THE EFFECT OF FINANCIAL DEEPENING ON ECONOMIC GROWTH IN THE EAST AFRICA COMMUNITY BLOC

PAMELLA GOGO

A RESEARCH PROJECT PRESENTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, UNIVERSITY OF NAIROBI

2019

DECLARATION

This research project is my original work and has not been submitted for presentation in this or any other University.

Signature…… Date……..

Pamella Gogo

REG. NO: D61/6848/2017

This research project has been presented for examination with my approval as university Supervisor

Signature…… Date……

Dr. Winnie Nyamute

Senior Lecturer

Department of Finance and Accounting

The University of Nairobi

DEDICATION

This project is dedicated to my Parent, Mr. and Mrs. Gogo for their parental love, inspirations, sacrifice and their endless financial support. To My sister Vallary Kings and my brother Rodgers Otieno for their encouragement. To my supervisor, Dr. Winnie Nyamute for her guidance and valuable insights.

ACKNOWLEDGMENT

I am heavily indebted to various people and my project assistant without whose material and non-material support this research project would have come to naught. I take this opportunity to express my sincere thanks to each of these people for their contribution.

I would also like to express my gratitude to my employer, Kenya Revenue Authority for making it easier for me to get the data needed for the completion of this research.

I would also like to appreciate and express my sincere gratitude to my supervisor Dr. Winnie Nyamute for always being available and her prompt response in the whole time of this research.

Finally, I would wish , above all to thank the Almighty God in advance for providing me with an opportunity and keeping me in a government of healthy mind throughout the period I will be conducting this research.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS

ARCH- Autoregressive Conditional Heteroscedasticity

BM-Broad Money

CPS-Credit to Private Sector

EAC - East Africa Community

FE – Fixed Effects

FSD - Financial Sector Development

GDP – Gross Domestic Product

LSD-London Stock Exchange

OLS- Ordinary Least Squares

RE- Random Effects

REC-Random Effects

UAE – United Arabs Emirates

UK - United Kingdom

USA-United State of America

VTS-Volume of Traded Stock

ABSTRACT

Extensive research has been conducted by different scholars to show the relationship between Financial Deepening and economic growth in different countries. A better understanding of this relationship has a significant implication for policy makers, scholars and financial sector players. Financial systems serve to mobilize pooling of funds that are channeled towards productive capital which stimulates economic growth. Additionally, financial deepening plays a critical role in broadening its financial resource base, credit creation and increasing velocity of money supply, this, in turn, enhances investment and consequently boosts productivity and growth. Consequently, economic growth ensure that financial instruments like the credit facilities are available to consumers. The significance of this study is to evaluate and provide evidence of correlation between financial deepening and economic growth within East African Community. To achieve this objective, the paper derives three key objectives as: Establish the effect of broad money on economic growth, Establish the effects of credits facilities to the private sector on economic growth, and Establish the effects of rate of value of the traded stock on economic growth. Broad money was used to denote the amount of money supply in the economy, credit facilities to the private sector denote loans offered to the private sector, while the volume of the traded stock was used as a measure for financial market investment. The study used descriptive research design and employed the fixed effect model in regression analysis. The findings of the study established that the three indicators of financial deepening namely; credit facilities, amount of money supply in the economy, and amount of stock traded have a positive correlation with economic growth in East African Community bloc. The coefficient for amount of money in the economy was 0.4410, amount of stocks traded 0.1367 while credit facilities was 0.4022. Additionally, the model had a an F statistic of 103.50, confiring its suitability. The study recommends that the East Africa Community governments should place more emphasis on the efficiency and of money supply, investment and distribution by commercial banks, the study also recommends that the governments of East Africa Community countries should continue pursuing policies that promote access to credit such as ensuring that interest rates are low. Consequently, Capital Markets Authorities present in all East African Coutries should organize public sensitization campeigns to increase public participation in the stock market.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The relationship between financial deepening and economic growth has received extensive attention from both economic scholars and policy makers across the globe. Schumpeter (1911) is one of the earliest scholars to investigate the correlation between Financial deepening and economic growth. The proposition was that the services rendered by monetary institutions such as mobilization of saving, project evaluation, risk management and transaction facilitation are key ingredients of financial technological progress and consequently, economic growth. Schumpeter (1911) opines that financial institutions are essential components of economic growth as it offers credit facilities to the private sector.

Goldsmith (1961) and Shaw (1973) promoted the works of Schumpeter through their publications, however, their works had a small deviation from the former's proposition. They emphasized that the restrictive policies set by the governments for example capping of interest rates, devaluation of the currency, high taxes imposed to banking sector and huge minimum reserve requirements are deterrents to financial market development. McKinnon and Shaw (1973) therefore, advocated that it is through resolving these repressive financial policies that countries can achieve economic growth as it would pave way for proper allocation and distribution of financial resources.

A 2009 report by World Bank, on analysis of financial deepening in East Africa established that a reliable financial system facilitates economic growth as it enables effective and efficient economic activities such as; saving, trade, risk management, and efficient use of

resources. Additionally, the study established that even though East Africa is far much from achieving advanced financial system, the potential to grow has been witnessed with various economic and financial activities expected to occur such as increased investment in security, modern banking system including internet banking and investment in global financial markets. Additionally, Ghildital, Pokhriyal & Mohan (2015), through their study, financial deepening on economic growth, opines that financial institutions are essential components of economic growth. Financial institutions are mandated with the responsibility of controlling the surplus and the deficit spending units.

1.1.1 Financial Deepening

Sackey and Nkurumah (2012) defined financial deepening as the process which involves increasing the provision of financial services through supply of financial resources to the economy. Money circulation in the economy refers to the availability of legitimate and in high quantities with the aim of creating efficiency in various activities which support economic growth and developmemt. A study conducted by Rahman and Mustafa (2015), identified that financial deepening contributes to accessibility of products and other items in the economy. The study also identified that various players such as the financial institutions, capital markets, money markets, investors, central bank and brokers are among the main participants in financial deepening activities.

Nguena and Abimbola (2013) opines that Financial Deepening involves numerous processes. The primary approach of financial deepening involves the level of money circulation in the economy through such mechanisms such as retail sales, small scale businesses, mobile money transfers among individuals and normal purchase of fast-moving products, borrowing and lending money from family and friend. The secondary approach

of financial deepening was considered to be the most important in an economy and this included activities such as mortgages, financial markets, internal borrowing from the public sector, external borrowing, banking, saving institutions, and allocating huge financial resources to infrastructural projects including the construction of roads and other national projects which enhance financial deepening.

Adan (2017) posits that positive financial deepening such as the rapid supply of financial resources within an economy with limited borrowing contributes effectively towards resources and risk management in relation to loss of financial resources through payment of debt and other leakages. The study established that developing countries encourages innovation, investment and entrepreneurship with respect to government subsidies to ensure that there's increased exchange of financial resources in the economy. Other factors considered were increased investment in a planned economy.

Financial Deepening has been measured using a number of variables such as; amount of money circulation in the economy, credit facilities to private sector which represents the rate of credit financing as well as volume of traded stock which represents the rate of financial market investment (Sackey & Nkrumah, 2012; Alrabadi & Kharabsheh, 2015)

1.1.2 Economic Growth

The viability Economic progress/Growth lies on the capability of a country to sustain its fiscal welfare through enhancing efficient production of goods and services, increase in investments, limited government expenditure on social services, increased export from a home country, creation of employment and ability to attract foreign direct investment (Helpman, 2004).

Analysis of economic growth in any country is mostly associated with the growth in its Gross Domestic Product (GDP), which measures the overall value of goods and services produced within its boarders. Economic growth not only determines the current state of a country but it also determines the ability of a country to participate in the global markets to access financial resources from multilateral finanacial organizations like the world bank and international monetary fund (Garrett, 2014).

Consequently, Iram & Nishat (2009) opines that economic progress of a country is correlated with its health; healthy states portray high economic growth while unhealthy countries are under developed. Economic growth is also significant while placing value to a country. A country with poor economic growth is associated with certain aspects such as civil war and insecurity in general. This has been witnessed in most parts of Africa and gulf nations where civil war and insecurity has been a common phenomenon.

Economic growth is generally approximated using the Gross Domestic Product. It was obtained from the calciulation by Shcweitzer (1964), as the summation of all that is consumed in an economy, invetsmens, government expenditure and value of exported goods and services, less value of imported products. It can also be described as a measure of all the products produced in a country irrespecive of the nationality of its producers. Economic growth can also be operationalized using the Gross National product (GNP) whis measures all the products produced by citizens of a country irresective of the country they are prodicing it form.

1.1.3 Financial Deepening and Economic Growth

In the current financial times, tremendous attention has been paid to the notion of financial deepening and its effects on economic progress. It has been identified that the reason why most of the countries remain under developed is due to lack of sufficient financial support from foreign companies, well-wishers, donors, foreign direct investors and government injection of money to the economy through either subsidies or granting cheap loans (Rahman & Mustafa, 2015). Globalization is among the factors which have been praised to contribute directly towards financial deepening and fiscal progress. This has contributed to the growth of capital markets and foreign direct investment which has enabled investors to invest their financial resources to nations of their choice leading to enhanced flow of financial resources in an economy which affect the gross national product.

A study by Al-Jarrahet et al. (2012) on the impacts of Financial Deepening in the United States and the United Kingdom indicated that the financial industry played a critical role in these countries ' economic growth. While financial deepening has been considered to contribute to rising inflation in the short-run, research has identified a controlled market environment where demand and supply forces dictate the market, hence, financial deepening has been seen as contributing to economic growth.Financial deepening such as the stock exchange has enhanced the ability of the two countries to rely heavily on security investments. Shaw (2013) supported the study and identified that the finance industry in the USA plays a significant role in the country's economy than any other sector. This was proven with the credit crunch which happened back in 2008-2009 where the financial crisis affected financial deepening to the whole world.

