enterprises
<b>NTBs:</b>	None Tariff Barriers
<b>REM:</b>	Remittance
<b>SDG:</b>	Sustainable Developmental Goals
<b>TMEA:</b>	Trade Mark East Africa
<b>UNCTAD:</b>	United Nations Conference on Trade and Development

## **OPERATIONAL DEFINATION OF TERMS**

- Debt crowding out effect:** This is situation whereby a country uses the income from exports or foreign aid to repay the accumulated debt (Ejigayehu (2013)
- Debt Overhang:** This is the condition of an organization or government that has existing debt so great that it cannot easily borrow more money (Wikipedia).
- Economic Growth:** This is an increase in the amount of goods and services produced per head of the population over a period of time (Wikipedia).
- Foreign Inflows:** This is money coming into the economy from abroad into the domestic economy (World Bank).
- Gross Domestic Product:** This is a monetary measure of the market value of all the final goods and services produced in a specific time period (Wikipedia)
- Real GDP per capita:** This is a measurement of the total economic output of a country divided by the number of people and adjusted for inflation (U.S & World economies)
- Remittance:** This is a transfer of money, often by a foreign worker to an individual in their home country (Wikipedia)
- Utility:** This refers to the total satisfaction received from consuming a good or service (Wikipedia)

## **ABSTRACT**

The main objective of this study was to investigate the effect of foreign inflows on economic growth of East African Community countries. Three independent variables including foreign direct investment, personal remittance and external debt were reviewed to evaluate their effect on gross domestic product of EAC countries. The specific objectives for this study were to evaluate the effect of external debt on economic growth of East African Community countries, assess the effect of foreign direct investment on economic growth of East African Community countries and investigate the effect of remittances on economic growth of East African Community countries. Theories applicable to the study such as debt overhang theory, internationalization theory and utility theory were reviewed. To accomplish the study objective, Pooled Ordinary Least Squares model was recommended based on model estimation performed for panel data of three countries using Hausman test and Breasch –Pagan LM tests. The target population sample size was three East African Community member countries that signed into the union in 1993 and they include Kenya, Uganda and Tanzania. A panel data covering a period of 20 years from 1999-2018 was used. Rwanda and Burundi acceded the treaty agreement in July 2007 while South Sudan joined in April 2016. Data was obtained from World Bank’s African Development indicators, reports from bureau of statistics from each of the countries, data from central bank for each of the countries and information published on the website. This study concludes that foreign direct investment has significant impact on gross domestic product of East African Community Countries. Foreign direct investment therefore, is one of the foreign inflows that has an effect on economic growth of East African Community Countries. The results from this study also found the coefficient for remittance was positive but statistically insignificant. The results from this study found that external debt negatively affect the gross domestic product of East African Community countries. More studies would also be recommended to investigate the negative effect on gross domestic product for East African Community countries by external debt. Little or no research has been conducted to investigate the existence of debt overhang or debt crowding out effect specifically in East African Community countries. Further research is recommended as this would give more insights to East African Community countries on how to deal with external debts to avert the negative effect on economic growth and development.

**Keywords:** Economic Growth, Gross Domestic Product, EAC countries, FDI, Personal Remittances, External Debt

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the study**

The East African Community (EAC) is a regional organization comprising of six EAC countries, including Republics of Kenya, Uganda, United Republic of Tanzania, Burundi, Rwanda and South Sudan. The EAC was originally established in 1967 before collapsing in 1977 due to lack of political good will and suitable policies to address their differences. Upon dissolution of EAC, the EAC mediation agreement was signed in 1984. In 1997, the heads of state of Kenya, Uganda and Tanzania embarked on negotiations for the upgrading of the agreement and this resulted in the signing of the treaty for the establishment the EAC in 1999 entering into force in 2000 following its ratification by the original three partner states; Kenya, Uganda and Tanzania. Rwanda and Burundi acceded to the East African Community in 2007 while South Sudan acceded in 2016.

All the governments in developing countries want to attract foreign inflows to enhance economic growth and development. However, during the UNCTAD 2019, the Secretary General disclosed that East African region has obvious challenges that negatively affect its investment climate and foreign inflow in general. According to Chaunduri and Mukhopadhyay (2014) developing economies suffer low levels of productivity, low wages, low levels of savings and investment back to low levels of productivity”. Chaunduri and Mukhopadhyay (2014) noted that, to break the vicious circle, external injection in form of foreign inflows would be needed. Human resources, physical capital, natural resources and technology are some of the factors that contribute to economic growth in developing economies.

East African Community countries appreciate the role that foreign inflows play on their economies and are keen to attract and retain investors to help drive economic growth through job creation, skills transfer and technological transformation. Ordinarily, capital is expected to flow from developed countries with huge capital to developing countries with deficient capital and unutilized resources. According to Oneya, Ombui, Ondabu, Iravo, Muturi (2018) if external resources are channeled into productive investments, growth will be achieved and result to improvement of people’s living standards. Gachunga (2019) found that foreign inflows on

infrastructure sector has positive economic development than manufacturing and agricultural sector. To close the productivity gap in manufacturing and agricultural sector, inter-sectoral linkages should be taken into account for better gains in productivity. World economic reports have also revealed the challenges facing the agricultural sector especially climate change in EAC countries that have negatively affected the gross domestic product in form of increased poverty levels, low productivity and job loss.

Savings and investments gaps, insufficient technology and skills can be addressed by Foreign Direct Investments (Gachunga 2019). External debts are also considered to address the issue of resource gaps and the funds can be channeled to productive investments which would result to economic growth and development. This can be achieved by having strong fiscal policies in place to ensure proper use of resources through transparent and accountable systems for resource allocation to steer economic growth.

Uganda's economic outlook indicates that the projected growth for 2018/2019 is 6.3% and notes that population in Uganda is growing rapidly leading to high poverty level while external debts are on the rise causing more strain to the budget due to interest payments. The aspect of external debt is a factor with potential to grow or wreck economic growth in developing countries. Huge accumulation of debt that is not serviced is likely to handicap economic growth in that resources are constantly channeled into debt and interest repayment rather than investment into the sectors of economy. On the other hand, external debt has potential to grow the economy if resources are not diverted from rightful government expenditures aimed at steering economic growth and investments capable of generating returns enough to service the debts.

UNCTAD 2020 points out that FDI inflows in Uganda increased by 20% in 2019. The country has potential for more direct investments by foreign investors considering the significant natural resources like oil reserves and hydroelectric potential. The government of Uganda should focus on creating an enabling environment to attract more investors. Political reforms should also be a key focus noting that foreign direct investments are high risk investments and investors would be careful to consider countries that are politically stable. Poor infrastructure in Uganda and low productivity are noted as some of the weak points and this poses risk of losing investors or failure to attract investors.

Personal remittances contribution to GDP in 2018 was 4.2% in Uganda. Personal remittances are noted to exceed the inflows of foreign direct investments in some studies. Most

studies have also revealed the key challenge in remittance receiving economies to be the recording of accurate data considering the channels of transfer are unregulated. More pronounced effect of personal remittances on economic growth can be revealed if governments and financial markets paid more attention to realize the magnitude of inflows in form of remittances. Studies have also noted the significance influence of remittances in poverty reduction through job creation and enabling access to education by remittance receiving countries. Mushomi, Ntozi, Rutaremwa (2017) noted a research gap on the role of international remittances as they proved resilient in contributing to development in Uganda.

According to World Bank data, Tanzania has in the last 5 years seen the slowest growth since 2000 and the projected growth 2020/2021 is 6%. It is also noted that Tanzania's economy is donor dependent and has huge external debt whose servicing absorbs close to 40% of government expenditure. The huge rate of government revenue channeled into servicing debt poses a great risk to economic growth and development of Tanzania. This is likely to result into debt overhang or debt crowding out effect. According to a study by Eligayehu (2013) noted that heavy debt repayment and government spending reduction has potential to retard economic growth. On average, remittance contribution to GDP in Tanzania was 1% between 2010 and 2017 according to the country's economic data.

East African Community countries experience low productivity and consequently low economic development, lack of global trade relations, overreliance on external debt and donations among others. Growth is a very dynamic process, and the technological changes have transformed countries leading to improved economies Upreti (2015). ICT transformation in Kenya is considered an economic growth driver in the recent past based on innovations around mobile money (Korsak 2017). Mobile money comprises of electronic money accounts that can be accessed through mobile phone. This technology has created competition in the financial markets and its considered a tool for job creation, poverty reduction and hence a driver for economic growth. Human capital is a key factor of production and schooling has mirrored the role of human capital in growth and development even though the expansion of schools has not guaranteed improved economic conditions. Mere school attainment with no attention to quality and intellectual skills of the population has no influence of human capital on economic growth (Hanushek 2013).

### ***1.1.1 Foreign Inflows***

Foreign inflow is the amount of money coming into a country from foreign countries to developing economies. Foreign inflow can be in form of foreign investments, foreign debt, foreign aid, personal remittances, and inflow from exports among others. Ordinarily, developing economies attract foreign inflows from developed countries to cover the resources gap for development investments. This study will focus on three forms of foreign inflows (foreign direct investments, personal remittances and foreign debt) and their effect on economic growth of East African community countries.

FDI inflows to East Africa fell by 14% and global FDI inflows fell by 19% in 2018 (UNCTAD,2019). FDI is the greatest source of external funding for the developing economies as a driver of real economic growth. A study by Hlavacek and Domanska (2016) revealed that foreign direct investment has been a major indicator of economic growth and offers economic stability for the developing economies. Researchers note that FDI has the ability to create employment, technological development and improve access to international markets. The trend of declining FDI to Africa with several service industries highly affected, is set to worsen significantly in 2020 amid the effect of the COVID 19 pandemic and low prices of commodities. The world investment report indicates that the downward pressure on FDI will be -5% to -15% as there will be lower multinational enterprises profits (MNEs) and investment earnings. This is attributed to lower sales and disruption on production and supply chain following a lockdown in most countries. The other key factors likely to affect foreign direct investments include political instability, poor infrastructure, lack of access to raw materials, unskilled labor, insecurity and agricultural risks. These factors are some of the common weak points noted in East African Community countries. From previous studies, foreign direct investment has potential for significant positive impact on economic growth and therefore governments in East African Community countries would need to attract foreign investors. This can be achieved by creating competitive markets and increased productivity.

Most developing countries are faced with huge investment and savings gaps leading to budget deficits. This necessitates the need to mobilize resources for sustainable developmental goals (SDG)-related projects to boost economic development as well as resources for government expenditure. Lack of savings and investment by the developing economies is the reason for borrowing externally in order to cover the budget deficits and consequently boost their real per

capita GDP. Using data for the period (1990-2015) Kharusi and Ada (2018) found that external debt has no positive influence on GDP in Oman. On the other hand, a study by Oneya, Ombui, Ondabu, Iravo, Muturi (2018) finds that foreign debt in East African Community has a positive and significant effect on GDP and would increase significantly with increase in foreign debt. Most studies and economic data reveal that EAC member countries are highly indebted following external borrowing to cover budget deficits and the servicing of these debts has affected economic growth since resources are hardly channeled to development projects but to debt repayment. Data from world bank reports on external debts for the period of study reveal that more than 30% of gross national income for each of the three countries (Kenya, Tanzania and Uganda) is in form of foreign debt. From the studies that noted a negative impact of external debt on gross domestic product, the attributed factors include corruption and lack of strong fiscal policies to ensure that borrowed funds are channeled to productive projects. Lack of transparency and accountability has been cited as a key challenge for most governments in East African Community countries. Due to these challenges, most of the developing economies are highly indebted and unable to service the debts. All the countries in East African Community are included in the list of heavily indebted poor countries (HIPCs) seeking to benefit from the initiative by international monetary fund (IMF) and World bank for debt relief.

Remittances boost financial market and monetary policy improvement in developing economies. A report from World Bank (2010) notes that lack of proper system by some countries to track data on inflows from personal remittances in the IMF Balance of Payments statistics makes it hard to determine the actual contribution of remittances to economic development. Actual contributions can be determined by regulating the transfer channels since most remittances are sent through unregulated channels such as money transfer operators, mobile money, post offices, etc which makes it hard to collect the full data. Previous studies revealed that more accurate results on the effect of personal remittances on economic growth can be found if accurate data is recorded. The studies also note that remittances have been ignored since they are in form of small amounts but they are substantial in aggregation and have therefore contributed to economic growth through job creations, education and poverty reduction as the living standards of the recipients are improved. “From 2014 to 2016, there is a decrease in remittances and foreign direct investment” (Oneya, Ombui, Ondabu, Iravo, Muturi 2018, pg 416). Foreign inflows in form of remittance from diaspora is becoming a stable source of foreign currency earnings and a potential source of capital

(World Bank, 2011). According to a study by Upadhyaya, Upadhyay and Gyan (2008) world bank report (2006) estimated remittances to be 50% higher than official remittances if they were sent through formal channels. The findings from previous studies have revealed that accurate results have not been realized since not all information on personal remittances is recorded.

### ***1.1.2 Economic Growth***

Economic growth is measured as the percent rate of increase in GDP which represents the total aggregate output of the economy. Some factors noted as drivers of economic growth and development include human resources, physical capital, natural resources and technology. Throughout East Africa, economic growth is suppressed by unconducive business environment, high transport costs and low productivity levels.

