

**THE EFFECT OF DOMESTIC BORROWING ON CAPITAL MARKET  
DEVELOPMENT IN EAC MEMBER COUNTRIES**

**BY**

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## DECLARATION

This research project is my original work and has not been submitted in any other university.

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This research project has been submitted for examination with my approval as University  
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To all of you, kindly accept my appreciation for your support. May God abundantly bless you.

## **DEDICATION**

I dedicate this research paper to my husband Onesmus Ngogoyo and my children Wisdom Nguro and Wangeci Ngogoyo .Words cannot be enough to express how privileged I am to have you as my pillar and source of encouragement.

# TABLE OF CONTENTS

<b>DECLARATION.....</b>	<b>ii</b>
<b>ACKNOWLEDGEMENTS .....</b>	<b>iii</b>
<b>DEDICATION.....</b>	<b>iv</b>
<b>TABLE OF CONTENTS .....</b>	<b>v</b>
<b>LIST OF TABLES .....</b>	<b>ix</b>
<b>LIST OF FIGURES .....</b>	<b>x</b>
<b>ABBREVIATIONS.....</b>	<b>xi</b>
<b>ABSTRACT.....</b>	<b>xii</b>
<b>CHAPTER ONE .....</b>	<b>1</b>
<b>INTRODUCTION.....</b>	<b>1</b>
1.1 Background of the Study.....	1
1.1.1 Public Debt.....	2
1.1.2. Capital Market Development.....	3
1.1.3. Public Debt and Capital Market Development.....	4
1.1.4. EAC Member Countries .....	5
1.2. Research Problem.....	8
1.3. Research Objective.....	10
1.4. Value of the Study.....	10

<b>CHAPTER TWO .....</b>	<b>12</b>
<b>LITERATURE REVIEW .....</b>	<b>12</b>
2.1. Introduction .....	12
2.2. Theoretical Review .....	12
2.2.1. Keynesian Model .....	12
2.2.2 David Ricardo Theory.....	13
2.2.3 The Debt Overhang Theory .....	14
2.3 Determinants of Capital Market Development .....	15
2.3.1. Government Policies.....	15
2.3.2 Inflation.....	15
2.3.3 Interest Rates.....	16
2.4. Empirical Review .....	16
2.5. Conceptual Framework .....	21
2.6 Operationalization Matrix .....	22
2.7. Summary of the Literature Review .....	23
<b>CHAPTER THREE .....</b>	<b>27</b>
<b>RESEARCH METHODOLOGY .....</b>	<b>27</b>
3.1. Introduction .....	27
3.2 Research Design.....	27

3.3 Population.....	27
3.5. Data Collection.....	27
3.6. Diagnostic Tests .....	28
3.6.1 Tests of Normality .....	28
3.6.2 Multicollinearity Tests .....	28
3.7. Data Analysis .....	28
3.7.1. Test of Significance .....	29
<b>CHAPTER FOUR.....</b>	<b>30</b>
<b>DATA PRESENTATION AND DISCUSSION OF FINDINGS .....</b>	<b>30</b>
4.1 Introduction .....	30
4.2 Descriptive Statistics .....	30
4.3 Diagnostics Tests.....	31
4.3.1 Normality Test .....	31
4.3.2 Multicollinearity Tests .....	32
4.4 Correlation Analysis.....	33
4.5 Regression Analysis .....	34
4.6 Interpretation of the Findings .....	37
<b>CHAPTER FIVE .....</b>	<b>38</b>
<b>SUMMARY, CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>39</b>

5.1 Introduction .....	39
5.2 Summary of Findings .....	39
5.3 Conclusion.....	41
5.4 Recommendations .....	42
5.5 Limitations of the study.....	43
5.6 Suggestions for Further Research .....	44
<b>REFERENCES.....</b>	<b>45</b>
Appendices I: East African Countries .....	48
Appendices II: Data Collection Template.....	49
Appendices III: Plagiarism Report.....	51



## LIST OF TABLES

Table 2.1: Operationalization Matrix.....	22
Table 2.2 Summary of the Literature Review.....	23
Table 4.1: Descriptive Statistics .....	30
Table 4.2: Multicollinearity Results .....	33
Table 4.3: Correlation Matrix .....	33
Table 4.4: Model Fitness.....	35
Table 4.5: Analysis of Variance (ANOVA) .....	35
Table 4.6: Regression of Coefficients.....	36

## LIST OF FIGURES

Figures 2.1: Conceptual Framework.....	22
Figure 4.1: Histograms of Residuals.....	32