A study conducted by Apergis et al. (2007) found that economic growth is positively affected by financial deepening. Theoretically, financial deepening in an economy increases money supply. When financial resources are available in an economy, it means there is quick access of cash and cash related resources which benefits both the small and large businesses. Growth in the business sector contributes to heavy investment and saving which enhances economic growth. The study further identified financial deepening in countries such as Switzerland has been one of the reasons why the country has maintained the most top economy in the world, with increased banking services which has resulted to money circulation in the economy hence spurring economic growth.

1.1.4 East African Community

East African community is a bloc that has six member countries, including Kenya, Tanzania, Uganda, Burundi, Rwanda and Southern Sudan, with a secretariat that sits in Arusha, Tanzania. Heads of states and council of ministers meet to deliberate on key issues concerning the bloc. The bloc has integrated up to the customs union level but plans are underway to integrate it further into a monetary union, a move which is expected to lead to harmonization and standardization of interest rates, taxation and other charges, use of a common currency, and one central bank. Therefore, there is need for proper financial system to be in place prior to that (Alot and Muller, 2015).

Financial sector in East Africa Community is among the least developed among the economic blocs in Africa. This can largely be attributed to recessive polices in the past that extensively encouraged governments' control of the financial sector and political interference in the working of financial intermediaries. Initially, after EAC countries independence the governments believed that they could achieve their development agenda

through the selective allocation of credit. However, this was not realized and in the late 1970's and 1980s marked a period of deterioration of the financial and economic conditions. With the advice from IMF through the structural adjustment programs as well as own initiative, EAC governments embarked on policies to reduce controls and allow for liberalization of the financial markets. They instituted reforms such as granting autonomy to the central banks, privatization of state-owned financial institutions, liberalization of interest rates as well as opening up the economy to international trade.

Much of these reforms are still being pursued up to this day, however, financial intermediation is still slow and some measure have even reduced. For example, the income from the private sector as a percentage of GDP dropped from 15.4 in 2000 to 9.3 by the end of 2018 (UNECA, 2019). Increased economic activity has occurred in East Africa, which has a greater impact on the economic growth of its economies, such as the formation of East Africa passport which enables the movement of traders and their goods at a minimum tax to the region's market. Trade in East Africa is largely supported by the modern standard gauge railway, tarmac roads, tourism, food produce among other industrial and manufacturing infrastructure. However, slow economic growth has been recorded by the EAC member states. The GDP growth of the EAC member states also dropped from 6.8 in 2010 to 5.9 in 2018 (UNECA, 2019).

1.2 Research Problem

In both theory and empirical works, documenting the nexus between financial deepening and economic growth has been extensive. A better comprehension of the nexus between the two has significant implications to policymakers, scholars and financial sector practitioners. Financial systems serve to mobilize pooling of funds that are channeled

towards productive capital which stimulates economic growth (Raghuram & Zingales, 2003). Additionally, financial deepening plays a critical role in broadening its financial resource base, credit creation and increasing velocity of money supply, this in turn enhances investment and consequently boosts productivity and growth. Conversely economic growth plays a key role to ensure that financial instruments are in place leading to financial sector development (Levine, 2005).

EAC has made much progress in terms of liberalizing financial sector and instituting measures meant to encourage financial deepening. Some of the key polices include; granting autonomy to monetary policy committees, privatization of state-owned financial institutions, increased advocacy for low interest rates as well as opening up economies to international trade. However, in spite of these policies and reforms, financial intermediation still remains low in the region as compared to other blocs, and some measures have greatly reduced. In essence, the amount of loans accessible to the private market has dropped significantly from 15.4% in 2000 to 9.3% by the end of 2018. Additionally, EAC's GDP growth has also been on a declining trend from 6.8 in 2010 to 5.9 in 2017 (UNECA, 2019). It is imperative therefore, to assess whether financial development has a part to play in this.

Pioneers of empirical works on growth of the financial industry and its relationship to economic growth include a study by King and Lavine (1993) who by using bank liabilities and credit as proxies to financial development found that financial Deeping confirmed existence of the long-run GDP growth, capital formation, and increased output in a survey comprising of 77 economies over a period spanning from 1960 to 1989. Similarly, a study by Levine, Loayaza, & Beck (2000), concluded that some elements like bank liability and

credit facilities have led to increased levels of economic growth. Al-Jarrah et al., (2012); Shaw (2013); Apergis et al., (2007) conducted financial management studies and their effects on economic growth. The findings revealed that the world economic giants including USA, UK and Switzerland that have been fully reliant on the financial system. Increased financial deepening with respect to financial security and risk management has generally contributed to creation of economic growth activities such as investment in the money market, banking services, retail, capital market, short-term bonds and other long-term assets.

However, it should be noted that these studies focused on OECD countries and developed countries, excluding sub-Saharan countries and the East African Community to a greater extent. Most local studies have been country specific for example Kilimani (2003), Othiambo (2005), Fille (2011), Buchichi (2013), Bakang (2017) and Ibrahim (2017), none has focused on the influence that Financial development has on economic growth in EAC as a bloc. East Africa community has reached advanced stages of economic integration i.e. custom union and negations are underway to make it a monetary union. This implies that there will be harmonization and standardization of the currency and therefore there will be need for integration of the financial sector. It is imperative that the EAC enter into these negotiations with full knowledge of the state of the development of the financial sector and the effect that the bloc's economic growth is bound to have once it achieves the status of monetary union. Hence, the survey aimed to empirically examine the effects of Financial Deepening on Economic Growth within EAC against this backdrop.

1.3 Research Objective

This research aims at evaluating the impact of financial deepening on economic growth in the East African Community.

1.4 Value of the Study

The research add extensively to the existing works in the fields of financial deepening and economic growth. Therefore, the research will be useful for future researchers who would like to dig into studies that aim to develop the correlation between financial deepening and economic growth of the Regional Economic Communities (REC) in particular.

The study is useful to the secretariat of the EAC as well as the individual member governments through policy guidance. The results would illustrate the impact of financial deepening on EAC's economic growth and will provide them with insights into the policy gaps that need to be tackled, especially in financial deepening and fostering economic growth.

The research is more important to the private sector because financial institutions participate in the EAC, as it explicitly provides credible literature on how financial deepening has enabled quick access to loans and other financial resources, and how this has in effect led to economic growth. The study addresses some of the most important theories which the private sector can rely on towards understanding the effective use of increased financial resources towards organizational success.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Chapter Two looks at the Literature review on Financial Deepening as well as its effects on economic growth in the East African Community (EAC). The research addresses theoretical review where theories such as financial intermediary theory and finance-led growth theory are discussed. Concerning the empirical review, the study focuses on both international and local evidence which relates to Financial Deepening and Economic growth. The chapter also discusses the conceptual framework and a thorough overview of the chapter's discussions.

2.2 Theoretical Review

Theoretical review discusses relevant theories in relation to this study. Thoeries under consideration are Finacial Led growth theories and the financial intermediary theory.

2.2.1 The principle of financial intermediation

In 2004, Mitchell first introduced the concept of financial intermediaries. The theory emphasizes the significance of having different participants in the financial market with different financial related information and how this information contributes to financial deepening hence affecting economic growth. The financial intermediary theory is pegged from asymmetry information and agency theory (DeMarzo, 2004). Asymmetry information theory focuses on how financial markets end up being effective as a result of participants having different information in relation to investment vehicles and decision making, this makes the financial market stable, while the agency principle centers on the ability of a financial agent to work in the interests of inventors to create wealth and ensure

a stable economy.Financial intermediation theory comprises of individuals or parties with various information, resources and capabilities to ensure smooth flow of financial resources in the economy hence resulting in financial development which affects the economy positively (Oldfield, 2010).

The theory has been supported by Gorton and Pennacchi (2014), who in their study on financial intermediary and liquidity creation indicated that financial intermediaries are not only middlemen but they can also comprise large institutions such as banks and other investment companies. According to the study, availability of financial intermediaries has resulted in creation of liquidity which is quite significant towards economic growth. For instance, the presence of investment banks has ensured that financial securities such as T-bills and corporate bonds trade easily hence increasing investment in the financial markets and encouraging circulation of money to the economy which contributes to growth.

The financial intermediary model's contribution to this research is that it highlights the role played by monetary intermediaries including banks, the share market and other financial firms that act as agents to community members and bridge the liquidity gap. The financial intermediaries further, play a critical role in financial deepening through circulation of financial resources leading to financial deepening and consequently economic growth.

2.2.2 Finance Led Growth Theory

Finance led growth theory was first introduced by Schumpeter in 1911 when the financial sector was limited to its activities. Finance led growth theory, previously known as the finance-led growth hypothesis, pointed out that progress and expansion in the financial sector as a whole plays an important role in a nation's economic growth (Schumpeter,

1911). The theory was founded on the idea that financial sector acts as a catalyst to resource mobilization and financial sector mobilizes financial resources and enhances effective resource utilization through saving and investment. Saving and investments are perceived to be key elements of economic growth (Gberevbie, 2011).

This theory's proponents include Choong et al. (2010), who claim that comprehending the association around financial growth and economic development is a key factor in promoting a nation's economy. The study however identified that in relation to the recent global and national financial crisis; the governments should play a significant role in developing relevant policies which regulate money circulation in the economy. Inflation and other harmful activities in the economy are prone to arise when the financial sector is fully controlling the economy. For this analysis, this concept is important as it describes the connection between financial deepening and economic growth.

2.3 Determinants of Economic Growth

A country's capacity to maintain its economic well-being through efficient production, increase investments, creation of employment and the ability to attract foreign direct investments describes economic growth. Some of the determinants of economic growth include financial deepening, employment, and technology.