Some of the shared weak points that affect economic growth and development in EAC countries include; weak infrastructure, high inflation rate and corruption and this calls for structural revolution. According to Hanushek (2013), in order to improve economic growth in developing economies, quality of school should be improved in both basic and advanced skills as this is related to personal income, distribution of earnings, and significantly to increased real GDP per capita. In 2018, real GDP in East Africa grew by 5.7 percent, slightly less than the 5.9 percent in 2017 and the highest among African regions.

### ***1.1.3 East African Member Countries***

All the governments in developing countries want to attract foreign inflows to enhance economic growth and development. However, during the UNCTAD (2019) it was disclosed that East African region continues to face challenges that impact investment climate negatively, namely; Non-tariff barriers (NTBs), high cost of borrowing, power and other utilities, poor infrastructure and unpredictable investment regimes.

Trade in East African Community is noted to fall below par in different measures of economic activities such as GDP per capita, population below the poverty level, unemployment and trade. Recent statistics on the import and exports market per country show very low trade levels among the East African Community member countries. Ranking the top five (5) trade markets for imports and exports for each of the 6 East African Community member countries, Tanzania and Burundi have 0% (insignificant) exports within the EAC while Uganda has 26.8%

of the total exports. On the other hand, Kenya and Tanzania have 0% (Insignificant) imports within the East African Community while S.Sudan has 54.3% of its total imports from Uganda.

Nevertheless, World Investment Report 2019 by UNCTAD shows that despite flat growth in FDI in the larger East Africa, which remained largely unchanged at \$9 billion due to contractions in Ethiopia, the East African Community partner states recorded impressive growth. In Uganda, inflows increased by 67 per cent to \$1.3 billion, while Kenya posted a 27 per cent growth to \$1.6 billion. The World Investment Report 2019 notes that regional integration could be a catalyst to economic growth and development.

## **1.2 Statement of the problem**

Foreign inflow is an important element that acts as a boost for economic growth and development. International investments are regarded as job creators, efficiency, effectiveness, innovation and technological development (Denisia, 2010). It was noted during UNCTAD (2019) that capacities for African countries need a boost as they are lagging behind in participation in global economy and trade and this has led to low economic growth and development. Chaunduri and Mukhopadhyay (2014) noted that low levels of productivity and poverty in developing economies affect the GDP.

The economic growth of East African Community member countries declined from 14% in 2007 to 3.9% in 2013 World Bank Report (2014). According to Purtunoi and Mutuku (2013) countries rely on foreign investment to attain value addition in their economies. Such foreign capital components entail foreign direct investment, remittances, foreign aid and foreign debt (Oneya, Ombui, Ondabu, Iravo, Muturi, 2018). It is not clear whether the decline in the economic growth of these countries can be traced to the variations in the foreign inflows or other economic factors.

A study by Safdri and Mehrizi (2011) which showed that external debt had a negative impact on gross domestic product contradicts the positive results revealed from other studies. A study by Ejigayehu (2013) aimed at examining whether external debt affects the economic growth of selected heavily indebted poor African countries found that external debt affects economic growth by debt crowding out effect rather than debt overhang whose results are insignificant. These results also contradict previous research done on East African Community countries. This calls for more research to investigate the effect of external debt on economic growth of East

African Community countries. Debt crowding out effect is defined as a situation whereby a country uses the income from exports to repay the accumulated debt (Ejigayehu 2013). Going by this definition, this situation is unlikely in East African Community countries noting the level of exports which is insignificant. The contribution of revenue from exports to gross national income is a small proportion for the East African Community countries. However, debt crowding out effect is bound to happen when more borrowing is made to repay another debt, alternatively if foreign aid is used to repay the accumulated debt.

Upreti (2015) researched on the factors affecting economic growth in 77 developing countries and recommended more research to distinguish the causes of growth in these countries. A study by Rahman (2014) in Bangladesh revealed that experts are divided on the impact of FDI on the economic growth of the host country. In general, these studies are not conclusive on the form of inflow that impacts economic growth most and particularly in East Africa. To fill this gap, this study's aim is to assess the effect of foreign inflows on economic growth of East African Member countries for a period of 20 years. The study will seek to confirm or challenge results from previous studies done on effect of foreign inflows on economic growth of East African Community countries.

Apart from foreign inflows, this study recognizes some other common factors that affect economic growth in Africa which include inflation rate, level of exports, population growth and corruption. The consensus view among economists is that sustained inflation occurs when a nation's money supply growth outpaces economic growth. Price stability is a variable key for economic growth and development and is a goal of monetary and fiscal policy aiming to support sustainable rates of economic activity. According to (Ruzima, 2016), if currency as a medium of exchange loses value, it affects peoples' confidence to invest and consequently the economic growth and development is affected. Inflation rate for Kenya, Tanzania and Uganda in 2019 stood at 5.5%, 5.2% and 4.3% respectively. All states are encouraged to develop macroeconomic policy stance that aim to stimulate the economy and other monetary policy instruments to manage system liquidity.

A study by Ola, Mohammed, and Audi (2014) reveal that Corruption in Africa has affected development. The state governments in Africa should therefore focus on corruption crackdown to drive high economic growth. Corruption is noted to hurt the economy by expanding the size of subversive economy, distorting tax structure leading to further reduction of tax revenue as a result

of corroding tax morals of tax payers. Several studies have been conducted targeting various developing economies and revealed conflicting results on effect of foreign inflows on economic growth. Study by Ekanayake & Chatma (2010) revealed negative effect of foreign inflows on economic growth. The study by Oneya, Ombui, Ondabu, Iravo, Muturi (2018) revealed a positive and statistically significant relationship between foreign debt and economic growth in East African Community countries and insignificant effect by remittances and foreign direct investments. This study seeks to confirm or challenge the results from this study using different methodology, a sample of the East African member countries and not all, panel data and not time series and fit a different model either; fixed effect or random effect model.

The burden of external debt has affected many developing countries also classified as heavily indebted poor countries (HIPCs). The East African Community countries are all listed as heavily indebted poor countries among other countries in sub-Saharan African countries. The initiative of HIPCs was launched in 1996 by IMF and World bank to caution overburdened countries. The heavily indebted poor countries initiative allowed the fund to provide debt relief and strengthen the link between debt relief, poverty drop and social policies. To qualify for debt relief, the heavily indebted poor countries must commit to poverty reduction through policy changes and demonstrate a commendable track record of reforms and sound policies. Noting the level of corruption witnessed in these countries and especially East African Community countries, one would think that unsound policies on corruption is likely to deny them a chance for full debt relief. However, International Monetary Fund report notes that most of these countries are eligible to full debt relief upon meeting the conditions. Debt relief is meant to free up resources for social spending and this would consequently revive the economies for the heavily indebted poor countries.

This study was conducted covering a smaller group of countries with the same level of economic growth as this is likely to give different results. The period of study from 1999 to 2018 was different from the period covered by previous studies. This study was addressing the research gap by covering three countries which have long membership in East African Community. A pooled Ordinary Least Square model was fitted as found fit by the diagnostic test. The selection of the three countries allowed uniform data collection for a period of 20 years considering some East African Community member countries (Rwanda, Burundi S. Sudan) are less than 20 years old since the reorganization of the union in 1993.

### **1.3 Study objectives**

This study aimed to attain the following general and specific objectives;

#### **1.3.1 General objective**

The main objective of the study was to assess the effect of foreign inflows on economic growth of East African Member countries.

#### **1.3.2 Specific objectives**

The specific objectives of this study were:

1. To evaluate the effect of external debt on economic growth of East African Community member countries
2. To assess the effect of foreign direct investment on economic growth of East African Community member countries
3. To investigate the effect of remittances on economic growth of the East African Community member countries

### **1.4 Hypothesis of the study**

*Ho1: External debt does not affect economic growth of East African Community member countries*

*Ho2: FDI does not affect the economic growth of East African Community member countries*

*Ho3: Remittance does not affect the economic growth of East African Community member countries*

### **1.5 Significance of the study**

This study's aim was to reveal the role of foreign inflows particularly foreign direct investments, remittances and foreign debt on economic growth of East African Community countries. The study revealed the extent to which each of the predictor variables influence the gross domestic product

of each of the EAC countries and noted that other omitted variables have a greater impact on GDP than three independent variables included this study. The results of this study will benefit the following;

#### ***1.5.1 East African Community member states***

Data given from the study will provide information on the advantages or disadvantages of foreign inflows to economic growth of East African Community countries. The results will help identify the level of contribution to the economic growth for each of the three types of foreign inflows (foreign direct investment, personal remittances, external debts). The information provided from the study will also reveal the current state of economy based on the trend of economic growth for the past 20 years for each of the member state and will enhance cross running within the East African Community member countries.

#### ***1.5.2 Policy Makers***

The results of the study will help policy makers to develop as well as improve the existing policies on micro economic development and particularly on foreign inflows. The data given will prompt the evaluation of existing guidelines around foreign inflows to ensure their attractiveness by either relaxing the existing regulations to attract more investors taking into account the benefit of each type of inflow and how they contribute to economic development of the member states. The findings of this study will also help the policy makers in each of the East African Community countries to understand how each of the factors contribute to economic development and this would help design policies to control, strengthen or improve their contributions to positive growth.

#### ***1.5.3 Investors***

The results of the study will act as an eye opener to investors as it will add to the knowledge on the effect of foreign inflows particularly Foreign Direct Investments and remittances. This study recognizes the investors preferences to put their investments in most cost effective countries promising good returns. This will guide the investors on where to channel their resources based on the contribution made to the economic development by each type of inflow. The results of the study will also add to the existing knowledge and stimulate the need to identify possible opportunities offered from foreign trade.

## **1.6 Scope of the study**

The study covered three forms of foreign inflow which include, Foreign Direct Investment, foreign debt and personal remittances and assess their effect on economic growth of East African Community countries namely, Kenya, Uganda and Tanzania. The independent variables were foreign inflows, foreign direct investments, remittances and foreign debt while the dependent variable was gross domestic product. The period covered was 20 years from 1999-2018 covering the period of 20 years after the East African Community agreement was signed by three state members in 1993, November. Data was collected from World bank data base, central bank of Kenya, Uganda and Tanzania, reports from bureau of statistics for each of the three countries and other published materials.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The first section of this study discusses theoretical review while the second discusses the empirical studies conducted by other researchers on effect of foreign inflows on economic growth of EAC Countries.

#### **2.2 Theoretical Review**

The theories discussed in this chapter have been considered based on their relevance to the study objectives. They include debt overhang theory, internationalization theory and utility theory. Each theory will be discussed based on the type of inflow each theory is related to. Debt overhang theory was discussed in relation to external debt, internationalization theory was discussed in relation to foreign direct investment and utility theory was discussed in relation to personal remittances.

##### ***2.2.1 Debt overhang Theory***

The theory of debt overhang was first suggested by Stewart C. Myers in 1977 showing that debt overhang leads to under-investment. Overhang in one market reinforces overhang in the other Philippon (2010). In pursuit of economic growth and development, every government finds it crucial to borrow resources in order to fill the budget deficit arising from the projected expenditure and probable revenue within a financial period. According to Ejigayehu (2013), debt overhang can be a liquidity problem faced by countries to service current debt or solvency problem when the liability is beyond a country's ability to pay. The same study by Eligayehu (2013) describes debt overhang effect as a condition when accumulated debt discourage and overhang investment in that all resources are diverted to debt repayment, government increase taxes to raise more revenue for debt repayment and this ends up affecting private investors who bore more costs in form of government taxes. Once investors are scared, this results to a vicious cycle whereby, the economic growth of a country remains at risk as productivity will be reduced, jobs will be lost and individuals living standards will deteriorate leading to poverty. From the previous studies, external debt depresses investments with negative effect on liquidity where both creditor and debtor country

lose (Claessens & Diwan, 1990). A study by Kobayashi (2013) finds that public debt could negatively affect economic growth if it is above a certain level. Borrowing with a clear investment plan without diverting resources to unintended purpose would i) raise the gross domestic product ii) would generate enough resources to service the debt iii) avert the cost of interest on accumulated debt. Ogunnoiki (2016) notes that high level of corruption and mismanagement of borrowed funds has resulted to an overbearing debt burden in African countries which has led to diversion of resources from development provisions to repay the debts hence further widening the gap of capital needed to transform the poor countries' economies.

Recent report by Trade Mark East Africa notes that IMF raised an apprehension over the debt accumulating rate in East Africa as the budget deficits carry on. Most of the East African Community countries have mega infrastructure projects pegged on borrowed funds from domestic and international markets. The IMF report points Kenya, Uganda and Tanzania among the top 50 countries highly indebted to China. The East African Community countries debt ceiling is set at 50 per cent of the gross domestic product in the net present value terms. The data according to Trade Mark East Africa (2019) shows that Kenya and Burundi breached the debt ceiling. According to East African Monetary Union report, gross public debt as a percentage of gross domestic product has been on the rise for all East African Community countries which explains low economic development as a result of huge cash outflows and high deficits for payment of debt interests.

Developing economies appreciate the need for external borrowing to fill the resource gap as it is cheaper than borrowing locally. With proper government policies in place, it is expected that any borrowed funds would be channeled to investments with positive net present value making it possible to service such debt. Accumulation of unpaid debt will not only injure the credibility of the country, but will also negatively affect the economic progress by channeling funds to settle accrued interest and not investing in projects that would grow the economy. As a result, a country would suffer unsustainable public debt effect leading to loss of profitable investment opportunities which is detrimental to development. The World Bank report shows that on average, each of the three countries included in this study (Kenya, Tanzania and Uganda) have more than 30% of their national gross income in form of external debt. This is expected noting the need for the developing countries to cover their budget deficits. This theory is imperative to evaluate the extent to which economic growth of East African Community countries is affected by external debt. Debt overhang

theory was useful to analyze the liquidity or the solvency of the East African Community countries to settle outstanding debt. The data collected on external debt is a clear indicator that the EAC countries have liquidity issues to settle previous debt as there is external borrowing each year during the period of this study. There is therefore a high likelihood of debt overhang in these countries.