2.3.1 Financial Deepening

Pettinger (2017) stated that financial deepening results to increase in investment activities. Investments also result in economic growth. The study found that a rise in aggregate demand leads to financial deepening. This clearly means that a country's consumption is expected to rise, thereby generating short-term economic development. Nevertheless, the

research found that financial deepening leads not only to positive economic impact, but also in the long run, intensified financial deepening such as in financial markets, advancement of loans and high supply of financial resources in the economy results to inflation when aggregate demand is higher than market equilibrium. The results clearly indicated that there is an increasing and rising correlation between financial stability and economic development.

Financial penetration has resulted in public investment, especially in the public sector; the economy is expected to grow if a country invests its revenue in activities such as infrastructure, technology, industrialization, and the transport system. Jung (2006) investigated financial deepening in the public sector and established that there are high chances of government to create employment to its people while contributing to operation in positive cash balance which boosts economic growth.

2.3.2 Employment

A study carried out by Ioan (2013) on the impact of jobs on economic growth found that work results in savings in comparison to the public sector. For instance, in developed economies, the creation of jobs has resulted in households' self-dependency and increased saving which results to the provision of economic resources in the economy leads to investment. The state still experiences the benefits of employment since through work; minimal spending on the delivery of public services such as accommodation, healthcare and education is reduced resulting in budget savings on social services. Full employment also results in reduced taxation since financial resources flow effectively in the economy hence resulting in economic growth.

2.3.3 Technology

Caliskan (2015) on his study on technology change and economic growth found that in a global economy, the reason why most of the countries have witnessed economic growth is due to increased adoption of modern technology and technology growth. In the current 21st Century, technology is the key to every aspect of a business. Financial security, production of goods and services and conducting research and development requires the need to invest in technology which aids the growth of the economy since limited financial leakage can be witnessed.

A study conducted by Kvochko (2013) on five ways technology can help the economy, identified that one of the most common ways in which technology has contributed to economic growth is through the creation of employment. The prevailing study will only focus on three. It is estimated that 22% of the world labor market has gotten job in relation to technology, which is in the ICT department or use of a computer to enhance organizational performance. The second avenue in which technology has made a significant contribution to the growth of the economy is a contribution to the GDP. It is estimated that in Kenya for instance, technology and ICT, in general, have contributed to around 10% of the country's economy. The use of technology-related services is among the extensive measure of technology diversity. The last way in which technology has contributed to economic growth is business innovation. Technology such as in the security market has enhanced the ability of investors to purchase and sell financial securities at the comfort of the zone hence contributing to economic growth through investments (Kvochko, 2013).

2.3.4 Growth in Gross Domestic Product (GDP)

Gross domestic product is the economic standard of a country's results (Lepenies 2016). This means that for GDP to be effective, the calculation of a country's final goods and services must be put into consideration. When there is growth in a country's GDP, it clearly means that the country is growing stronger economically hence working towards feeding her people, producing for exports and investing heavily. If a country's GDP remains constant or diminishes, it's clearly possible that there's no increment in production activities, exports are not growing and funds are being spent on social and economic development activities. For instance, a study published by World Bank (2018) indicated that the top three countries in the world with the most growing GDP include Libya, Ethiopia, and India. Growth in GDP in these countries has translated to economic growth.

Wohlner (2016) considered GDP to be an economic scorecard of the economic health of a Nation. The study identified that GDP is usually annualized or measured on a quarterly basis. The study indicated that growth in a country's GDP has impact on investors' attraction hence contributing to increase in foreign direct investment which resultantly enhances economic growth. The study also identified that GDP takes into account the aspect of country's inflation. Countries with high GDP tend to have low inflation and forces of supply and demand control the economy such as in USA, Europe, and UAE. Control of inflation has significantly resulted in economic growth.

2.4 Empirical Literature Review

This section presents surveys on financial deepening and economic expansion carried out by other scholars. The section sheds light on both international studies and local studies in order to identify gaps and recommendations that have been made.

2.4.1 Global Studies

The link between financial growth and economic expansion has been extensively investigated and has produced varied and inconclusive results. Goldsmith (1969) first documented early research on the effects of financial deepening on economic growth. The survey consducted by Goldsmith (1969) covered 35 developed countries through the years 1860 to 1963. The study established that there was evidence that financial structure positively resulted in economic development. Mackinnon (1973) replicated the same study in Argentina, Chile, Brazil, Germany, Indonesia, Taiwan and Korea. The report agreed with Goldsmith's (1961) results by using panel data analysis, the result was that the revamped financial system had a favorable and significant impact on economic growth.

The following series of studies used various techniques to examine the intersection between financial development and economic growth empirically. King and Levine (1993) established a contemporary association between financial development and economic growth in their study of 80 developed and developing countries over a period from 1960 to 1969. Their study concludes that the long-term effect of financial growth on economic growth can range from 10 to 30 years. Darrat conducted a study close to Goldsmith in multiple middle-east countries: the UAE, Turkey, and Arabia. The study found that the financial deepening causes economic development by using the Granger cause and effect method, but the causality force ranges through financial deepening steps and countries.

By using the decomposition of the variance approach on a segment of 109 emerging and developed nations over a period between 1960-1994, Calderon and Liu (2002) established that a trans-directional causality existed between financial growth and economic growth. Their study concludes that in developing countries, the causal effect of financial deepening on economic growth is greater than in developed countries.

Onwumere (2012) conducted research on the effects of financial widening on economic development in Nigeria's financial markets generally can not grow out of blues unless the market is ready to buy or recognize its products. The study, which focused more on the supply-leading proposition, found how an efficient availability of financial resources contributes to economic growth in general. However, the study pointed out that with increased growth in technology and adoption of modern systems of enhancing financial supply, only the minorities of investors have welcomed the new system hence creating a surplus in the economy which has affected the ability of the country to grow economically. The study recommended the need for the government to conduct extensive investment in public education and policies to enhance financial institutions' ability to conduct training that encourages technology acceptance to facilitate investment which boosts economic growth (Onwumere, 2012).

However, other studies have produced different results, for example, Alzubi et al. (2007) researched the role of financial development in economic growth in the countries of the Middle East and North Africa between 1989 and 2001. By using the panel data analysis approach, they find that all financial deepening measures do not affect economic growth as they are negligible.

2.4.2 Local Studies

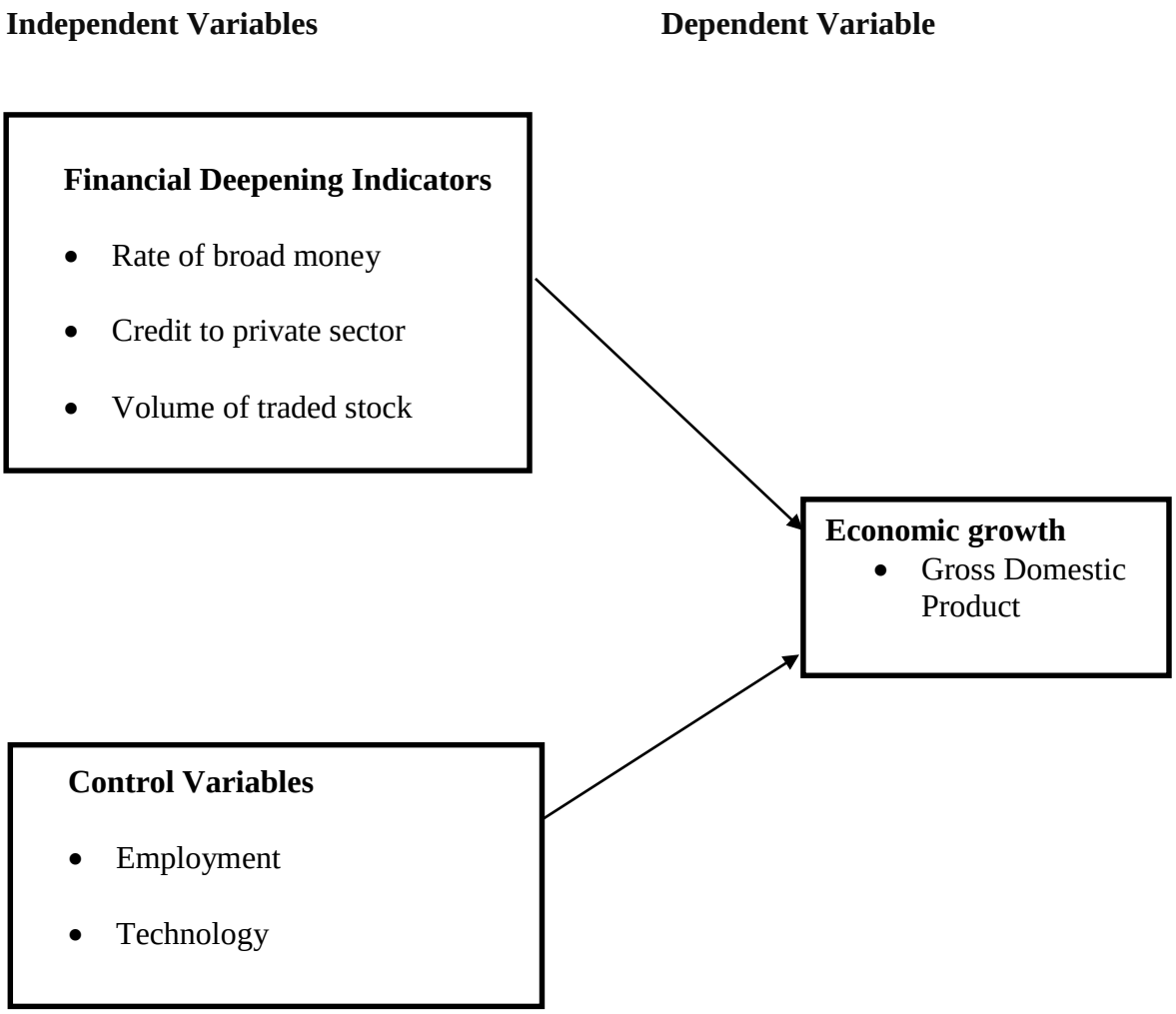
Chogi, Aduda, & Murayi (2014) published a systematic review of the capital market deepening on Kenya's economic growth and found that the idea of capital markets and its contribution to economic activity has recently attracted attention among stakeholders in Kenya and the government as a whole. The study which focused on descriptive research methodology of financial markets identified that capital markets have been considered among some of the key financial institutions contributing to financial deepening in Kenya and in the world at large. Investments in capital markets include a lot of participants such as suppliers of financial resources such as individuals, schools, hospitals, insurance companies, pension funds, the government, religious institutions, and non-financial companies. In other terms, the capital market generally has been a key player in the economy hence contributing to economic growth.

As a consequence, Bakang (2007) also studied the impact of Financial Deepening on Kenya's economic growth and observed that Kenya's financial institutions, especially Kenya's central bank and commercial banks, play significant financially deepening roles in the Kenyan economy. The study focusses on quarterly surveys of financial reports in 2012 clearly pointed out that the new regulations in financial markets at the beginning of 2012 enhance the ability of financial institutions to develop in investment and money distribution to the economy through various financial vehicles. However, the study identified that provided regulations have enhanced flow of money to the economy, reinforcement hasn’t been fully intensified since cases of bad debts and high rate of financial defaults have been witnessed hence affecting efficiency in economic growth (Bakang, 2007).

2.5 Conceptual Framework

According to Mugenda & Mugenda (2013), a conceptual framework is a hypothetical design that introduces the concepts of the research and how the concepts are linked. The conceptual framework consists of two variables that are autonomous or conditional.

Independent variables obtain their own significance while dependent variables heavily on independent variables to give the purpose of the analysis effectively. While the purpose of this analysis is to assess the impact of financial deepening on Eastern Africa's economic growth. The external variables of the analysis include the value of money supply in the economy, credit facilities advanced to the private sector, and exchanged stock volume. Input factors provide employment and innovation which would be assessed by high-tech exports. While the dependent variable is measured by the GDP. The Conceptual framework is as shown in Figure 2.1.



Source: Author, 2019

Figure 2.1 Conceptual Model

2.6 Measurement of Variables

2.6.1 Gross Domestic Product

GDP has been a benchmark for economic growth and will be determined by the amount of the additional net income. It was measured by summing up the total cost of the country's goods and services, net exports, net transactions, and total government spending, minus taxation. The value was adjusted for inflation and therefore it was in real terms. Data was

measured using US dollars and it was sourced from EAC member countries Bureaus of Statistics.

2.6.2 Rate of Broad Money

In this study rate of broad money was used to represent the rate of the money supply. The study used the M3 which was measured by the summation of cash in circulation, the total amount of money deposited in banks deposit accounts, the total travelers' cheques and government securities. Data was collected from the database of the central bank which is present in member countries.

2.6.3 Credit to Private Sector

Private sector credit has been used to represent the credit financing rate. Private-sector credit was measured by summarizing the total loans made by banks, SACCOs and micro-finance institutions to the population. The variable was measured in terms of US dollars. Data was sourced from the Central Bank of EAC member countries.

2.6.4 Volume of Traded Stock

The volume of the traded stock was used as a measure for the rate of financial markets investment. The volume of the traded stock was measured using the total annual transaction of securities traded in the stock market. The data was obtained from Stock exchange of the EAC member countries.

2.6.5 Employment

Employment was measured by the total number of people that are in gainful employment. The study considered the proportion of the population that was 18 to 60 years who were in formal and informal employment and have contracts for the job with remuneration. Employment Data was sourced from the International Labour organization.

2.6.6 Technology Level

The technology rate was calculated using exports of high technology. High-tech imports include high-intensity goods such as electronics, aircraft, pharmaceuticals, electronic equipment and scientific instruments. Evidence are derived from the World Development Indicator in actual U.S. dollars

2.7 Summary of the Literature Review

On the topic of financial depth and economic growth, the evidence provided by quantitative literature is usually inconclusive. In fact, research have reported contradictory findings; Others have developed a positive association between financial deepening and economic growth, for example (Calderon and Liu, 2002; Darat, 1999; King and Levine, 1993; Bakang, 2013), while others have identified a negative relationship, such as (Alzubi et al., (2007); Masoud and Hardaker (2013); and Elian and Sulaiman, 2014). It is worth noting that these studies were mainly country-specific and no study attempted to work on a regional economic bloc.

Local studies also show that research used descriptive statistics and ordinary least square to understand the relationship between financial deepening and economic development. These approaches are not really robust in carrying out studies with high-resolution data due to problems of non-stationarity. The survey therefore sought to use panel data analysis to assess and determine the potential effects of financial deepening on economic growth EAC.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section presents a research methodology that includes research design, population, sample design, data collection, diagnostics test and finally data analysis.

3.2 Research Design

According to Cooper & Schindler (2014), a research design is the structuring of data mining techniques for the purposes of achieving research goals using empirical evidence. The study used a descriptive design to answer the research questions. The value of this design is its ability to systematically describe data and thus provide a clear description of population or phenomenon characteristics being studied. In addition, the design is versatile in terms of accommodating data of various forms as well as assimilating human experience: This offers the author with the ability to study a variety of things and a way of looking at the picture in comparison to other forms of research design (Kothari 2004)

3.3 Study Population

The area of the study focussed on the East African economic bloc for the duration between 1999-2018. The year 1999 has been chosen as that is the year that EAC was re-established after its collapse in 1977. The report would examine the effects of various financial deepening steps on the economic growth of the EAC. The EAC has a population of 150 million people and the member countries include; Rwanda, Burundi, Tanzania, Kenya, South Sudan, and Uganda. Southern-Sudan was, however, excluded in the study due to unavailability of data given it is a recently formed state.

3.4. Data Collection

Essentially, the survey depended on secondary data collected between 1999 and 2018 from different sources. Data on broad money and interest rate was collected from central banks of the respective EAC member countries, data on the total volume of traded stock was sourced from member countries security exchange, data on technology was sourced from world development indicator, data on employment was sourced from International Labour Organisation, although Gross Domestic Product and Private Sector Credit information are obtained from the Member States ' statistical office.

3.5 Data Analysis

The research used the concept of financial driven development where GDP would reflect the dependent variable to figure out the impact of financial deepening. The independent variables are mainly the various financial deepening measures including money circulation, credit facilities advanced to private firms and exchanged stock size. The model also includes other control variables which are essential determinants of growth i.e. Technology which was measured by the value of high-technology exports and employment.

$$GDP = F\ (BM, CPS, VTS, EMP, TECH) \quad \text{.....3.1}$$

Shahbaz (2012) Log-log model was used so as to provide more efficient results to eliminate or reduce heteroscedasticity. The log-log design parameters have a meaning as elasticity and the total values of the data set are considered to be constant elasticity.

$$InGDP_{it} = \alpha + \beta_1 InBM_{it} + \beta_2 InCPS_{it} + \beta_3 InVTS_{it} + \beta_4 InEMP_{it} + \beta_5 InTECH_{it} + \varepsilon_{it} \quad \text{3.2}$$

Where:

BM-Broad money

CPS – Credit to Private Sector

VTS – Volume of traded stock

GDP- Gross Domestic Product

EMP-Employment

TECH-high technology export

ε – Error term

3.5.1 Analysis Techniques

The research will use panel data since it seeks to study different countries in the East African Community. Panel data consist of high-resolution data that composes the aspects of time series data which is data over an extended time period and cross-sectional data, which is data across different subjects but a specific point in time. The time-series dimension of the data to be used in this analysis is the period of time that the data will be obtained, that its 19 years, while the cross-sectional feature is the number of countries used as the topic in the research, are the 5 East African Community data. In the measurement of panel data, there are two basic approaches, random and set-effect models. The set-effect model operates under the assumption that specific factor unique to the subject under study may lead to the biasness of the coefficient obtained in the study. On the other hand, the random effect model is based on the assumption that there is a random variation in the subjects being studied (Woodridge, 2003).

In order to make a decision regarding the use of random effects or set effects, Hausman (1978) proposed test is run. This experiment essentially ascertains whether the individual errors are associated with the regressor, the null hypothesis states that they are not being linked while the alternative hypothesis states they are correlated. Diagnostic tests are important in panel data analysis for checking for the validity and robustness of the model. In this regard, both pre estimation and post estimation tests will be conducted (Woodridge, 2003).

3.5.2 Pre-estimation Diagnostic Tests

Panel information includes time series and cross-sectional dimension, so it is advisable to conduct some pre-estimation testing before conducting regression analysis to prevent spurious regression problems arising from unit root that are usually present in time series results. In this regard, the study used the Im, Shin and Pesaran (2003) to test for panel unit root, this method is appropriate for this study as it works irrespective of whether the data is balanced or not. In addition, the study conducted cointegration analysis to check for long-run relationships between integrated variables. Pedroni (2004) cointegration test has been used for this test.

3.5.3 Post-estimation Diagnostic Test

Random and fixed effects panel analysis is mainly based on the Ordinary Least Square assumptions which if violated they are likely to lead to serious econometric problems such as biased and inconsistent estimates. The study carried out tests for heteroscedasticity and autocorrelation to check for validity of the model. Heteroscedasticity refers to an econometric condition that occurs when there is no continuous variation in the error word.

It results well into the violation of the Ordinary Least Square (OLS) which necessitates a constant variance of the error term, which is likely to result in inefficient predictions of regression. The study used Modified Wald test for GroupWise Heteroscedasticity.

On the other hand, Autocorrelation is an econometric problem that arises when two successive error terms seem to be correlated, a situation also referred to as serial correlation. Ordinary least square requires that error terms in a time series be independent of each other as this would lead to biased and inconsistent estimates rendering the inferences invalid. The study used Allerano and Bond test for autocorrelation.