### ***2.2.2 Internationalization Theory***

Internationalization theory was established by Buckley and Casson, in 1976, by Hennart, in 1982 and by Casson, in 1983. According to Denisia (2010) the theory tries to describe the motivation of firms to achieve foreign direct investment. Theory is a branch of economics that is used to analyze international business behavior. Various theories try to explain the main factors that influence internationalization focusing on country level perspective to a microeconomic perspective to firm based perspective (Ribau, Raposo and Moreira, 2015). According to Dele (2013) internationalization has positively impacted economic growth through knowledge and skills transfer from developed to developing countries. Governments in developing countries should put effort to develop economic policy to attract foreign direct investment as FDI represent a major proportion of total investments.

Foreign direct investment has been used in most countries to boost economic growth and development. Previous studies have revealed that FDI has been a major indicator of economic growth as it offers economic stability of the developing countries. Countries encourage foreign direct investment by creating incentives to attract investments from developed countries. The governments in East African Community countries need to create conducive environment for foreign investors noting that investors prefer to place their investment in most cost effective countries (Upret. Considering the various weak points noted in East African Community countries including poor infrastructure, political instability, low productivity, insecurity among other factors, these countries risk scaring away investors and this is detrimental to economic growth and development.

Investors will be attracted to countries that have an enabling environment for optimal productivity like good infrastructure which would enable ease of access to raw materials, skilled and affordable labor to ensure quality production, political stability as this would give assurance for sustainable investments. The size of the economy based on the population size is also noted to

be a key factor in attracting foreign direct investment. This is because foreign direct investment targets to sell the produced goods and services to the country hosting the investment. High population is correlated to high consumption of goods and services hence an attraction to foreign investors. In April 2013, a law on public-private partnerships (PPP) was passed in Kenya to entice foreign investment in the infrastructure sector. It is important for the countries in East African Community to attract foreign direct investment for the purpose of capital accumulation and improved productivity. The host countries should also ensure that foreign investors enjoy the same privileges as local investors as a way of motivating them (Rahman 2014).

Foreign direct investment is noted to have three broad categories. One of them is export orientated foreign direct investment and this is aimed at finding investment opportunities with low costs of production in host countries. Most developing countries are noted to have low cost of labor and this attracts investors and mostly in production as noted in export processing zone in Kenya. Wage reduction or improved labor efficiency have a positive impact on the balance of payment. The other category is import oriented foreign direct investment aimed at replacing economic imports by the host country. This category is aimed at reducing the amount paid for imports from foreign countries by insuring local production and this would lead to increased level of exports. The last category is government oriented foreign direct investment achieved by way of creating incentives for attracting foreign investors. Foreign direct investments in various sectors of the economy has also proved to contribute greatly to economic growth and development. Incentives for attracting FDI should be designed in line with factors that affect foreign direct investments some of which include affordable wage rates, labor skills, tax rates, transport and infrastructure, political stability and security.

The Kenyan economy is now seen as an encouraging economy for foreign investors as it offers incredible prospects for growth and future success. This is based on the technological transformation and innovations around mobile money, manufacture of consumer goods, diversification of Export processing zone and promotion of agribusiness activities UNCTAD (2013). Internationalization theory was useful in assessing the effect of foreign direct investment on economic growth of East African Community countries. The internationalization theory refers to outward movement of a firm's operations. Foreign direct investment can be inward (non-residents investments in the reporting economy) or outward (residents' investments to the external economy). Some studies emphasize on the need to attract foreign direct investment for economic

transformation while other studies are not conclusive on the impact of foreign direct investment on economic growth.

### ***2.2.3 Utility Theory***

Utility theory was formally integrated into analysis of economic problems by Jevons, Menger and Walras in the 1870s (Juster, 1990). According to utility theory from Jeremy Bentham to Daniel Kahneman, a person develops a desire that informs their decision (Read, 2004). Economics is the father of utility theory and utility was invented by 18<sup>th</sup> century Swiss Mathematician Daniel Bernoulli. This economic theory explains the individuals' behavior based on the fact that individuals make choices depending on their preferences. Utility allows individuals to choose between options. It is essential to identify a true zero-point which is the worst possible state relative to which utility measurements can be in order to measure total utility (Read, 2004).

Investment decisions equally applies to individuals as it does to corporate entity. Individuals will normally choose what satisfies them the most. According to Markowitz Model of portfolio selection, individuals will constantly trade-off between consumption and investment to establish an optimal decision. Personal remittances received by individuals are therefore likely to be invested or consumed directly depending on the individual's preference based on optimal benefits. According to Mongin (1997) expected utility theory (EUT) states that risky or uncertain prospects are preferred by comparing their expected utility values. According to rational choice theory, aggregate social behavior results from individual actors assuming the individual has preferences among the available alternatives.

This theory was used to explain personal remittance decisions and examine the extent to which remittances influence positive growth of East African Community countries. Developing countries are the greatest beneficiaries of remittances from personal workers who moved to foreign countries in search of employment opportunities. Remittances are mostly excluded from discussions on foreign inflows since they are informal considering they are not remitted through formal institutions but individual banks, yet they make a positive contribution to gross domestic product. Remittance recipients can choose to invest the cash to education, health or entrepreneurship and this can be in order of their preference. Individual decisions are made in a very competitive and uncertain world full of self-interest and this influences investors decision making process. Remittance has made high contributions to poverty reduction and growth in GDP

for most of the poor countries through investments, education and consumption. Utility theory explains the concept that individuals and firms seek to get the highest satisfaction from their economic decisions.

### **2.3 Empirical Literature Review**

EAC countries appreciate the role that foreign inflows play on their economies. Since these are developing economies, they exhibit similar characteristic of low level real per capita gross domestic product. A study was conducted by Upreti (2015) using cross-country data among 77 countries on effects of economic growth in developing countries. The study finds that FDI has been one of the main sources of external funding, job creation, technological improvement and knowledge transfer which leads to improved production and consequently, economic development is achieved. For foreign direct investments, investors will be attracted to counties that have an enabling environment for optimal productivity like good infrastructure which would enable ease of access to raw materials, skilled and affordable labor to ensure quality production, political stability as this would give assurance for sustainable investments. The size of the economy based on the population size is also noted to be a key factor in attracting foreign direct investment. This is because foreign direct investment targets to sell the produced goods and services to the country hosting the investment. High population is correlated to high consumption of goods and services hence an attraction to foreign investors.

External borrowing is another form of foreign inflow that contributes to gross national income for the developing countries. Lack of savings and investment by the developing economies is the reason for borrowing externally to conceal the resource gap and consequently boost their economic growth. Neoclassical view asserts that external borrowing frightens private investors and therefore hampers national growth. It is evident that emerging economies need external debt to bridge the resource gap according to Kharusi and Ada (2018) but positive impact on economic growth can only be realized through sound management and investment to more productive sectors of the economy. While some studies reveal a positive impact of external debt on economic growth, others found a negative impact on economic growth of East African Community countries. According to studies, external borrowing and GDP in the heavily indebted poor African countries (HIPCS) have a positive correlation. However, this can only be achieved with more productive use of borrowed funds in order to realize positive growth.

Personal remittances are noted as a tool to reduced poverty in remittance receiving countries. Remittances are contributions from persons who relocate to foreign countries for job search to their family and friends hence impacting economic growth positively. Governments and financial markets can no longer ignore remittances as they are greatly impacting on the economic growth of the developing economies. A study by Combes and Ebeke (2010) using panel data of developing countries over the period 1975-2004 found that remittances significantly reduce household instability and they appear to caution GDP volatility. Remittances are also noted to be a source of foreign exchange gains. The income from foreign exchange gains are used to pay for imports hence reducing the losses related to currency translation. Remittances from foreign countries are received in foreign currency. These foreign currencies are used to pay for imports from foreign countries which otherwise would have costed more through currency translation (Oneya, Ombui, Ondabu, Iravo, Muturi, 2018). The cost saved from currency translation is considered to contribute positively to the economic growth in the long run.

A study by Boldeanu and Constantinescu (2015) was done to offer a point of view in the evolution of factors that impact economic growth. The four factors include human resources, natural resources, capital and technological advancements. These factors cut across globally and technological advancements is the key factor in developed countries. A study by Caliskan (2015) on technological change and economic growth finds that in a developing world economy technological transformation explain the dissimilarities on economic growth and inter-country income inequity. The goal of technological development is to improve on efficiency which would reduce the cost of production and enhance productivity gains.

A study by Perez, Ortega and Diaz (2019) presents three models of economic growth. The first model emphasizes the skill, knowledge and experience possessed by individuals and technological change while the second model assumes technological change is internal and finds that the growth of capital must be equal to population growth and technological stock. The third model stresses foreign trade and aggregation of human capital by training as engine of economic growth. More studies reveal that the combination of the factors of production would result to great economic growth. A study by Wanjiku (2014) investigated the interaction of various variables and revealed their significance in achieving positive growth in Kenya but FDI by itself was found to be insignificant. A study by Babu, Kiprop, Kalio and Gisore (2015) indicate that capital

accumulation and productivity growth can be achieved through borrowing as long as borrowed funds are not diverted from productive investment.

### ***2.3.1 Foreign Direct Investment and Economic growth***

According to Chaunduri and Mukhopadhyay (2014) “Foreign investment can be in the form of both foreign direct investments (FDI) and foreign portfolio investment (FPI)” (para 2). FDI is distinguished from FPI by the concept of direct control. FDI is a crucial element in economic development and particularly for developing countries. FDI is expected to positively impact the economic growth of these countries in that it allows the transfer of technology, promote competition in the local market, job creation and increased revenue in form of corporate tax from profits created by FDI.

A study by Wanjiku (2014) FDI bridges the gap between domestic savings and investments as well as enhance technology and knowledge transfer between regions with developing economies while noting that FDI on economic growth has mixed results as some researchers are opposed to the concept that FDI positively impacts on the economic growth and argue that through FDI local markets are exposed to external volatility, dependency syndrome, and crowds out domestic savings thus undermines macro-economic stability.

A study by Gachunga (2019) was conducted to determine the extent to which inflows in the infrastructure, manufacturing and agricultural sectors impact economic growth in Kenya. The study revealed that FDI inflows in infrastructure have positive and significant impact on economic growth while inflows in manufacturing and agricultural sectors have positive but insignificant impact. This significant impact can be explained by the fact that infrastructure development is extensive as it includes access to electricity, mobile phone subscription and internet access and transport, with their ability to reduce cost of production, increased productivity and enhanced regional and international trade. Most of the countries in EAC have depended on FDI for transport infrastructure development.

According to research, there is a huge infrastructure deficit in EAC. According to Korsak (2017) one of the weaknesses of each of the countries is pointed out to be on infrastructure. The infrastructure is either weak, poor or inefficient to absorb growth. This calls for intervention from donors, government and private sector to attain economic gains from infrastructure development. A research by Oneya, Ombui, Ondabu, Iravo, Muturi (2018) found that FDI coefficient taken as a

ratio of GDP has a positive effect on economic growth and recommended a creation of an enabling environment to attract foreign direct investment.

A study by Rahman (2015) aimed at evaluating the impact of FDI on GDP, inflation rate and balance of trade using a time series data over a period from 1999 to 2013 in Bangladesh. The results found a negative impact of FDI on economic development of Bangladesh. Noting the concern that these results might raise among international organizations, the study recommended a focus on reforms and policy review by the government to ensure positive impact of FDI on economic growth of Bangladesh.

Hlavacek and Bal-Domanska (2016) conducted a study to analyze the impact of FDI in the Central and Eastern European countries between 2000-2012 emphasizing on the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia. The study used two different methodologies one of which involved comparative analysis of the trends in foreign investment and GDP and a growth model. The results revealed positive development by reporting highest volume of FDI for production of gross domestic product in Estonia, Hungary, Czech Republic and Slovakia. Lower influence of FDI on economy was reported for the other countries. The growth model revealed substantial relations between economic growth, FDI and Investment growth. The impact of FDI on economic growth of the Central and Eastern European countries was visible in the period 2009 and 2012.

Various studies have revealed the importance of designing policies for attracting FDI by governments in developing countries. A combination of various factors of production from human factor, natural resources, technological factor and entrepreneurship are useful for stimulating economic growth. This study will assess the effect of FDI on economic growth of EAC countries.

### ***2.3.2 Remittance and Economic Growth***

Remittances are contributions from persons who relocate to foreign countries for job search to their family and friends hence impacting economic growth positively. Governments and financial markets can no longer ignore remittances as they are greatly impacting on the economic growth of the developing economies. A research by Chowdhury (2016) on 33 developing countries in the period 1977 to 2011 revealed that promoting financial literacy and encouraging use of financial institutions other than banks may encourage a strong remittance development link. The study also revealed insignificant influence of financial variables on economic growth.

Another study by Salahuddin (2015) was conducted using data for a period between 1977 and 2012 to test the relationship between remittances and economic growth using data for some of the remittance recipient countries namely Bangladesh, Pakistan, India and Philippines. Using Panel Pedroni and Westerlund cointegration tests, the study confirmed a positive correlation between remittances and economic growth. Nonetheless, the results may be different if EAC countries were considered.