CHAPTER FOUR

DATA ANALYSIS RESULTS AND DISCUSSION

4.1 Introduction

This section presents descriptive properties that give the overall characteristic of the variables in the study in the form of mean, standard deviation, kurtosis and skewness. These tests are deemed useful in assessing the normality property of the data. The section discusses association analysis, predictive pre-estimation measures such as unit root test and cointegration test regression analysis, and post-estimation diagnostic tests.

4.2 Descriptive Statistics

Descriptive statistics is the starting point and fundamental analysis that precedes empirical analysis. It is useful in enabling the researcher to have a feel of the data as well as detecting the presence of outliers in the data. It is essential as it gives a summary of data which informs the researcher about possible factors which needs to be put into consideration before preceeding with empirical analysis (Kothari 2004). Measures of central tendency and dispersion have been used in this respect to provide descriptive statistics of the factors being tested. Table 4.1 shows summary statistics of the different variables used throughout the study, namely Gross Domestic Product, Money circulation, Credit advanced to the private industry, Traded Stock Volume, Employment and Exports of High Technology. With the exception of housing, both factors are expressed in billions of dollars, workers are calculated in millions.

Table 4.1: Summary Statistics

Variable	Observation	Mean	Std. Deviation	Skewness	Kurtosis
GDP	100	15.4	1.76	0.1008	2.6201
BM	100	4.45	0.682	0.9682	2.9063
CPS	100	3.24	0.538	0.1976	2.8581
VTS	100	0.454	0.506	0.1382	2.6712
EMP	100	11.6	8.6	0.6049	1.742
TECH	96	0.198	0.331	0.3217	2.337

The results shown in Table 4.1 highlight the mean, standard deviation, kurtosis, and skewedness of the variables being studied. From the table, there were 100 observations for gross domestic product, broad money, private sector credit, traded stock volume, and employment. High technology exports had an observation of 96 because Burundi had a gap in data between 2009 and 2012, while Rwanda had missing data on the variable in 1999.

The mean for gross domestic product was USD 15.4 billion, Broad money (M3) had a mean of USD 4.45 billion, credit facilities advanced to the private firms had a mean of USD 3.24 billion, volume of traded stock had a mean of USD 0.454 billion, employment had a mean of 11.6 million people, while high technology export averaged USD 0.198 billion.

The standard deviation is a calculation of the degree to which information have extended from the norm. Larger standard deviation value means higher spread from mean data and vice versa. Table 4.1 depicts a standard deviation of 1.76 billion for the Gross Domestic product, broad money USD 0.682 billion, credit to private sector USD 0.538 billion, volume of traded stock USD 0.506 billion, employment 8.6 million, while high technology export had a standard deviation of USD 0.331 billion. All of these variables have a lower standard deviation than the mean, indicating that the data is not highly diffused from the mean.

Skewness is the degree of data imbalance, it measures how much the mean has deviated from the median. Skewness is critical in informing the researcher about the distribution of the data, this is important in informing the choice of the test to be conducted between parametric tests and non-parametric tests. Table 4.1 indicates the skewness coefficient of Gross Domestic Product was 0.1008, broad money was 0.9682, credit to private sector was 0.1976, volume of traded stock was 0.1382, employment was 0.6049, while high technology export had a skewness coefficient of 0.3217. The Skewness coefficients of all the variables in the study was less than 1 in absolute terms an indication that the data was normally distributed and parametric techniques should be used in significance testing.

Kurtosis on the other hand is a measure of how heavy the tail is in comparison to normal distribution. This measure is important in detecting the presence of outliers in the data, which is always shown by heavy tails (Kothari, 2004). A coefficient of more than 3 indicates the presence of kurtosis while that with less than three shows the absence of kurtosis and thus normal distribution. The output analysis in Table 4.1 reveals that all

parameters have a kurtosis coefficient of less than 3, which means that they are all light-tailed and thus distributed normally. If the information are usually distributed in economic models, then there is a decreased risk of producing extreme outcomes.

4.3. Correlation Analysis

Correlation refers to a statistical mechanism that indicates the strength and possible relationship between a given pair of variables. It is measured by means of a coefficient showing the degree of linear connection among two parameters. The index ranges from -1 to + 1, where values tending to 1 mean a strong and positive correlation, those tending to -1 mean a strong and negative correlation. While 0 values that tend towards zero in absolute terms signify weak correlation.

Table 4.2: Correlation Analysis

	LnGDP	**LnBM**	**LnCPS**	**LnVTS**	**LnEMP**	**LnTECH**
LnGDP	1					
LnBM	0.8916	1				
	(0.000)					
LnCPS	0.8040	0.9746	1			
	(0.000)	(0.000)				
LnVTS	0.3198	0.5461	0.5246	1		
	(0.012)	(0.000)	(0.000)			
LnEMP	0.9855	0.8965	0.8101	0.3829	1	
	(0.000)	(0.000)	(0.000)	(0.000)		
LnTECH	0.4549	0.5577	0.4861	0.5185	0.4865	1
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	

Note: The values in parenthesis denote P-values

Table 4.2 shows correlation results, From the table, the index of similarity between the natural log of Gross Domestic Product and broad money is 0.8916 and is statistical significance at 5% as shown in the P-value of 0.000. These outcomes indicate a strong and positive correlation between the two variables, a rise in broad money increases the GDP

and vice-versa. The interpretation of this is that money circulation in the economy would propel economic growth as it would facilitate more investment. Correlation between the amount of loans offered by financial institutions to the private firms and the GDP is 0.8040, this is an indicator that the two factors have a strong and positive relationship.The correlation between the natural log volume of traded stock and Gross Domestic Product is 0.3189 and significant at 5 percent, however, since the value is less than 0.5, the correlation can be said to be positively weak. The connection between employment and Gross Domestic Product is 0.9855 and is significant at 5%, so there is a strong and positive connection between GDP and employment. Finally, the log of high export technology and the log of GDP have a correlation coefficient of 0.4549 and this is statistically significant at 5 percent, an indication of a fairly weak correlation between technology level and GDP.

4.4 Pre-diagnostic Tests

4.4.1 Panel Unit Root Test

In order to avoid spurious regression problems, unit root testing is vital. This study adopted the Im, Shin and Pesaran (2003) approach to conduct unit root testing. The method was selected because it can be used on unbalanced data. The IPS system root approach's anti-hypothesis notes that all of the series included in the panel information is non-stationary, while the null hypothesis claims that they are stationary, implying they do not include the root unit. The findings are as shown in Table 4.3.

Table 4.3: Panel Unit Root Test

Variable	Statistic	In Levels	P-Value	Order of integration
LnGDP	t-bar	-2.8020		I(0)
	t-tilde-bar	-1.3627	0.087	
	Z-t-tilde-bar	-0.3829		
LnBM	t-bar	-2.1518		I(0)
	t-tilde-bar	-2.0431	0.0577	
	Z-t-tilde-bar	-1.5748		
LnCPS	t-bar	-2.5375		I(0)
	t-tilde-bar	-2.5093	0.0461	
	Z-t-tilde-bar	-1.0971		
LnVTS	t-bar	-4.8878		I(0)
	t-tilde-bar	-3.8891	0.000	
	Z-t-tilde-bar	-6.6844		
LnEmp	t-bar	-2.1388		I(0)
	t-tilde-bar	-2.0118	0.0684	
	Z-t-tilde-bar	-1.4881		
LnTech	t-bar	-2.5331		I(0)
	t-tilde-bar	-1.9295	0.0570	
	Z-t-tilde-bar	-1.5806		

Table 4.3 presents panel unit root results. It can be deduced from the Table it can be shown that all the data are stationary in levels as indicated by the T sand Z statistics. Consequently, the null hypothesis of existence in the unit root in the panel will be dismissed and will infer that the entire series is stationary.

4.4.2 Cointegration Test

The cointegration test is an integral part of panel regression analysis as it is useful in showing whether the series exhibits a long-run property. This study used the approach of Pedroni (2004) whose null stipulates that no cointegration exists in the series while the null states that cointegration is present in the series. Table 4.4 shows the results.

Table 4.4: Pedroni Cointegration Test

Test statistic	Panel	Group
V	.7464	-
Rho	-3.752	-2.991
T	-5.625	-5.769
Adf	-2.52	-2.863

From the cointegration result in Table 4.4, six out of seven statistics have values that are larger than 2 in absolute terms, this is an indication that the tests are Significant at 5%, so we reject the null hypothesis of no cointegration. It can, therefore, be affirmed that in the long run, the variables in the model move together.

4.4.3 Hausman Specification Test

Prior to performing the panel regression analysis it is vital to carry out tests to determine the suitable regression model to be used. In this regard, this study adopted the Hausman (1978) specification test to make a choice between the Random and Fixed effect models. According to Hausman (1978)' null hypothes, the random effect is compared to the fixed effect template, whereas the alternative theory suggests that the static effect is preferable

to the random effect. The Fixed Effect model makes an assumption of homogeneity whereas Random Effect model will allow for modeling heterogeneity across units. The outcomes are as shown in table 4.5.

Table 4.5: Hausman Specification Results

Chi-Square		**P-value**
Degrees of freedom	Statistic	
5	87.95	0.0000

Table 4.5 displays the Hausman model test results. The results show that the P-value is important at a significant rate of 5% and therefore the most fitting regression method is the fixed effect.

4.5 Regression Analysis

Fixed impact was defined as the correct template for the study from the Hausman definition experiment.

Table 4.6: Regression Results

Variables	Coefficients	Standard Errors	T-statistic	P-value
Constant	4.6025	0.51967	8.86	0.000
LnBM	0.4410	0.0524	8.41	0.000
LnCPS	0.4022	0.0796	5.05	0.000
LnVTS	0.1367	0.0199	6.88	0.000
LnEMP	1.2360	0.0798	15.50	0.000
LnTech	0.02325	0.0090	2.57	0.010
R-squared	Within=0.8524 Between=0.9928 Overall=0.9832			

4.6 Post-Estimation Test

Post-estimation tests were performed to ensure the model's validity and robustness. The research used updated Wald heteroscedasticity analysis for GroupWise to calculate whether or not the variation of the term of error was constant. The study also used a serial correlation measurement procedure proposed by Allerano and Bond.