According to World Bank (2010) the failure by some countries to track remittances data makes it hard to determine the actual contribution of remittances to economic development. Accurate measuring of remittances can be achieved by regulating the transfer channels since most remittances are sent through unregulated channels such as money transfer operators, mobile money, post offices, which makes it hard to collect the full data. A study by Oneya, Ombui, Ondabu, Iravo, Muturi (2018) using a panel data covering the period between 1977 and 2012 on EAC countries revealed that Remittance indicators affect Kenya's economic growth the most. This study will expand the period to 2019 to determine whether the results remain the same.

A study by Meyer and Shera (2016) was conducted using data sets of remittance receiving countries, Albania, Bulgaria, Macedonia, Moldova, Romania and Bosnia during the period 1999-2013. The results suggested a positive impact on economic growth. The study also reveal that remittances represent the largest source of foreign exchange earnings. Another study by Combes and Ebeke (2010) using panel data of developing countries over the period 1975-2004 found that remittances significantly reduce household instability and they appear to caution GDP volatility against shocks.

A study by Ocharo (2014) was conducted to analyze the impact of remittances on economic development in Kenya for the period 1970-2010. The study used Ordinary Least Squares estimation and found that remittances have positive impact on GDP. The study also revealed that remittances are relatively stable and tend to increase during periods of depression and natural disasters. The study recommended government policies to encourage remittances.

A study was conducted by Kiiru (2010) using the Kenya integrated household budget survey data (2005/2006) to measure the impact of remittances on poverty in Kenya. The results showed significant impact on households' consumption and have dealt with household economic shocks. Using the 2009 Kenya migration household survey by the world bank, Bang, Mitra and Wunnava (2014) conducted a study to examine the effect of inflows from personals on poverty

and income inequality in Kenya. The analysis reveals that receiving remittances has an unsubstantial and insignificant impact on expenditure by poor households and larger impacts on expenditures by richer households. The study also finds that remittances benefit the poor more than rich ones but there is unequal access to the opportunity by the poor families.

Various studies reveal that remittances are important to the developing countries to bridge the resource gap although they are not majorly considered as an inflow that contributes to the GDP. Remittances from the personals are also not regulated and so the transaction cost of remittances is considered high. For the remittances to effectively contribute to the GDP, Governments in emerging economies should design policies that would strengthen social networks and see remittances directed to investment opportunities. This study aimed at investigating the extent to which remittances influence economic development of EAC countries. Although positive impact of remittance on GDP, it was found to be insignificant.

### ***2.3.3 External Debt and Economic Growth***

Lack of savings and investment by the developing economies is the reason for borrowing externally to conceal the resource and consequently boost their economic growth. Using a time series data for the period between 1990 and 2015 Kharusi and Ada (2018) investigated the relationship between Government external borrowing and Economic growth in Oman. The study found no positive impact on economic development.

Neoclassical view asserts that external borrowing frightens private investors and therefore hampers national growth. It is evident that emerging economies need external debt to bridge the resource gap according to Kharusi and Ada (2018) but positive impact on economic growth can only be realized through sound management and investment to more productive sectors of the economy. A study by Lau, Lee and Baharumshah (2015) was conducted in Malaysia, Thailand and Philippines intending to investigate the contribution of external borrowing to GDP. The findings recommend a formulation of policies to monitor the amount of external borrowing to avert the manifestation of debt overhang.

One of the common characteristic in developing countries is government corruption by way of bribes, political unrest, social displeasure, inefficient allocation of public resources, poor health care system, low-quality education, hence a slowed economic growth. A study by Ola, Mohammed, and Audi (2014) was conducted in Nigeria with data drawn from Nigerians to give

an overview of the impact of corruption in the context of economic development. The study revealed negative impact of corruption on economic development as it hinders fast development. This case could be the same with EAC countries as corruption in these countries has undermined efficiency and transparency in allocation of borrowed funds, equity and fairness and this is detrimental to development.

According to studies, external borrowing and GDP in the heavily indebted poor African countries (HIPCS) have a positive correlation. However, this can only be achieved with more productive use of borrowed funds in order to realize positive growth. Safdari and Mehrizi (2011) conducted a study to analyze external debt and economic growth in Iran for the period 1974 to 2007. The study used five variables including GDP, private investment, public investment, external debt and imports to analyze their influence on each other using vector autoregressive model. The results showed that external debt had a negative effect on GDP and private investment while public investment had a positive relation with private investment.

A study to explore the effect of domestic debt as a share of GDP on economic growth in EAC over the period 1990 to 2010 was conducted by (Babu, Kiprop, Kalio and Gisore , 2015). Using Levin-Lin-Chu test (LLC) to investigate the properties of data with respect to unit roots, the results showed that domestic debt has a significant effect on per capita GDP growth rate in EAC. Internal borrowing would lead to hastened economic development by covering the resource gap in annual budgets although accumulation of unpaid debt is likely to lead to debt overhang which would adversely affect the economic growth.

Eligayehu (2013) conducted a study to examine the influence of foreign debt on economic growth of selected HIPCS using data for the period 1991 to 2010. The selected countries were Benin, Ethiopia, Madagascar, Mali, Mozambique, Senegal, Tanzania and Uganda. The results revealed that external debt affects economic growth by the debt crowding out effect rather than debt overhang. Productivity slowdown causes great depression while early implementation of policies aimed at reducing government deficits and debt accumulation can restore credibility and high growth lost due to unmanageable public debt (Kobayash, 2013).

A study by Onyango (2014) was conducted to analyze the impact of the external debt burden on Kenya's economic growth. Using time series data for the period 1971-2012, the findings suggested that there is a positive correlation between GDP and External debt and use of SAS and Stata revealed negative impact revealing the presence of debt overhang. A study by Murungi

(2018) using macroeconomic variables which include interest rates, exchange rates, unemployment, inflation and money supply indicated there was a positive impact of government debt on economic development with some variables showing optimism and others pessimism. Further studies were recommended to determine whether the results apply across the board or they are specific to Kenya.

Government borrowing either internally or externally seeks to cover budget deficits for developing countries. Studies reveal that fiscal consolidation, effective use of borrowed funds to productive investments, servicing of debt to avoid accumulation which leads to debt overhang and crowding out effect will lead to a positive influence on GDP. This study will evaluate the effect of external debt on economic growth of EAC countries.

## 2.4 Conceptual framework

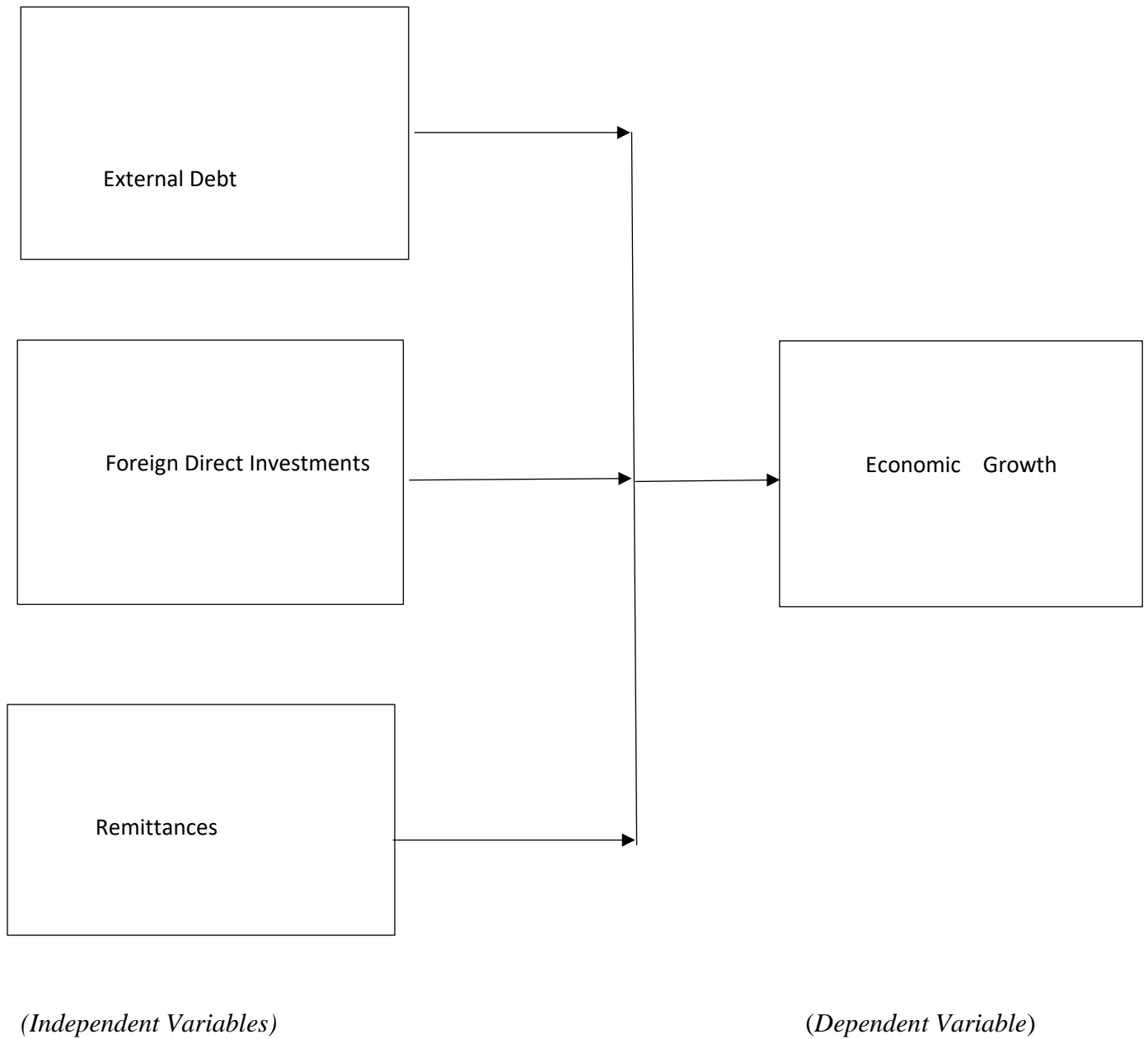


Figure 1 2.1 Conceptual Framework

## 2.5 Operationalization of variables

Category of Variables	Variables	Measurement
Independent Variable	External Debt	External Debt/ Net Inflows *100 (% of GDP)
Independent Variable	Foreign Direct Investments	FDI / Net Inflows * 100 (% of GDP)
Independent Variable	Remittances	Remittances / Net Inflows *100 (% of GDP)
Dependent Variable	Economic Growth	GDP growth rate

Table 1 2.1 Operationalization of variables

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter of the study discusses the research approach, data analysis, data type and source, data test, and sampling technique used in estimating the effect of foreign inflows on economic growth of EAC countries. The study also captured the target population, sample size and data collection tool.

#### **3.2 Research Design**

This is a plan of investigation considered to answer specific study questions (Sachdeva, 2009). Research design ranges from data collection, measurement and data analysis (Akhitar, 2016). This study employed a descriptive research design to assess the effect of foreign inflows on economic growth of EAC countries. Exploratory research design is used to achieve new insights to a study compare to the previous studies. Exploratory research design was best suited for this study since there are few studies done specifically in EAC to assess the effect of foreign inflows on economic growth of EAC countries.

#### **3.3 Target Population**

The study targeted three EAC countries which include Kenya, Uganda and Tanzania. Data was collected on foreign direct investments, foreign debt and personal remittance inflows as a percentage of GDP. Information was extracted from secondary data. Source of data was from World Bank's African development indicators, Central bank and Bureau of statistics of each of the EAC countries.

#### **3.4 Research Instrument**

These are devices for obtaining relevant information for research project (Wilkinson & Birmingham, 2003). Secondary type of data and data collection sheet was used as a research instrument to acquire further evidence using all the variables for this study for the period from 1999 to 2018.

### 3.5 Data Collection procedure

This involves assembling data from the respondents. Data from published source is referred to as secondary data (Kabir, 2016). Secondary data was used drawn from data already published in World Bank development indicators Central bank and Bureau of statistics of each of the EAC countries. Data on FDI, foreign debt and personal remittance inflows was collected for each of the three EAC countries. A data collection sheet was used to indicate whether the indicated aspect is Disclosed (D) or Not Disclosed (ND).

### 3.6 Data Processing and Analysis

Linear regression model was used to estimate the effect of foreign inflows on economic growth of EAC countries using STATA software to aid in data analysis and presentation. Diagnostic tests was used to test for Multicollinearity using Collin addon method, Unit root Levin-Lin Chu test was used to test for stationarity and Breusch Pagan test to test for Heteroscedasticity. Hausman specification test was used to choose the appropriate type of model, either fixed effect (FE) or random effect (RE) model. Random effect model was chosen since Prob > F value was > 0.05 using F-test. On further diagnosis to help decide between RE model and Pooled Ordinary Least Squares (POLs), null hypothesis was accepted as variance across groups was zero.–Therefore, POLs model was used given as;

$$y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon_{it} \dots \dots \dots 1$$

The fitted model was give as follows;

$$EG_t = \beta_0 + \beta_1 FDI_t + \beta_2 Rem_t + \beta_3 ED_t + \varepsilon \dots \dots \dots 2$$

Where;

$EG_t$  = Economic Growth at time t,

$FDI_t$  = Foreign Direct Investment at time t,

$REM_t$  = Remittance at time t,

$ED_t$  = External Debt at time t,

$\varepsilon$  = Overall error term,

The regression coefficients  $\beta_0$ ,  $\beta_1$ ,  $\beta_2$  and  $\beta_3$  were estimated whereby  $\beta_0$  was the constant,  $\beta_1$  was foreign direct investment,  $\beta_2$  was personal remittances and  $\beta_3$  was the external debt. In the equation, EG was the percentage change of gross domestic product over a period of one year, FDI was the percentage change of foreign direct investment over a period of one year, REM was the percentage of personal remittances over a period of one year and ED was the percentage change of external debt over a period of one year. The study used the percentage rate for each variable measure against the gross domestic product.