Table 4.7: Post Estimation Diagnostic Tests

Modified Wald Test for GroupWise Heteroscedasticity
Chi2(5) = 7.77, Prob > Chi^2 = 0.1695
Arellano-Bond test for zero autocorrelation
Z=0.53044, Prob>z= 0.5958

Table 4.7 shows the results of the regression analysis of post-estimation studies. The results show that the model is homoscedastic as shown in the GroupWise heteroscedasticity modified Wald test by the P-value of 0.1695. On the other hand, the results show that there is no autocorrelation as indicated by the P-value of 0.5958 in the Allerano and Bond test for zero autocorrelation. Therefore the results of the regression model can be concluded to be effceicient and consistent.

4.7 Test of Significance

The random effect template, as shown in Table 4.8, can be said to be relevant. The model's F numbers was 103.50 and the P-value was 0.000. This means that the model was statistically significant and can be used to make a sound deduction on the parameter of the population. In addition, from Table 4.6 above, the model's overall R square was 0.9832 which means that the independent variable explains 98.32 percent of the model variation, so concluding that the model is a good fit.

Table 4.8: Test of Significance

F(4, 86) =	103.50	Prob > F = 0.0000

4.8 Interpreation of Findings and Discussion of Results

As projected, the coefficient for broad money is positive and important. This is demonstrated by the coefficient of 0.4410 and the P-value of 0.000, which means that a 10% rise in the broad money will result in a 4.41% rise in the Gross Domestic Product. The results are in concur with Bakang's (2007) work, which claimed that the central bank plays a critical role in financial deepening through the establishment of processes and legislation that enhance money circulation in the economy. The rate of growth in the economy's money circulation triggers the speed of money in the economy, and thus individuals can hold money for various reasons such as transactional, speculative, and precautionary. Hence, this improves overall economic activity that leads to economic growth.

The multiplier for the private sector's normal credit log is 0.4022, whereas the P-value is 0.000. Such results indicate that an increase in the amount of credit given to the private sector by 10 percent will result in an increase in GDP of 4.02 billion. The results are as predicted and are compatible with Onumwere's (2012) study, which found that private-sector credit is an important element of economic deepening that guarantees enhanced access to credit, which can add to an increasing level of Gross Domestic Product when channeled to investment and capital generation.

The natural log coefficient for the value of exchanged stock is 0.1367 and as shown by the P-value of 0.000 is significant at 5%. The findings can be translated as a rise of 10% in the volume of traded inventory leading to an increase of 1.36% in the gross domestic product and vice versa. Such results are in accordance with the findings of Chogi, Aduda and Murayi (2014), who considered the size of exchanged stock and GDP to have a positive effect. The study recognized the importance of capital market in financial deepening, the rationale was that volume of traded stock represents the rate of financial market investment, a situation which can only occur when there is high financial inclusion and deepening.

The employment log coefficient is positive, 1.2360 and as predicted statistically significant. The results show that a rise of 1% in employment will lead to an increase of 1.2 billion in Gross Domestic Product and vice versa. These results are consistent with Loan's (2013) work, which has shown that employment has a positive impact on GDP. This effect can be demonstrated by the fact that employment increases family income levels, resulting in increased saving and investment, and hence economic growth. Throughout turn, the state still experiences the impact of employment as a function of employment; minimal spending on the delivery of public services such as infrastructure, health and education is decreased, contributing to budget expenditures in social services. Full employment also leads to lower taxation as financial resources flow in the economy effectively resulting in economic growth.

Finally, the coefficient of the natural log of technology is 0.0235 and is statistically significant at 5% as shown by the P-value of 0.010. Technology in this study was proxied by the value of high technology export, the rationale for this variable was that a country produces the surplus after it has satisfied the domestic demand.

The results indicate that an increase in the value of high-tech exports by 10 percent will lead to a rise in GDP of 0.2 percent. The findings are consistent with Caliskan's (2015) study, which found that technological advance had a positive effect on economic growth. The rationale for these results is that technology has improved productivity in the economy's goods and services produced, as well as promote the transfer of economic resources that can stimulate the economy.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATION

5.1 Introduction

The section introduces the overview, the conclusion and the recommendations of the results of the study.

5.2 Summary of Findings

The goal of the analysis was to ascertain the impact of financial deepening on the Eastern African Community bloc's economic growth. To achieve this goal, large capital has been used to approximate the level of money supply, lending to the private sector has been used to reflect debt funding while the amount of trading stock has been used as a metric of financial market activity.

The study conducted pre-estimation studies using the I m, Pesaran and Shin technique, including panel group root analysis. The study found that all parameters were constant in rates, so there was no need to separate the results. The research also performed Pedroni co-integration tests and found that all variables are co-integrated and thus there is evidence of a long-term relationship between Gross Domestic Product and independent variables such as large capital, size of exchanged stock, private sector credit, level of jobs and innovation development.

The analysis used a set-effect correlation for panel data the Hausman Specification test told this option. To interpret the results as price elasticity, the parameters are translated into normal logarithms. The model's average decision factor was 0.9832, which implies that the

independent variables included in the system describe 98.32 percent of the variance in the Gross Domestic Product. After regress testing, the design was tested for post-estimation and it was determined that there is no existence off serial linkage and that the model was homoscedastic.

The coefficient for large money was 0.4410 and statistically meaningful from the results of the regression. Private-sector credit had a coefficient of 0.4022 and statistically significant, traded stock volume had a coefficient of 0.1367, which was also statistically meaningful. The level of employment had a coefficient of 1.236, while the natural log had a coefficient of 0.02325 for the level of technology. The model had a statistical F value of 103.50 with a P-value of 0.000 indicating that the model was fit and that the population parameter could deduce its coefficients.

5.3 Conclusion and Recommendations

In conclusion, the study's objective to analyze the effect of financial deepening on the EAC community bloc's economic growth was met. The research structure had developed that broad money, private sector credit, and traded stock volume as key financial deepening indices and had a positive impact on economic development.

The study found that large capital has a positive impact on the EAC's economic growth. This was in keeping with the financial intermediation concept, which implies that financial brokers play a vital role in financial deepening. The central bank establishes rules and offers financial distribution channels to ensure a smooth movement of money in circulation. It does so by offering a facilitating environment to boost the circulation of money in the economy for financial institutions and other financial brokers. Commercial

banks are helping to achieve this goal by spending and circulating capital through different vehicles in the country, thereby leading to economic growth. This is demonstrated by the positive and statistically meaningful coefficient of regression. Private-sector credit has been characterized by households ' ease of access to credit, which has been compounded by financial innovation and technology, and individuals can borrow credit from mobile apps. Most of these loans are used to boost business activities and thus promote expenditure in the EAC countries, resulting in a higher level of Gross Domestic Product. The third objective concludes that the quantity of traded stock has a positive impact on EAC economic growth. The financial market plays a critical role in financial deepening, reflecting the rate of financing in the financial market. This demonstrates that the capital market is working well as people invest in stocks, which in turn raises market efficiency, investment and growth. Broad money leads positively to economic growth as determined by the results. Therefore, it would be of concern to the central banks of the EAC government to place greater emphasis on the efficiency of money supply, investment and production by commercial banks that are the financial brokers. Second, EAC member states ' central banks must continue to implement measures to ensure low interest rates to encourage further credit access. Eventually, EAC member states ' capital market regulators must conduct awareness campaigns to encourage high stock market activity and other items on the capital market.

5.4 Limitations of the Study

The research was restricted by time constraints and was therefore confined to the countries of the East African region, so the result may not extend to the African Continental Free Trade Area recently formed by African economies. The analysis used secondary

information and used a period of 20 years, constrained by the lack of some data. However, secondary evidence does not reflect the short- or long-term impact of financial deepening.

The study developed a descriptive research design concept to assess the connection between financial deepening and economic growth in the East African Community on a 20-year horizon, but using the time series used in the study would have been sufficient to use cross-sectional design.

The research used annual data due to unavailability of the data, resulting in a relatively smaller data point. To increase the scope of the study, it would have been more prudent if the data were collected on an annual or semi-annual basis. The study was restricted in a few years by the lack of data on different variables. One such instance was encountered on high-level technology export data from Burundi. Over the past two decades, Burindi has been overshadowed by conflicts that led to the imbalanced data.

5.5 Suggested Areas of Further Studies

Recently, African countries have established the African Continental Free Trade Area which aims to unite all African economies, the analysis should be repeated to cover the entire African continent. The research focused on secondary information, but both secondary and primary data are used by future study college. Using questionnaires, interview guides, and observation, primary data can be collected. The incorporation of both secondary and primary sources will improve the comparison of meaning decision findings.

Future research should broaden and further investigate other factors that affect economic development and conduct studies on the contrast between short-term and long-term financial deepening due to conflicting accounts from previous studies. Future philosophers

should use either quarterly or semi-annual data to increase the number of findings since the present study collected data on an annual basis that reduces the number of findings. In the future, an analysis should be performed using an appropriate approach to evaluate unbalanced panel results. One of this method might be ause of dynamic data panel methodology such as the Generalized Least Squares approach which accounts for missing data as some variables are encountered by Burundi results.

REFERENCES

AL-Zubi, K., AL-Rjoub, S. & Abu-Mhareb, E. (2006). "Financial Development and Economic Growth: A New Empirical Evidence from The MENA Countries, 1989-2001*", Applied Econometrics and International Development*, 6(3), 137-150.

Alrabadi, D.W.H., & Kharabsheh, B. A (2016). Fianacial Deepening and Economic Growth. Case of Jordan. *Journal of Accounting and Finance,* 16(6), 158-169

Ang, J. (2007). Financial Deepening and Economic Development in Malaysia, Asian Business and Economics Research Unit, 19(10), 340-356.

Apergis, N., Filippidis, I., & Economidou, C. (2007). Financial Deepening and Economic Growth Linkages: A Panel Data Analysis. Review of World Economics. 143 (1): 179-198.

Bakang, M. (2007). Effects of financial deepening on economic growth in Kenya. International journal of business and commerce, 4(7), 2225-2436.

Buchichi, A. N. (2013). The impact of financial sector deepening on economic growth in Kenya. *International Journal of Social Sciences and Project Planning Management*, 1 (1), 41- 64

Burns, N. & Grove, S.K. (2003). Understanding Nursing Research, (3rd Ed.). Philadelphia: W.B. Saunders Company.

Calderon, C & Liu, L. (2002). The direction of causality between financial development and economic growth. *Journal of Development Economics*, 72, 321– 334.

Caloskan, H. (2015). Technological change and economic growth, retrieved from: https://www.sciencedirect.com/science/article/pii/S1877042815036538.

Chogii, R, Aduda, 0, & Murayi, T. (2014). The Effect of Capital Market Deepening on Economic Growth in Kenya. Journal of Applied Finance & Banking, 4(1): 141-159.

Choong, K., Yusop, Z., Law, H., Liew, V., & Sen, K. (2010). Financial Development and Economic Growth in Malaysia: The Stock Market Perspective. Working Paper Series, 3(1), 30-45.

Darrat, A.F. (1999), Are Financial Deepening and Economic Growth Causally Related? Another Look at the Evidence", *International Economic Journal*, 19(13), 319-35.

DeMarzo, P. (2004). The Pooling and Tranching of Securities: A Model of Informed Intermediation, Review of Financial Studies, 3(8), 100-134.

Elian, M. & Suliman, A. (2014). Does an Emerging Equity Market Stimulate Long-Term Economic Growth? Evidence from Jordan, *International Journal of Business*, 19(3), 291-309.

Fille. C. T (2011). Financial Development and Economic growth in Tanzania. Unpublished thesis. The university of Nairobi

FSD (2016). Financial Deepening and Economic Growth. Retrieved from https://www.fsdafrica.org/about-fsd-africa

Garrett, T.J. (2014). Long-run evolution of the global economy: 1. Physical basis. Earth's Future. 2 (3): 127.

Gberevbie, E. (2011). Leadership, the financial sector and development in Nigeria. Inkanyiso, Jnl Hum & Soc Sci, 3(2), 148-158.

Ghildital, V. Pokhriyal, K. & Mohan, A. (2015). Impact of financial deepening on economic growth in East Africa perspective. *Asian Development Policy Review*, 3(3), 49-60.

Goldsmith, R.W. (1969), *Financial Structure and Development*, New Haven: Yale University Press

Gorton, G. & Pennacchi, G. (2014). Financial Intermediaries and Liquidity Creation, Journal of Finance, 45(1), 49-71.

Hausman, J. A. (1978). Specification Tests in Econometrics. Econometrica. 46 (6), 1251-1271

Helpman, E. (2004). The Mystery of Economic Growth. Harvard University Press.

Ibrahim. R.A (2017) relationship between financial deepening and economic growth in Kenya. *Unpublished thesis.* The university of Nairobi, Kenya.

Im, K. S, Pesaran, M.H., & Shin, Y. (2003). Testing for Unit Root in Heterogeneous Panels. Journal of Econometrics 115:53–74.

Jung, W. (2006). Financial Development and Economic Growth: International Evidence. Economic Development and Cultural Change, (34), 333-346.

Kazeem, Y. (2017). Africa economic growth in 2016, retrieved from: https://qz.com/africa/994526/ethiopia-led-east-africas-economic-growth-in-2016/.

Kilimani. N (2013) Financial Deepening and economic growth in Uganda. *Journal of economics and business* 4(2), 56-83

King, R. G. & Levine, R. (1993). Financial indicators and growth in a cross section of countries. *Policy Research Working Papers*, Financial Policy and Systems, WPS 819, 1- 50.

Kothari, C.R. (2010). Research Methodology. Methods and Techniques. Delhi: New Age International Publishers.

Kvochko, E. (2013). Ways in which technology can help the economy. Retrieved from: https://www.sciencedirect.com/science/article/pii/S1877042815036538.

Lepenies, P. (2016). The Power of a Single Number: A Political History of GDP. New York: Columbia University Press.

Masoud, N. & Hardaker, G. (2013). Do Financial Market Lead to Economic Growth? A Causality Test in Jordan, *Journal of Investment and Management*, 2(5), 87-103

McKinnon, R. (1973), *Money and Capital in Economic Development*, Washington, D.C.: Brookings Institution

Mugenda, O.M., & Mugenda, A.G. (2010). Research Methods: Quantitative and Qualitative Approaches. Nairobi: Act press.

Ochanda, M. (2014). Effect of financial deepening on growth of small and medium sized enterprises in Kenya. International Journal of Sciences and Entrepreneurship, 3(10), 191-208.

Odhiambo, F.O. (2016). Effects of financial deepening on economic growth in Kenya, Unpublished Journal, University of Nairobi, Kenya.

Ohwofasa, J. (2013). Financial deepening and economic growth in Nigeria, 1986-2011: An empirical investigation. Journal of Economics and Development Studies, 1(1), 24-42.

Oldfield, G. (2010). Making Markets for Structured Mortgage Derivatives, Journal of Financial Economics, 57 (11), 445-471.

Onwumere, J., Ibe, I.G., & Mounanu, O. (2012). The impact of financial deepening on economic growth: Evidence from Nigeria. Research Journal of Finance and Accounting, 3(10), 44-64.

Onwumere, U. (2012). The impacts of financial deepening on economic growth from Nigeria. Research journals of finance and accounting, 3(100), 64-71.

Othiambo. N. (2005). Effect of financial development on economic growth in Tanzania. *African Finance Journal* 7(1):1-17

Pedroni, P. (2004). Panel Cointegration: Asymptotic and finite sample properties of pooled time series tests with application to PPP hypothesis. Econometric theory, 20 (3), 597-625

Pettinger, T. (2017). Investments and economic growth. Available at: https://www.economicshelp.org

Raghuram, G., & Luigi Z. (2003). The great reversals: the politics of financial development in the twentieth century (PDF). Journal of Financial Economics. 6(9), 5–50.

Rahman, M., & Mustafa, M. (2015). Financial deepening and stock market returns. Journal of Economic and Sustainable Development, 12(8), 120-145.

Sackey, F.G., & Nkurumah, E. M. (2012). Financial sector deepening and economic growth in Ghana. Journal of Economic and Sustainable Development, 3(8), 122- 140.

Saunders, M., Lewis, P., &Thornill, A. (2003). Reasearch methods for business students. London: Prentice Hall

Schweitzer, A. (1964). Big business in the Third Reich. Eyre & Spottiswoode

Schumpeter, J. A. (1911). The theory of economic development. Delhi: New Age International Publishers.

Shaw, E. (2013). Financial Deepening in Economic Development. Oxford University Press.

UNECA (2018). Assessing Regional Integration in Africa IX: Innovation, Competitiveness and Regional Integration.

Wohlner, H. (2016). Economic indicators of Gross domestic product. Retrieved from: https://www.investopedia.com/university/releases/gdp.asp.

World Bank (2009). Financial Deepening in Sub-Saharan Africa: Theory and Innovations. Industry and energy working papers, series no. 62.

APPENDICES

Appendix I: Data Collection Sheet

	GDP	Broad Money	Credit to Private Sector	Volume of Traded Stock	Employment	Technology
1999						
2000						
2001						
2002						
2003						
2004						
2005						
2006						
2007						
2008						
2009						
2010						
2011						
2012						
2013						
2014						
2015						
2016						
2017						
2018						

Appendix II: Data Collection Introduction Letter

UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS

Telephone: 020-8095398
Telegrams: "Varsity", Nairobi
Telex: 22095 Varsities

Tel: 020 8095398
Nairobi, Kenya

DATE: 9/10/2019

TO WHOM IT MAY CONCERN

The bearer of this letter GOGO PAMELLA of Registration Number D61/68416/2017 is a Master of Business Administration (MBA) student of the University of Nairobi.

He/she is required to submit as part of his/her coursework assessment a research project report
We would, therefore, appreciate if you assist him/her by allowing him/her to collect data within your organization for the research.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organization on request.