### **3.7 Diagnostic Tests.**

Diagnostic testing is a step that is necessary to ensure that linear regression assumptions are not violated in order to get the best linear unbiased estimator (BLUE) of the coefficients given by the Ordinary Least Squares (OLS) estimator. The tests conducted include tests for; Linearity, Multicollinearity, Stationarity, Heteroscedasticity and normality of residuals.

#### ***3.7.1 Test for linearity***

This step seeks to check that the variables are linear using scatter plots in STATA. Since linear regression requires all variables to be multivariate normal, Histogram Q-Q plots were used to check the assumption. The independent variables tested were FDI, personal remittances and foreign debts and were found to be linear.

#### ***3.7.2 Test for Multicollinearity***

This test is necessary to ensure that there are no two variables with high correlation. A matrix was drawn to check for high correlation between any pair of independent variables; FDI and personal remittances, FDI and foreign debt, personal remittances and foreign debt. Variance inflation factors (VIF) was computed using Collin addon method and the VIF was less than 10, hence the conclusion that the independent variables are not highly correlated.

#### ***3.7.3 Test for Stationarity***

Stationarity means the variable is integrated of order zero or has no unit root. Presence of a unit root lead to spurious regression and renders forecasting unsuitable. A test was conducted for each of the variables

from a panel data set of the period between 1999-2018 using Levin-Lin-Chu Unit root test in STATA. Any variable with P values >5% and t-statistics <2 indicates the presence of unit root or non-stationarity. To correct the existence of unit root, the variable with unit root was transformed by converting into first difference. External debt was found to have unit root and was transformed to third difference.

### ***3.7.4 Test for Heteroscedasticity***

Heteroscedasticity occurs when the standard deviation of a predicted variable or variance of residual is non-constant. In this study, the test was conducted on GDP growth variables as a measure for economic growth for the three countries in EAC. Before testing for heteroscedasticity, a test was done to check for the appropriate model between Random Effects (RE) and Fixed Effects (FE) using Hausman test. Breusch Pagan test was used to test for heteroscedasticity.

### ***3.7.5 Normality test***

The normality test was done with intent to find out the normal distribution of the residuals. For residuals to be normally distributed, the histogram should be bell-shaped. This study found the residuals to be normally distributed.

## **CHAPTER 4**

### **RESEARCH FINDINGS AND DISCUSSIONS**

#### **4.1 Introduction**

This chapter covers data analysis results, explanation and deliberations of the study. Diagnostic tests conducted will be outlined and model results given. The sample size of the tests was 3 countries (Kenya, Uganda, Tanzania). The initial sample size was 6 countries comprising the EAC

members but the membership of three countries (Rwanda, Burundi, South Sudan) which is less than 20 years limited the size. The sample period of 25 years (1994-2019) was limited by missing data for the period 1994-1998 and 2019 hence the period under consideration is 20 years (1999-2018). The missing data was on personal remittance in Uganda for the period 1994-1998 and 1994 for Tanzania. Data on FDI in 2019 was missing for Kenya and Tanzania.

## 4.2 Descriptive statistics

The descriptive statistics is based on the secondary data collected from various sources including World bank reports, Central bank of Kenya, Central bank of Tanzania, Central bank of Uganda, Kenya Bureau of statistics report, Tanzania bureau of statistics report and Uganda bureau of statistics report.

Summarize extdt fdi rem gdp					
Variable	Obs	mean	St.Dev.	Min	Max
extdt	60	37.18672	17.91741	13.47453	73.77208
fdi	60	2.614269	1.62628	0.0408334	6.479821
rem	60	2.199685	1.694314	0.056643	7.151016
gdp	60	5.730429	2.023297	0.2322827	10.78474

R-sq:      within = 0.1081  
             between= 0.7296  
             overall = 0.2144

Table 2 4.1 Descriptive statistics

Table 3.1 presents various descriptive statistics as given by the STAT software. The total number of observations is 60 for each variable. The average for GDP was 5.73043 with a standard deviation of 2.023297 and a minimum and maximum values of 0.232283 and 10.78474 respectively. The average for remittance was 2.199685 with a standard deviation of 1.694314 and a minimum and maximum values of 0.0566433 and 7.151016 respectively. The average for FDI was 2.614269 with a standard deviation of 1.62628 and a minimum and maximum values of 0.040833 and 6.479821 respectively. The average for external debt was 37.18672 with a standard deviation of 17.91741 and a minimum and maximum values of 13.47453 and 73.77208 respectively. The average for transformed external debt was -0.08237 with a standard deviation of 9.604826 and a

minimum and maximum values of -37.6016 and 22.97291 respectively. The fixed effect regression results had within, between and overall values as 0.1081, 0.7295 and 0.2144 respectively.

xtset Country year	
panel variable:	Country (strongly balanced)
time variable:	year, 1999 to 2018
delta:	1 unit

Table 3 4.2 Panel Data

Table 4.2 above shows that the panel data is balanced.

### 4.3 Diagnostic Tests

The diagnostic tests carried out include descriptive statistics, exploration for dependent variable, test for linearity, test for multicollinearity, test for stationarity, model specification, test for heteroscedasticity and test for normality.

#### 4.3.1 Exploration for dependent variable-GDP growth

Growth plots are generated to reflect the GDP growth behavior over time within the individual countries. Kenya is represented by growth plot 1, Tanzania by graph 2 and Uganda by growth plot 3 in figure 4.3 below.

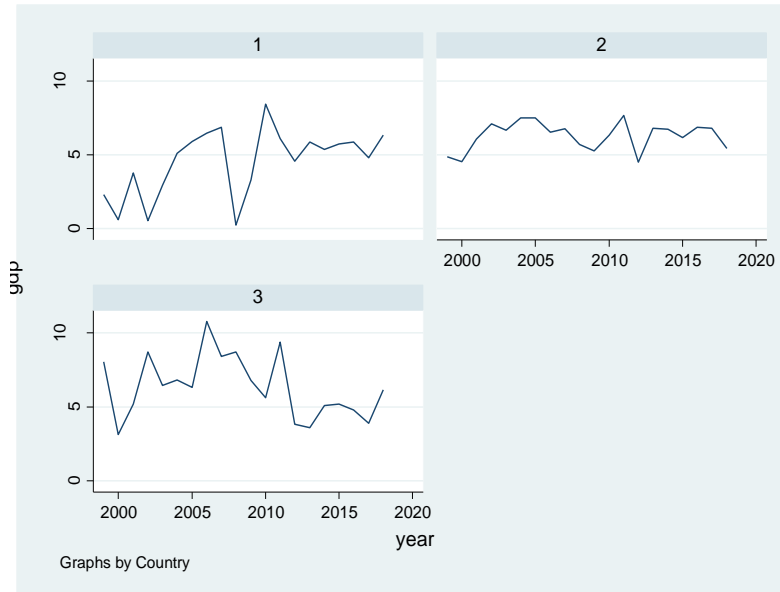


Figure 2 4.1 Growth plots

According to graph 1 in figure 4.1, the annual GDP growth rate in Kenya was 0.6% in 2000 and the trend was varying with increase and decrease over the period. A huge drop was registered in 2008 with a growth rate of 0.2%. The growth rate registered in 2018 was 6.3% and 5.4% in 2019. Kenya's real gross domestic product was projected to grow by 5.7%. However, this was not realized owing to the average short rain experienced in October to December 2018 and a delay in long rain season in the first quarter of the year as noted in the African Development bank report 2019.

Agriculture remains a key contributor to economic growth and development in Kenya and a driver to poverty reduction. According to the African Development bank report (2019) unlike in 2018 where there was a favorable harvest, investors' confidence and stable micro economic environment which led to a boost in economic growth, the forecasted growth in 2019 was slowed down as agricultural production was affected by the rain patterns. Other factors noted to have contributed to the slowed growth in 2019 include insufficient credit growth to private sector following the imposition of interest rate cap that was introduced in September 2016 (African development bank report 2019).

A recommendation is made to fast-track the solution and policy reforms. Another factor that is attributed to the slowed economic growth in 2019 is poor fiscal management which resulted

to delayed payments to the firms that trade with government leading to liquidity issues hence negatively affecting the private sector activities 2016 (African development bank report 2019).

According to growth plot 2, the annual GDP growth rate in Tanzania was 5% in 2000 and the trend was varying with slight increase or decrease in growth rate. A huge decrease was registered in 2012 with a growth rate of 5%. The growth rate registered in 2018 was 5.4% and 5.8% in 2019. The improved growth rate in 2019 is attributed to a fall in inflation rate by 3.3% compared to 2018 following an improvement in food supply as noted in the African Development bank report 2019. Also noted as a key contributor to economic growth in 2019 was a concrete private consumption, extensive public spending and robust investment growth. The African Development bank report noted some of the key challenges that even with the registered economic growth. Poverty level, inequality, high unemployment of the youth and a decline in enrollment of young people in secondary school have persisted.

According to (Perez, Ortega and Diaz 2019) economic growth is explained by different models that include different factors of production which include human factor, accumulation of capital and technological advancement among others. Lack of access to developmental finance necessary to conceal the infrastructure gap, high unemployment level and low education level noted in Tanzania poses a threat to future economic growth with increased poverty level. The projected growth in 2020 is 6.4% subject to favorable weather which is key in agricultural production, prudent fiscal management and favorable business environment (World bank report 2019).

According to graph 3, the annual GDP growth rate in Uganda was 3% in 2000 and the trend was varying with slight increase or decrease in growth rate. A huge decrease was registered in 2012 with a growth rate of 4%. The growth rate registered in 2018 was 6% and 6.5% in 2019. The strong growth rate is attributed to expansion of services, increased government spending and industrial growth (African development bank report 2019). Increase in expenditures at a higher rate than domestic revenue led to wider fiscal deficit financed through external borrowing and this contributed to increased risk due to high costs of servicing debt. Some of the key challenges in Uganda's economic development is low productivity and low job creation. Industrial productivity is noted to be higher than productivity in service and agricultural sectors although the sector has inability to absorb the huge number of youth job seekers (African development bank report 2019).

Upret (2015) notes the drivers of economic growth to be exports in large volumes, natural resources, longer life expectancy, and greater investment rates in developing countries. The exports rate as a percentage of GDP in Uganda in 2019 was recorded at 19.5% against imports rate of 28.6% as a percentage of GDP leading to a deficit in the balance of payment. This poses a risk to slowed economic growth as resources are diverted from productive investments to servicing of debts used to cover the budget deficits. Job creation will remain at risk following low productivity and increased poverty levels.



Figure 3 4.2 Overlain plot for GDP

Overlain plots are used to help explain if there are significant differences between firms, and if the firms have different y-intercepts. Figure 4.2 reflects an overlain plot for the dependent variable gross domestic product for the three countries (Kenya, Tanzania and Uganda). The overlain plot shows the three countries have the same y-intercepts and the gross domestic product growth rate is close to each other at 6.3% (Kenya), 5.4% (Tanzania) and 6.1% (Uganda).

#### 4.3.2 Test for linearity

This step seeks to check that the variables are linear using scatter plots in STATA. Since linear regression requires all variables to be multivariate normal, Q-Q plots were used to check the assumption.

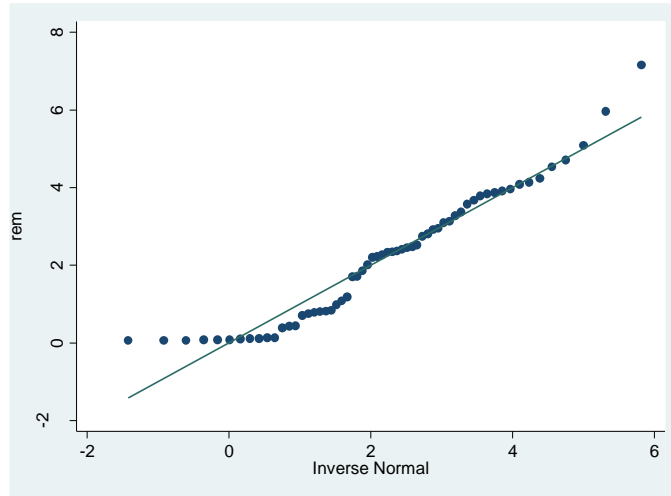


Figure 4 4.3 Q-Q Plot remittance

Figure 4.3 shows that remittance variable is normally distributed

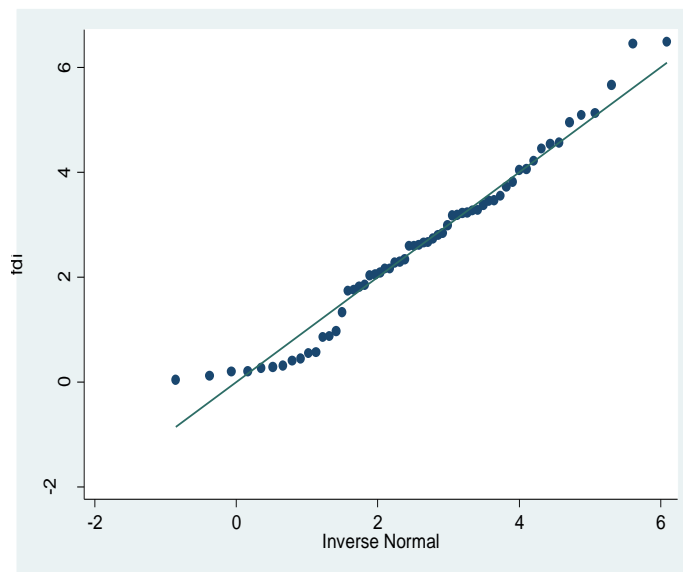


Figure 5 4.4 Q-Q plot FDI

Figure 4.4 shows that remittance variable is normally distributed

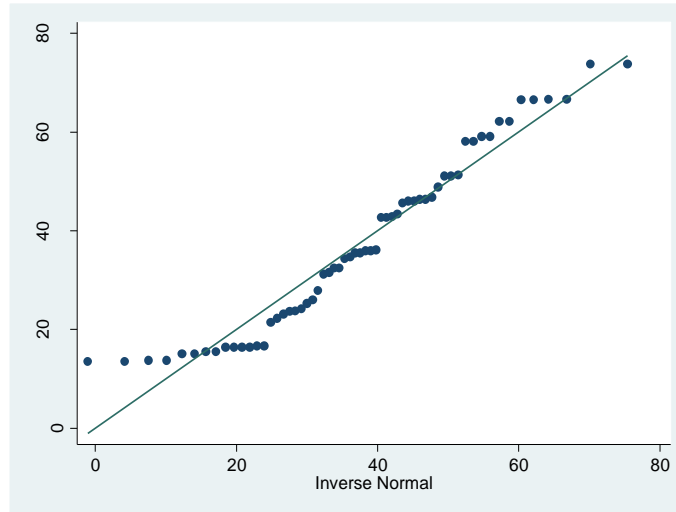


Figure 6 4.5 Q-Q plot external debt

Figure 4.5 shows that external debt variable is normally distributed

### 4.3.3 Test for multicollinearity

A correlation matrix was drawn to check for high correlation between any pair of independent variables; FDI and personal remittances, FDI and foreign debt, personal remittances and foreign debt.

```
. pwcorr, star(.05) sig
```

	country1	year	extdt	fdi	rem	gdpgr~e	residual
country1	1.0000						
year	0.0000 1.0000	1.0000					
extdt	0.1372 0.2958	-0.4548* 0.0003	1.0000				
fdi	0.6380* 0.0000	0.0062 0.9626	-0.1475 0.2606	1.0000			
rem	0.4242* 0.0007	-0.0230 0.8615	0.1037 0.4305	0.0686 0.6027	1.0000		
gdpgr~e	0.3657* 0.0041	0.1075 0.4136	-0.1187 0.3662	0.4865* 0.0001	0.0792 0.5474	1.0000	
residual	0.0550 0.6763	0.0932 0.4786	0.0000 1.0000	-0.0000 1.0000	0.0000 1.0000	0.8708* 0.0000	1.0000

Table 4 4.3 Correlation Matrix

From table 4.3, we observe the existing relationship between the variables used in the study. Multicollinearity would be assumed if the correlation coefficient between any two independent variables is above 0.7 value. From the table, the correlation coefficient between FDI and external debt is -0.1475, between remittance and external is 0.1037 and between remittance and FDI is 0.0686. None of the coefficients is above 0.7 hence there is no multicollinearity.

. vif

Variable	VIF	1/VIF
extdt	1.04	0.965222
fdi	1.03	0.971123
rem	1.02	0.982065
Mean VIF	1.03	

Table 5 4.4 VIF

Variance Inflation Factors (VIF) were examined to test for multi-collinearity. For VIF values greater than 10, multicollinearity is deemed to be present. The VIF for external debt, FDI and remittance was less than 10 implying absence of multicollinearity. The mean VIF was also less than 10 meaning there was no multicollinearity.

#### ***4.3.4 Test for Stationarity***

Stationarity means the variable is integrated of order zero or has no unit root and it is important because, in its absence, a model describing the data will vary in accuracy at different time points. Stationary processes avoid the problem of spurious regression.

```
. xtunitroot llc gdp
```

```
Levin-Lin-Chu unit-root test for gdpgrowthrate
```

```
Ho: Panels contain unit roots          Number of panels =      3
Ha: Panels are stationary              Number of periods =    20
```

```
AR parameter: Common                  Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Not included
```

```
ADF regressions: 1 lag
LR variance:      Bartlett kernel, 8.00 lags average (chosen by LLC)
```

	Statistic	p-value
Unadjusted t	-5.7234	
Adjusted t*	-3.5654	0.0002

Table 6 4.5 Stationarity for GDP

The results in table 6 indicate that the gross domestic product variable is stationary with the P-value of 0.0002 (<5%) and t-statistic value of -3.5654 (>2).

```
. xtunitroot llc d3extdt
```

```
Levin-Lin-Chu unit-root test for d3extdt
```

```
Ho: Panels contain unit roots          Number of panels =      3
Ha: Panels are stationary              Number of periods =    20
```

```
AR parameter: Common                  Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Not included
```

```
ADF regressions: 1 lag
LR variance:      Bartlett kernel, 8.00 lags average (chosen by LLC)
```

	Statistic	p-value
Unadjusted t	-11.0759	
Adjusted t*	-3.5768	0.0002

Table 7 4.6 Stationarity test for external debt

The results in table 4.6 indicate that the external debt variable is stationary with the P-value of 0.0002 (<5%) and t-statistic value of -3.5654 (>2). The variable was stationary at fourth level differencing.

```

. xtunitroot llc rem

Levin-Lin-Chu unit-root test for rem
-----
Ho: Panels contain unit roots          Number of panels =      3
Ha: Panels are stationary              Number of periods =    20

AR parameter: Common                  Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Not included

ADF regressions: 1 lag
LR variance:   Bartlett kernel, 8.00 lags average (chosen by LLC)
-----

```

	Statistic	p-value
Unadjusted t	-4.4489	
Adjusted t*	-2.4721	0.0067

**Table 8 4.7 Stationarity test for personal remittance**

The results from table 4.7 indicate that the remittance variable is stationary with the P-value of 0.0067 (<5%) and t-statistic value of -2.4721 (>2).

```

. xtunitroot llc fdi

Levin-Lin-Chu unit-root test for fdi
-----
Ho: Panels contain unit roots          Number of panels =      3
Ha: Panels are stationary              Number of periods =    20

AR parameter: Common                  Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Not included

ADF regressions: 1 lag
LR variance:   Bartlett kernel, 8.00 lags average (chosen by LLC)
-----

```

	Statistic	p-value
Unadjusted t	-4.5196	
Adjusted t*	-2.2625	0.0118

**Table 9 4.8 Stationarity test for FDI**

The results in table 4.8 indicate that the foreign direct investment variable is stationary with the P-value of 0.018 (<5%) and t-statistic value of -2.2625 (>2).

### **4.3.5 Model specification**

This test is used to determine whether to fit fixed effect (FE) model or random effect (RE) model. F test is used to see if the FE model is significant with a P-value less than 0.05. If the P-value is greater than 0.05, it means there are no fixed time effects, hence random effect model is fitted.

```
. xtreg gdp d3extdt fdi rem,fe

Fixed-effects (within) regression              Number of obs   =        60
Group variable: country1                     Number of groups =         3

R-sq:  within = 0.1081                       Obs per group:  min =        20
        between = 0.7295                       avg =           20.0
        overall = 0.2144                       max =           20

corr(u_i, Xb) = 0.1271                       F(3,54)         =         2.18
                                                Prob > F        =         0.1007
```

gdp	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
d3extdt	-.0036802	.0065026	-0.57	0.574	-.0167172	.0093568
fdi	.4650408	.2086316	2.23	0.030	.0467597	.8833219
rem	.2208067	.2687339	0.82	0.415	-.3179723	.7595857
_cons	4.026868	.8018288	5.02	0.000	2.419298	5.634438
sigma_u	.53861915					
sigma_e	1.8172379					
rho	.08075532	(fraction of variance due to u_i)				

F test that all u\_i=0: F(2, 54) = 0.64 Prob > F = 0.5327

Table 10 4.9 Fixed effect test results

Table 4.9 results show a p-value of 0.1007 which is greater than 0.05 meaning the FE model is not significant hence not fit.

Using Breusch-Pagan LM test, a test was done to help decide between RE model and Pooled Ordinary Least Squares (POLs). The null hypothesis is that variance across groups is zero hence POLs would be okay.

```

. xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

gdp[country1,t] = Xb + u[country1] + e[country1,t]

Estimated results:

```

	Var	sd = sqrt(Var)
gdp	4.093732	2.023297
e	3.302354	1.817238
u	0	0

```

Test: Var(u) = 0
      chibar2(01) = 0.00
      Prob > chibar2 = 1.0000

```

Table 11 4.10 Breusch-Pagan LM test results

Using Breusch-Pagan LM test, table 4.10 results show that the variance across groups is zero hence a POLs model is recommended.

#### 4.3.6 Test for Heteroscedasticity

Heteroscedasticity occurs when the standard deviation of a predicted variable or variance of residual is non-constant.

```

. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of gdp

chi2(1) = 2.24
Prob > chi2 = 0.1344

```

Table 12 4.11 Heteroscedasticity test results

The results in table 4.11 indicate that there is no heteroscedasticity since the P-value is 0.1344 which is greater than 0.05.

#### 4.3.7. Test for normality

Normality test is done to find out whether the residuals are normally distributed. To conclude that the residuals are normally distributed, the histogram should be bell shaped.

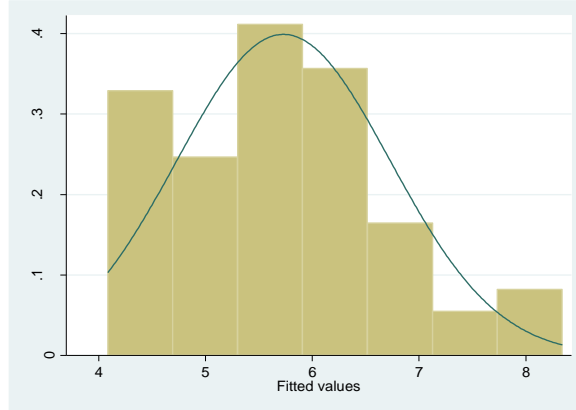


Figure 7 4.6 Histogram

Figure 4.6 reflect a bell shaped histogram indicating that the residuals are normally distributed.

#### 4.5 Regression results

The main objective of this study was to assess the effect of foreign inflows on economic growth of EAC member countries. Three countries with membership of more than 20 years were sampled for the study. The specific aim for the study was to evaluate the effect of external debt on economic growth of EAC member countries, to assess the effect of FDI on economic growth of EAC member countries and to investigate the effect of remittances on economic growth of the EAC member countries.

```
. regress gdp rem d3extdt fdi
```

Source	SS	df	MS			
Model	58.9943255	3	19.6647752	Number of obs =	60	
Residual	182.535836	56	3.2595685	F( 3, 56) =	6.03	
Total	241.530161	59	4.09373155	Prob > F	= 0.0012	
				R-squared	= 0.2443	
				Adj R-squared	= 0.2038	
				Root MSE	= 1.8054	

gdp	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
rem	.0487871	.1394022	0.35	0.728	-.2304689	.3280432
d3extdt	-.0040735	.006417	-0.63	0.528	-.0169284	.0087813
fdi	.6021545	.1448765	4.16	0.000	.311932	.892377
_cons	4.046578	.5250293	7.71	0.000	2.994818	5.098338

Table 13 4.12 Regression Coefficients

Foreign inflows contribute to economic growth of EAC countries and they appreciate the role that foreign inflows play on their economies. Ordinarily, capital is expected to flow from developed countries with huge capital to developing countries with deficient capital and unutilized resources.

The results from the regression coefficients in table 13 indicate that foreign direct investment is significant with a P-value of 0.000 (less than 0.05) and t-statistic value of 4.16 (greater than 2). The null hypothesis which stated that FDI does not affect economic growth of EAC countries is therefore rejected. The findings contradict the study results of Oneya, Ombui, Ondabu, Iravo, Muturi (2018) who found out foreign direct investment coefficient was insignificant in influencing economic growth. However, the findings agree with the study by Upreti (2015) who found a positive and significant influence of foreign direct investment on economic growth. The coefficient for remittance was statistically insignificant with a P-value of 0.728 (greater than 0.05) and t-statistic value of 0.35 (less than 2). The null hypothesis which stated remittance does not affect economic growth of EAC countries is therefore accepted. This result concurs with the findings of Oneya, Ombui, Ondabu, Iravo, Muturi (2018) which indicated insignificance of remittances to gross domestic product growth. The coefficient for external debt were found to be negative and statistically insignificant with P-value of 0.528 (greater than 0.05) and t-statistic value of -0.63 (less than 2). The null hypothesis which stated that external debt does not affect economic growth of EAC countries is accepted. The results agree with the findings from the study by Safdri and Mehrizi (2011) which showed that external debt had a negative impact on gross domestic product. On the other hand, the results contradict the findings by Oneya, Ombui, Ondabu, Iravo, Muturi (2018) whose study results revealed that statistically external debt had positive and significant influence on gross domestic product.