Thank you

UNIVERSITY OF NAIROBI
P.O. Box 30197 NAIROBI
02 OCT 2019

PROF JAMES NJIHIA
DEAN, SCHOOL OF BUSINESS

Appendix III: Data set

Year	Country	GDP_Growth	Broad_Money	Credit_to_private	Traded_Stock	Employment	Technology
1999	Kenya	1.96006E+12	3.0465E+11	2.02592E+11	97490000	4791210	20322312
2000	Kenya	1.94116E+12	3.24415E+11	2.39586E+11	37800000	4886180.4	11968910
2001	Kenya	2.06509E+12	3.40337E+11	2.47913E+11	39300000	4958164.8	12513396
2002	Kenya	2.06647E+12	3.59533E+11	2.55779E+11	37380000	5036972.4	17016637
2003	Kenya	2.09022E+12	3.95087E+11	2.66109E+11	200000000	5116603.2	35362359
2004	Kenya	2.1927E+12	4.41657E+11	2.82886E+11	283840000	5189086	22054521
2005	Kenya	2.33087E+12	5.01156E+11	3.45748E+11	504120000	5251226.4	16682841
2006	Kenya	2.5247E+12	5.50812E+11	3.69948E+11	1364270000	5427996.8	31568222
2007	Kenya	2.66981E+12	6.44295E+11	4.23934E+11	1127770000	5609943.6	40458269
2008	Kenya	2.69611E+12	7.7588E+11	4.93373E+11	742200000	5800037.6	82661150
2009	Kenya	2.86369E+12	8.9652E+11	6.2776E+11	198340000	5993623.6	70820567
2010	Kenya	3.06793E+12	1.04406E+12	7.13908E+11	793530000	6189523.6	86215335
2011	Kenya	3.21484E+12	1.27753E+12	8.59954E+11	917250000	6393251.6	99904495
2012	Kenya	3.42804E+12	1.52221E+12	1.13348E+12	1008100000	6605120	92661150
2013	Kenya	3.61432E+12	1.74129E+12	1.25637E+12	1804700000	6822332.4	90820567
2014	Kenya	3.78166E+12	2.00733E+12	1.50102E+12	1010900000	7043987.2	72063129
2015	Kenya	4.02134E+12	2.33639E+12	1.84047E+12	1683050000	7268630.4	22054521
2016	Kenya	4.24785E+12	2.6667E+12	2.14856E+12	1815820000	7499222.4	86682841
2017	Kenya	4.48116E+12	2.76451E+12	2.34846E+12	1683050000	7740962	71568222
2018	Kenya	4.87785E+12	3.01094E+12	2.39616E+12	1815820000	7985493.6	45768895
1999	Uganda	1.82979E+13	1.27737E+12	6.57223E+11	39800000	20415000.92	1704473
2000	Uganda	2.06419E+13	1.50911E+12	1.14275E+12	65420000	20373600.77	444599
2001	Uganda	2.13541E+13	1.65683E+12	9.12357E+11	105350000	20337599.95	2580127
2002	Uganda	2.28609E+13	2.06321E+12	1.43154E+12	55030000	20312999.73	3155138
2003	Uganda	2.43012E+13	2.4332E+12	1.25524E+12	102660000	20398500.82	3169206
2004	Uganda	2.59589E+13	2.64668E+12	1.26276E+12	114100000	20560501.1	1834548
2005	Uganda	2.76039E+13	3.10145E+12	1.38609E+12	139800000	20719800.57	9023698
2006	Uganda	3.07625E+13	3.62625E+12	1.36766E+12	156870000	20627400.97	60424366
2007	Uganda	3.36749E+13	4.42279E+12	1.16367E+12	411780000	20531700.9	23942454
2008	Uganda	3.56413E+13	5.78573E+12	2.96955E+12	348680000	20434799.19	4607480
2009	Uganda	3.80667E+13	6.7977E+12	3.55158E+12	340260000	20342999.27	3010160
2010	Uganda	4.0956E+13	9.38651E+12	5.96845E+12	365000000	20403000.64	6238424
2011	Uganda	4.49336E+13	1.05505E+13	7.58885E+12	510030000	23877700.04	1.49E+08
2012	Uganda	4.67743E+13	1.21231E+13	8.17032E+12	295840000	23989699.94	1.66E+08
2013	Uganda	4.87002E+13	1.32705E+13	9.05795E+12	321260000	24368750	8152925
2014	Uganda	5.0305E+13	1.52865E+13	1.15089E+13	463330000	24329200.36	10556376
2015	Uganda	5.4162E+13	1.70696E+13	1.33272E+13	460790000	29136240.69	7695449
2016	Uganda	5.57915E+13	1.89719E+13	1.44014E+13	319568571	29053081.51	7556939

2017	Uganda	5.77374E+13	2.13967E+13	1.56058E+13	449585432.6	29058538.51	7081459
2018	Uganda	5.6162E+13	2.20696E+13	1.61089E+13	461210000	29065681	10556376
1999	Tanzania	1.55273E+13	1.21753E+12	8.3536E+11	412580000	15136593	5866513
2000	Tanzania	1.63142E+13	1.39769E+12	8.7327E+11	638860000	15557619	1242797
2001	Tanzania	1.75302E+13	1.87611E+12	7.70011E+11	965680000	15991553	1476671
2002	Tanzania	1.91441E+13	2.35557E+12	9.25289E+11	926520000	16440046	700049
2003	Tanzania	2.02311E+13	2.77884E+12	8.83987E+11	500240000	16907414	1521466
2004	Tanzania	2.15647E+13	3.15378E+12	1.0406E+12	771260000	17400449	1106791
2005	Tanzania	2.33106E+13	4.25073E+12	1.84635E+12	476050000	17923728	1533315
2006	Tanzania	2.45973E+13	5.16446E+12	2.02751E+12	1056370000	18467737	1149067
2007	Tanzania	2.67704E+13	6.22359E+12	2.83137E+12	2936580000	19052390	4891077
2008	Tanzania	2.80991E+13	7.45878E+12	4.2212E+12	1352320000	19673588	11252821
2009	Tanzania	2.97705E+13	8.78014E+12	5.12025E+12	1032860000	20317814	16203276
2010	Tanzania	3.19358E+13	1.10127E+13	6.79843E+12	484040000	20977917	24738032
2011	Tanzania	3.46234E+13	1.30213E+13	9.09357E+12	512100000	21648145	40986194
2012	Tanzania	3.60794E+13	1.46636E+13	1.10455E+13	399910000	22388425	94598416
2013	Tanzania	3.8495E+13	1.61068E+13	1.29472E+13	412580000	23117961	44156835
2014	Tanzania	4.11947E+13	1.86142E+13	1.60639E+13	735840000	23845195	22713535
2015	Tanzania	4.42883E+13	2.21153E+13	2.03744E+13	364530000	24618402	8771922
2016	Tanzania	4.8706E+13	2.28779E+13	2.08909E+13	305770691	25423650	15624539
2017	Tanzania	5.10171E+13	2.84588E+13	2.10455E+13	377300000	26306084	15651169
2018	Tanzania	5.22883E+13	2.87801E+13	2.29472E+13	435840000	27235398	15714539
1999	Rwanda	1.70806E+12	98707310000	89482280000	139480000	3705711	9718
2000	Rwanda	1.87912E+12	1.14132E+11	88263000000	185910000	3899353	
2001	Rwanda	2.02543E+12	1.19038E+11	88688790000	48860000	4059999	22904
2002	Rwanda	2.2733E+12	1.36769E+11	86085540000	54850000	4186632	9272199
2003	Rwanda	2.29336E+12	1.60754E+11	1.20059E+11	51110000	4294136	492728
2004	Rwanda	2.48116E+12	1.89122E+11	1.04451E+11	100660000	4395745	680391
2005	Rwanda	2.71707E+12	2.25229E+11	1.08732E+11	139480000	4505848	979440
2006	Rwanda	3.07432E+12	2.84539E+11	1.26085E+11	270520000	4631678	674188
2007	Rwanda	3.31606E+12	3.79611E+11	1.79309E+11	94590000	4763230	1167746
2008	Rwanda	3.54014E+12	4.44704E+11	2.35581E+11	68090000	4897881	930199
2009	Rwanda	3.81718E+12	4.62252E+11	2.19635E+11	36470000	5037796	4560864
2010	Rwanda	4.076E+12	5.55527E+11	2.83146E+11	48560000	5181830	933635
2011	Rwanda	4.42262E+12	7.25151E+11	3.60861E+11	48770000	5324058	1403086
2012	Rwanda	4.7939E+12	8.22499E+11	6.04502E+11	44090000	5473265	1040410
2013	Rwanda	5.02148E+12	9.2513E+11	6.14598E+11	67360000	5629582	2076903
2014	Rwanda	5.46623E+12	1.07849E+12	9.46248E+11	61460000	5788485	6554503
2015	Rwanda	5.99686E+12	1.27764E+12	1.14379E+12	88800000	5949418	7610522
2016	Rwanda	6.42216E+12	1.39118E+12	1.26312E+12	73870539.1	6116453	4882829
2017	Rwanda	6.86859E+12	1.46225E+12	1.43977E+12	105439585.2	6296321	4403086

2018	Rwanda	6.92216E+12	1.55553E+12	1.6146E+12	170520000	6480403	5040410
1999	Burundi	1.09153E+12	93237400000	1.19187E+11	32496666.67	2677085	2358
2000	Burundi	1.08235E+12	1.07731E+11	1.35572E+11	12600000	2714429	392
2001	Burundi	1.09487E+12	1.25412E+11	1.73362E+11	13100000	2802498	57
2002	Burundi	1.14549E+12	1.63268E+11	2.0191E+11	12460000	2905730	7034
2003	Burundi	1.12295E+12	2.04083E+11	2.23581E+11	66666666.67	3020850	98465
2004	Burundi	1.19439E+12	2.24954E+11	2.58225E+11	94613333.33	3142756	251014
2005	Burundi	1.20824E+12	2.80589E+11	2.82284E+11	168040000	3267144	119141
2006	Burundi	1.28438E+12	3.44175E+11	3.7432E+11	454756666.7	3388958	154570
2007	Burundi	1.31835E+12	3.61227E+11	3.49443E+11	375923333.3	3513541	20353
2008	Burundi	1.38544E+12	4.82732E+11	3.77751E+11	247400000	3639043	698983
2009	Burundi	1.43649E+12	5.652E+11	4.98115E+11	66113333.33	3764253	
2010	Burundi	1.52665E+12	7.06364E+11	6.66363E+11	264510000	3888282	
2011	Burundi	1.56907E+12	7.55802E+11	8.34896E+11	305750000	3983756	529859
2012	Burundi	1.61874E+12	8.77253E+11	9.70505E+11	336033333.3	4081386	
2013	Burundi	1.73046E+12	9.86749E+11	1.03804E+12	601566666.7	4181126	446314
2014	Burundi	1.80419E+12	1.10709E+12	1.22893E+12	336966666.7	4283003	48346
2015	Burundi	1.83795E+12	1.10638E+12	1.48603E+12	561016666.7	4422039	345775
2016	Burundi	1.78816E+12	1.1871E+12	1.74743E+12	605273333.3	4568419	762143
2017	Burundi	1.73046E+12	1.49951E+12	1.9858E+12	561016666.7	4720326	216030
2018	Burundi	1.80419E+12	1.50638E+12	1.98603E+12	605273333.3	4867642	196739

Appendix IV: GDP Trends for EAC Countries