Holding all other factors constant, a unit increase in remittance would lead to gross domestic product increase by 0.04879. A unit increase in external debt would lead to a decrease in gross domestic product by 0.00407 units given that all other factors are held constant and a unit increase in foreign direct investment would result to an increase in gross domestic product by 0.60215 units holding all other factors constant. In case all the independent variables are equal to zero, the gross domestic product will be 4.04658 units. From the regression coefficients table, the value of R-squared is 0.2443 and that of adjusted R-squared is 0.2038. R-squared is the proportion of variance in the dependent variable that is explained by the independent variables. The results for this study shows that 20.38% of gross domestic product can be predicted from the independent variables (foreign direct investment, remittance and external debt). The constant variable with a t-statistic value of 7.71 and P-value of 0.000 is an indicator that other variables whose impact is

significant to account for gross domestic product growth for East African Community countries apart from foreign direct investment, remittances and external debt.

#### **4.6 Discussion of the Findings**

The results of the study reveal that a linear relationship exists between the gross domestic product (dependent variable) and independent variables (foreign direct investment, remittance and foreign debt). The diagnostic tests also revealed that independent variables are linearly independent, meaning no multicollinearity since the value for variance inflation factor (VIF) was less than 10. There was homoscedasticity since variance of the error terms were confirmed to be constant and the residuals were normally distributed. The independent variables foreign direct investment and remittance were found to be stationary without differencing but external debt was stationary at 4<sup>th</sup> order differencing. The results contradict the results from a study by Oneya, Ombui, Ondabu, Iravo, Muturi (2018) which revealed that foreign direct investment, external debt and remittance were found to be stationary at second order differencing.

Using a panel data set, the diagnostic tests conducted recommended the use of Pooled Ordinary Least squares model over random effect and fixed effect model. The data used for the study was suitable for the analysis as it had no missing variables. The period of study was 20 years from 1999-2018 after dropping the years with missing variables on remittances and foreign direct investment (1994-1998 and 2019). The study sampled only three countries from the EAC based on the period that each country joined the community. The three countries (Kenya, Uganda, Tanzania) joined membership in 1993 while the other three countries (Rwanda, Burundi, South Sudan) joined in 2007 and 2016.

The results of the study revealed that only two independent variables (remittance and foreign direct investment) related positively with gross domestic product. The effect of foreign direct investment was positive and significant and for remittance, it was positive but insignificant. The effect of external debt on gross domestic product was negative hence it was deemed not to relate well. This negative effect of external debt on gross domestic product can be attributed to corruption, administrative mismanagement and high investment risk (Safdari & Mehrizi, 2011).

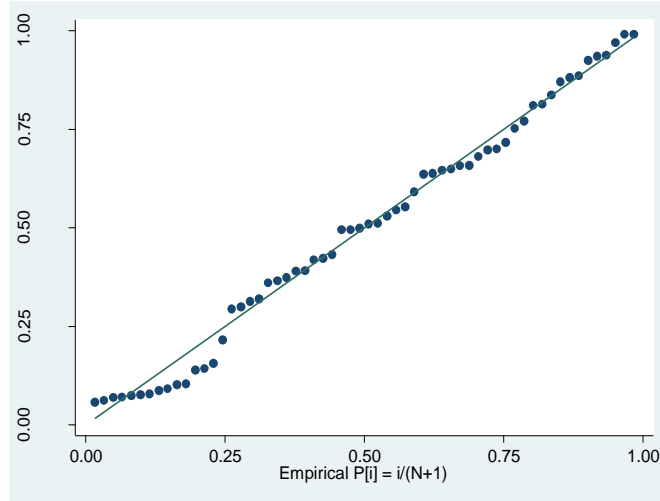


Figure 8 4.7 P-P plot FDI

The P-P plot in figure 4.7 shows that residual of FDI is normally distributed. However, the small variations can be addressed with more data for more observations. Data on foreign direct investment was collected from World bank and Central bank of Kenya, Uganda and Tanzania for the period of twenty years from 1999-2018. The missing data for this variable was collected from Bureau of statistics for Kenya, Uganda and Tanzania. Data on foreign direct investment was not found for the year 2019 for both Kenya and Tanzania. The aim of including this variable in the study was to assess the effect of FDI on economic growth of EAC member countries.

The results from the regression coefficients indicate that foreign direct investment is positive and significant with a P-value of 0.000 (less than 0.05) and t-statistic value of 4.16 (greater than 2). The findings contradict the study results by Oneya, Ombui, Ondabu, Iravo, Muturi (2018) who conducted similar research on EAC countries and found that foreign direct investment had positive but insignificant influence on economic growth of East African Community Countries. Foreign direct investment is an independent variable as a form of foreign inflow considered for this study. Foreign direct investment is the greatest source of external funding for the developing economies as a driver of real economic growth. Researchers note that foreign direct investment has the ability to create employment, technological development and improve access to international markets. Governments in developing countries should put effort to develop economic policy to attract foreign direct investment as FDI represent a major proportion of total investments.

In order to achieve economic growth and prosperity, foreign direct investment supplements national savings, facilitate access to internationally available technology and management know-how (Chaudhuri, 2014).

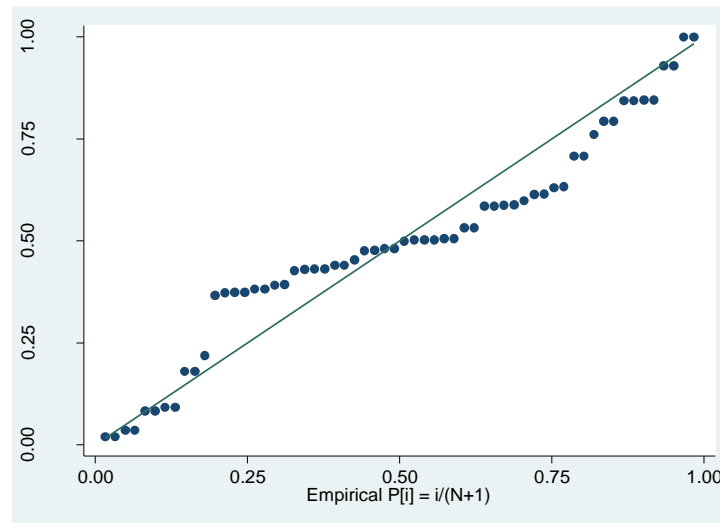


Figure 9 4.8 P-P plot external debt

The P-P plot in figure 4.8 shows that residual of external debt is normally distributed. However, the small variations can be addressed with more data for more observations. Data on external debt was collected from World bank and Central bank of Kenya, Uganda and Tanzania for the period of twenty years from 1999-2018. The missing data for this variable was collected from Bureau of statistics for Kenya, Uganda and Tanzania. The aim of including this variable in the study was to evaluate the effect of external debt on economic growth of EAC member countries.

The results from this study found that external debt negatively affect the gross domestic product of East African Community countries. This is evidenced from the regression coefficient for external debt found to be negative and statistically insignificant on gross domestic product with P-value of 0.528 (greater than 0.05) and t-statistic value of -0.63 (less than 2). Holding other factors constant, a unit increase in external debt would reduce gross domestic product by 0.00407 units. The results agree with the findings from the study by Safdri and Mehrizi (2011) which showed that external debt had a negative impact on gross domestic product. On the other hand, the results contradict the findings by Oneya, Ombui, Ondabu, Iravo, Muturi (2018) whose study results

revealed that statistically external debt had positive and significant influence on gross domestic product.

The role of external debt has been considered in financing budget deficits and source of funding for investments in most of developing countries. Holding other factors constant, the relationship for external debt and economic growth should be positive and significant only if the resources are channeled to productive projects. One of the specific objective for this study was to assess the impact of external debt on economic growth of EAC countries. Previous studies that revealed a negative impact of external debt on economic growth cite inefficiencies and lack of transparency in allocation of borrowed funds. This consequently leads to accumulation of debt, huge cost in form of interest and eventually a debt overhang might occur. Instead of resulting to a positive growth of the economy, more borrowing result to negative impact on economic growth since more resources would be diverted from productive projects to repayment of debt as budget deficits deepens each year. Besides the recommendations on formulation of policies to help avert manifestation of debt overhang Ejigayehu (2013), the results in this study calls for further examination to determine other factors that lead to negative effect of external debt on gross domestic product for EAC countries.

Lack of savings and investment by the developing economies is the reason for borrowing externally to conceal the resource gap and consequently boost their economic growth. Neoclassical view asserts that external borrowing frightens private investors and therefore hampers national growth. It is evident that emerging economies need external debt to bridge the resource gap according to Kharusi and Ada (2018) but positive impact on economic growth can only be realized through sound management and investment to more productive sectors of the economy. While some studies reveal a positive impact of external debt on economic growth, others found a negative impact on economic growth of East African Community countries. According to studies, external borrowing and GDP in the heavily indebted poor African countries (HIPCS) have a positive correlation. However, this can only be achieved with more productive use of borrowed funds in order to realize positive growth.

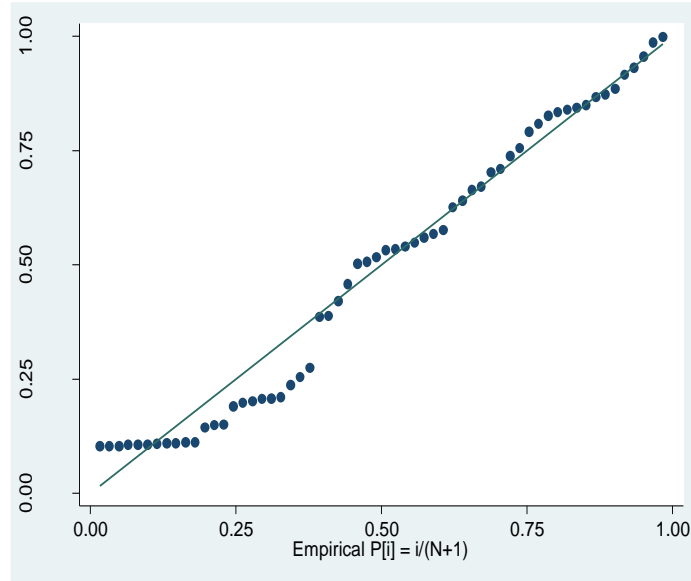


Figure 10 4.9 P-P plot Personal remittance

The P-P plot in figure 4.9 shows that residual of personal remittance is normally distributed. However, the small variations can be addressed with more data for more observations. Data on remittance was collected from World bank and Central bank of Kenya, Uganda and Tanzania for the period of twenty years from 1999-2018. The missing data for this variable was collected from Bureau of statistics for Kenya, Uganda and Tanzania. Data for the period between 1994 to 1998 was missing for Uganda and this led to elimination of the period from the period of study. The aim of including this variable in the study was to investigate the effect of remittances on economic growth of the EAC member countries.

The results from this study found the coefficient for remittance was positive but statistically insignificant with a P-value of 0.728 (greater than 0.05) and t-statistic value of 0.35 (less than 2). Holding other factors constant, a unit increase in personal remittances would increase gross domestic product by 0.047871 units. This result concurs with the findings of Oneya, Ombui, Ondabu, Iravo, Muturi (2018) which indicated insignificance of remittances to gross domestic product growth. On the other hand, a study by Shera and Meyer (2016) aimed at observing the impact of remittance on economic growth using a panel data set of six high remittance receiving countries found a positive and significant impact on economic growth and this contradicts the results from this study.

Remittances are contributions from persons who relocate to foreign countries for job search to their family and friends hence impacting economic growth positively. Governments and financial markets can no longer ignore remittances as they are greatly impacting on the economic growth of the developing economies. A study by Combes and Ebeke (2010) using panel data of developing countries over the period 1975-2004 found that remittances significantly reduce household instability and they appear to caution GDP volatility. Other studies have revealed the positive but insignificant effect of remittance on gross domestic product growth.

From this study, it is evident that there are more factors that contribute to economic growth of EAC countries. This is based on the fact that of the three independent variables included in this study (foreign direct investment, remittance and external debt), only foreign direct investment has a positive and significant impact on gross domestic product. A review from various studies reveal foreign direct investment as the main form of inflow that influence economic growth positively. Foreign direct investment in most of the developing economies is considered to promote growth and address some challenges like insufficient technology and skills. Foreign direct investment is noted to have three broad categories. One of them is export orientated foreign direct investment and this is aimed at finding investment opportunities with low costs of production in host countries. The other category is import oriented foreign direct investment aimed at replacing economic imports by the host country. The last category is government oriented foreign direct investment achieved by way of creating incentives for attracting foreign investors. Foreign direct investments in various sectors of the economy has also proved to contribute greatly to economic growth and development. Other factors or variables that should have been considered for East African Community member countries include exports, natural resources produced by each country for own use or export, investments in form of creation of capital goods and foreign aid even though foreign aid is recorded in some studies to have negative impact on economic growth just like external debt probably due to corruption and mismanagement of resources.

Remittances from foreign countries are received in foreign currency. These foreign currencies are used to pay for imports from foreign countries which otherwise would have costed more through currency translation as noted by Oneya, Ombui, Ondabu, Iravo, Muturi (2018). The cost saved from currency translation is considered to contribute positively to the economic growth in the long run. The insignificant impact of remittances on gross domestic product can be attributed to lack of accurate data on personal remittances. Most funds are wired through unregulated

channels such as money transfer operators, mobile money, post offices, etc which makes it hard to collect the full data. The lack of proper system to track data on personal remittance makes it hard to determine the actual contribution to economic development as noted by a report from world bank. Even though improvement has been recorded in registering of data on remittance, most information on remittance is not recorded since the means of transfer from individuals to their families are not regulated. Considering the period from which the EAC membership was formed in 1993, data on remittances was maintained not maintained up to 1998 but from 1999 in Uganda and this would have caused the problem of missing variables. For this reason, the period of five years from 1994 to 1998 was eliminated from the period of study.

The results from this study indicate that only two independent variables contribute positively to the economic growth of EAC countries (foreign direct investment and remittance. The R-square value indicates that only 20% of gross domestic product growth is accounted jointly by the independent variables in this study. The remaining 80% is accounted for by other factors left out in this study. A study by Wanjiku (2014) revealed that interaction of various variables had positive and significant effect on economic growth but foreign direct investment on itself was found to be insignificant. This study therefore, concludes that there are more omitted variables that are responsible for the positive growth of gross domestic product.

#### **4.7 Hypothesis testing**

The test for the hypothesis was carried out by running a regression analysis using multiple Ordinary Least Squares. The null hypothesis was; i) foreign debt does not affect economic growth of EAC countries. From the regression results, we accept the null hypothesis since the p-values was 0.528 and t-statistic value was 0.63. ii) foreign direct investment does not affect economic growth of EAC countries. From the regression results, we reject the null hypothesis since the p-value was 0.000 and t-statistic was 4.16. iii) remittances do not have effect on the economic growth of East Africa member countries. From the regression results, it was found that P-value was 0.728 and t-statistic was 0.35. This is an indication that the null hypothesis was accepted.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter will summarize the research findings on the effect of foreign inflows on economic growth of East African Community countries. Each of the variables which include foreign direct investments, personal remittances and external debts will be discussed. The chapter will also include the conclusions drawn from the study as well as suggestions for further studies.

#### 5.2 Summary

This study will research on the effect of foreign inflows on economic development of East African Community countries. Most studies done have included all developing countries in African region and little studies done specifically for EAC countries. The only study done on EAC community countries focused on all the six countries notwithstanding the period each country signed into membership of EAC. This study focused on a sample of three countries including Kenya, Tanzania and Uganda being the first countries to sign into EAC membership over 20 years ago. The study looked into the impact of three variables on economic growth of EAC countries and they include foreign direct investment, personal remittances and external debts. Worth noting is that most studies have focused on foreign direct investment as the main variable to influence economic growth and development in developing countries with some studies revealing significance and others insignificance of the variable.

##### *5.2.1 Foreign Direct Investments*

From this study, the foreign direct investment was found to have a positive and significant impact on gross domestic product for EAC countries. One of the specific objectives of this study was to assess the effect of foreign direct investment on economic growth of East African Community countries. However, the findings from this study agree with other studies that found a positive and significant influence of foreign direct investment on economic growth. The results from this study imply that FDI is a crucial element in economic development and particularly for developing countries.

FDI is expected to positively impact the economic growth of developing countries in that it allows the transfer of technology, promote competition in the local market, job creation and increased revenue in form of corporate tax from profits created by foreign direct investments. Most countries in East African community countries have noted the important role played by foreign direct investment on economic growth and development. However, noting that investors prefer to place their investments in more cost effective countries postures a future risk for East African Community countries. This is because there is still need to improve on the business environment that is attractive to investors. Some of the key factors to consider that affect foreign direct investments in developing countries include; infrastructure, access to raw materials, communication, skills and cost of labor.

Some of the weak points that cut across the EAC countries include; agricultural risks (drought, climate change), poor infrastructure that is weak to absorb growth, poor governance, high credit rates, inflation, corruption and political instability. Worth noting is that some countries have been making progress in addressing some of these challenges to make the investment locations attractive. For instance, in Kenya, ICT has been noted as the key driver of economic growth that has made huge impact on transport and communication sectors. The remarkable economic growth through ICT can be attributed to innovations such as mobile money, mobile phones and internet. Mobile money comprises of electronic money accounts accessible through mobile phone. Mobile money is noted as a potential engine to economic growth, job creation and poverty reduction.

Foreign direct investment has been considered a big source of funding for both developing and developed countries. Even though some economic researchers found a negative impact of foreign direct investment on economic development, this study revealed a positive and significant impact of FD on economic growth of East African Community countries. Out of the three independent variables included in the study, FDI seems a great contributor to economic growth and development besides other micro economic factors that contribute to economic growth and development.

### ***5.2.2 Remittances***

Personal remittance is another variable considered in this study as a form of foreign inflow that would have an impact on economic growth for East African Community countries. Foreign inflows

in form of personal remittances are a source of foreign exchange earnings. This research aimed at investigating the effect of personal remittances on economic growth for EAC countries. The results from this study found the coefficient for remittance was positive but statistically insignificant. The insignificant impact of remittances on gross domestic product can be attributed to lack of accurate data on personal remittances in East African Community Countries. Most funds are wired through unregulated channels such as money transfer operators, mobile money, post offices, etc which makes it hard to collect the full data. The lack of proper system to track data on personal remittance makes it hard to determine the actual contribution to economic development as noted by a report from world bank. Previous studies indicated that sometimes remittances exceed the flows of foreign direct investments meaning improved growth can be achieved if remittances are channeled to productive use like consumption and investment. Accurate data recorded on remittances is likely to reveal accurate impact of remittance on gross domestic product for EAC countries.

This conclusion from this study suggests an improved system of tracking remittances which have been ignored with little attention from government and financial markets since they are received in small amounts yet they are large in cumulative. Remittance is noted as a necessary inflow that contributes to economic growth and development. This study was seeking to investigate the effect of remittances on economic growth of East African Community countries. Even though the results revealed positive but insignificant effect on economic growth, the positive relationship revealed by various studies is an indication that remittances have potential to impact economic growth and development considering the key role they have played in poverty reduction.

### ***5.2.3 External Debt***

Government borrowing either internally or externally seeks to cover budget deficits for developing countries. Debt servicing obligations are likely to result to debt overhang if expected repayments falls short of the debt value. This study was seeking to evaluate the effect of external debt on economic growth of East African Community countries. The results from this study found that external debt negatively affect the gross domestic product of East African Community countries. This is evidenced from the regression coefficient for external debt found to be negative and statistically insignificant on gross domestic product.

Some of the previous studies revealed that external debt affects economic growth by debt crowding out effect rather than debt overhang whose results are insignificant. Debt crowding out

effect is a case whereby highly indebted poor African countries transfer resources including foreign aid and foreign exchange earnings to service their accumulated debt and would eventually negatively affect economic growth and development of these countries. However, this remains a debatable issue since debt overhang has been found to negatively impact on economic growth from previous studies.

The negative impact of external debt on economic growth can be attributed to poor resource administration and management, corruption and accumulation of debt that is not serviced resulting to debt overhang hence negatively affecting economic growth and development. Huge external debt has potential to slow down investments, scare away investors and depress economic growth through its negative effect on liquidity and projected profitability. The effects of high indebtedness can pull down a country such that the borrower and the creditor end up losing. This study did not look into the outstanding debts for East African Community countries but it would recommend further studies to investigate the cause of external debt's negative effect on gross domestic product of these countries. Such study would reveal whether the East African Community countries have debt overhang or debt crowding out effect hence the reason for the negative impact.

### **5.3 Conclusion**

This study investigated the impact of foreign inflow on economic growth of East African Community countries. Three countries were sampled to represent all the six member countries based on their long period of membership to East African community of more than 20 years. The study was implemented with annual data for a period of 20 years from 1999-2018. The three countries included in the study are Kenya, Tanzania and Uganda. The variables included in this study are foreign direct investment, personal remittances and external debt. Some findings from previous studies vary from the findings of this study based on various aspects; geographical area, methodology used, variables considered and period covered. A panel data was used and analysed using STATA software. This study has made conclusions based on the regression output.

#### ***5.3.1. Foreign direct investment***

This study concludes that foreign direct investment has significant impact on gross domestic product of East African Community Countries. This is evidenced from the regression results that reveal a positive and significant impact on gross domestic product. The results indicate that an

increase in one unit of foreign direct investment would significantly increase the gross domestic product and a unit decrease in foreign direct investment would significantly reduce the gross domestic product holding all other factors constant. Foreign direct investment therefore, is one of the foreign inflows that has an effect on economic growth of East African Community Countries.

### ***5.3.2 Personal remittances***

This concludes that personal remittance has insignificant impact on gross domestic product of East African Community Countries. This is evidenced from the regression results that reveal a positive and but insignificant impact on gross domestic product. The results indicate that an increase in one unit of personal remittance would insignificantly increase the gross domestic product and a unit decrease in personal remittance would insignificantly reduce the gross domestic product holding all other factors constant. Personal remittance therefore, is one of the foreign inflows that has insignificant effect on economic growth of East African Community Countries. This study would also conclude that personal remittances have potential to positively impact on gross domestic product if more accurate data is collected and if remittances are channelled to productive investments.

### ***5.3.3 External Debt***

This study concludes that external debt has insignificant impact on gross domestic product of East African Community Countries. This is evidenced from the regression results that reveal a negative but insignificant impact on gross domestic product. The results indicate that an increase in one unit of external debt would insignificantly decrease the gross domestic product and a unit decrease in foreign debt would insignificantly increase the gross domestic product holding all other factors constant. External debt therefore, is one of the foreign inflows that has an effect on economic growth of East African Community Countries. Based on the previous studies that revealed a positive impact of external debt on economic growth, this study concludes that external debt has potential to positively impact on gross domestic product on condition that there are reforms on resource administration and management and measures to curb corruption are enforced.

## **5.4 Recommendations**

### ***5.4.1. Policy recommendation***

This study would make recommendation to all states in East African community countries to consider policies that mobilize internal revenue collection to support government spending or cover budget deficits with the aim of reducing external borrowing. This is based on the fact that on average, more than 30% of gross national income for the period of 20 years from 1999-2018 for the three EAC countries in this study was from external borrowings yet, this study's results reveal a negative impact on gross domestic product for these countries. The negative impact could be as a result of not utilizing resources in productive investments that would influence economic growth noting the level of corruption and resource mismanagement registered in these countries.

This study would also recommend policies aimed at enhancing foreign direct investments considering the positive and significant impact on economic growth of East African Community countries revealed from this study.

The governments from each of the EAC countries should consider policies aimed at attracting investors like political stability considering foreign direct investment has an element of risk, improve infrastructure and especially transport to facilitate access of raw materials, improve on labour skills and productivity. These factors are key in attracting foreign investors. Noting the challenges cited in agricultural sector for the drop in gross domestic product in Kenya, there is need to design policies to manage agricultural risks to avert poverty and transform the sector to attract more foreign investors by creating a competitive market and increased productivity. This recommendation is for all East African Community states. There should also be a balance in attracting foreign direct investments in all economic sectors with the aim of absorbing the multi-skilled youths searching for employment. Governments in developing countries should put effort to develop economic policies meant to attract foreign direct investment as FDI represent a major proportion of total investments.

Governments from East African Community should consider regulating the channels used to remit personal remittances. This would enable the collection of accurate data useful in determining the extent to which gross domestic product growth is influenced by personal remittances. The governments and financial markets should give attention to personal remittances

and consider them as a form of foreign inflow which is substantial cumulatively noting their impact in poverty reduction and positive impact on gross domestic product as revealed in this study.

#### ***5.4.2 Investment recommendation***

This study would recommend East African Community countries as investment destination considering potential for huge investment returns in these countries based on a number of factors. Agricultural sector is diversified in these countries, emerging urban populations, improved business climate, high private consumption considering the population growth, affordable skilled labour following improvements in education, economic and commercial evolution especially in ICT innovations like mobile money in Kenya, mining resources, gold and significant gas potential in Tanzania, significant natural resources including oil reserves and hydroelectric potential in Uganda. All these key factors have created hope for productive investments for investors and sustained economic growth in East African Community countries.

#### **5.5 Recommendations for future research**

The results from this study found that the constant coefficient is statistically significant. The predictors variables were found to be insignificant apart from foreign direct investment in influencing gross domestic product growth. This means that even when the predictors included in this study (foreign direct investment, remittances, external debt) have zero values, gross domestic product would be affected by other factors. Further research is therefore recommended to include omitted variables besides the factors included in this study to understand the key factors that influence gross domestic product growth for East African Community countries.

Different estimation method can be used apart from Pooled Ordinary Least Squares model, time series instead of panel data and different period of study can be applied to include other members of East African Community not considered for this study. More studies would also be recommended to investigate the negative effect on gross domestic product for East African Community countries by external debt. Little or no research has been conducted to investigate the existence of debt overhang or debt crowding out effect specifically in East African Community countries. Further research is recommended as this would give more insights to East African Community countries on how to deal with external debts to avert the negative effect on economic growth and development.

## **5.6 Limitations of the study**

This study was conducted successfully but not without shortcomings. To begin with, the study period was planned to cover 25 years from 1994-2019. However, there was a challenge in collecting data on personal remittances from Uganda for a period of 5 years (1994-1998). In 2019, data was missing on foreign direct investment for both Kenya and Tanzania. The missing data on the proctor variables led to reduction of study period from 25 years to 20 years. Another limiting factor was access to data which was not readily freely available on website and collecting data from various sources was not only time consuming but also costly. Balancing work, family and studies cannot be left out as one of the additional challenges faced during the study period.

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## Appendix I: Data Collection sheet

The sheet will be filled after reviewing World Bank's African Development indicators. It will indicate whether the indicated aspect is Disclosed (D) or Not Disclosed (ND). A value of 1 will be provided for D and 0 for ND.

No.	Disclosure items	0 (ND)	1 (D)
1.	FDI net inflows (% of GDP)		D
2.	Debt (% of GNI)		D
3.	Personal remittance inflows (% GDP)		D
4.	GDP growth (annual %)		D