## **ABBREVIATIONS**

**ANOVA:** Analysis of Variance

**EAC:** East African Community

**GCF:** Gross Capital Formation

**GDP:** Gross Domestic Product

**IMF:** International Monetary Fund

**KEBS:** Kenya Bureau of Statistics

**NBFIs:** Non-financial institutions

**TDV:** Total Debt Value

**VIF:** Variance Inflation Factors

**WB:** World Bank

## ABSTRACT

In EAC countries, governments have been using public debts (domestic and international debts) to fund their budgets and expenditures. Compared to other parts of Africa, the EAC is one of the developed regions in Africa. The objective of the study was to examine the impacts of domestic public debt on the capital market development in East Africa community member countries. The study variables used were domestic public debt, inflation rates and interest rate on capital markets development. Keynesian Model, David Ricardo Theory and The Debt Overhang Theory informed the study. This study adopted the descriptive study design. This study used 5 EAC capital markets as its population. The countries that include Kenya, Uganda, Burundi, Rwanda and Tanzania were chosen as the population since they have similar regulations in relation to domestic public debt. Due to the small population, no sampling was conducted. This data was obtained from various sources that include East African Countries Central Banks, World Bank information, National Treasury Public Debt Department and Kenya Bureau of Statistics. Examples of data collected in this case include EAC countries Total Debt Value, inflation rate interest rates and Gross Capital Formation. Regression of coefficients results showed that domestic public debt and capital markets development are positive and significantly related ( $r=4.518$ ,  $p=0.030$ ). The results further indicated that inflation and capital markets development are negatively and not statistically significant ( $r=-0.093$ ,  $p=0.116$ ). It was further established that interest rate and capital markets development were positively and significantly related ( $r=0.345$ ,  $p=0.003$ ). Based on these findings, the study recommends on continued deepening of the capital markets to lengthen further the maturity profile of domestic debt and diversification of the investor base. The study further recommends on continued implementation of policies to support macroeconomic stability and faster economic growth. This includes restructuring public debt towards external borrowing which is comparably cheaper than domestic debt, and rationalization of recurrent expenditures to contain the widening deficit in the primary balance would be necessary in the medium-term to ensure that public debt remains on a sustainable path to allow for capital markets development. The study independent variables were only able to cover a section of the effect on capital markets development as shown in the regression model. Therefore, further research should be conducted to investigate the other factors that affect the capital markets development such as exchange rates, money supply and budget deficits. Behavioral factors should be studied in order to establish whether they affect capital market development. The impact of political risk on capital market development in East Africa Countries should also be examined to determine whether the political environment affect the development of the stock market. It will also recommend policies and measures which will cushion on the same. The study recommends further research on the factors that formulate the capital markets development i.e. market capitalization since the listed companies may vary from year to year in performance which in turn affects the market capitalization of the country per annum, GDP and other factors in the Economy that affect the development of financial markets development.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Government requires a lot of resources when it comes to public expenditure. When taxes are not enough to provide the bulk of revenue, governments engage in public borrowing that bridges the gap between the receipt and expenditure. Public debt whether international and domestic is one of the macroeconomic indicators of a country's economic growth. Through the public debt position, various international markets are in a position to form a country's image. As International Monetary Fund (2010) argues in its work; reasonable levels of borrowing may enhance a country's economic growth. As long as the country ensures that the borrowed funds are used for productive investments, domestic debt is a good source of country's capital. In his work, Nasieku (2016) defines domestic debt as the debt that the government owes to the holders of the government securities. This debt is divided into two that is the debt receipts and the debt disbursements. According to a study that was conducted by Babu et al. (2015), such economic development comes through capital accumulation and productivity growth that happens courtesy of the domestic and international public debt. Despite the many pros of domestic debt to developing governments, such debt also has severe cons on the economy especially when not well balanced with the anticipated economic growth.

In his theory of neutrality, Barro (1982) argues that the giving of debts never affects the wealth aggregate demand or interest rates. According to a study by Barro and Grilli (1994), the neutrality theory only functions to provide for the government to balance both expenditures and public revenues. In East Africa, the domestic debt absorbs a major part of the government's revenue that

should have been used in various development projects. When compared with the stock of internal debt, it turns out that the domestic public debt is more harmful to the East Africa government's economy because of the shrinking resources of funds planned for the development projects. This study focused on the effects of domestic debt on capital market development. In many ways, the financial market is symmetrical to the country's public debt. With a good public debt management, countries are in a position to grow their economy and stabilize it through the mobilization of resources that requires a low borrowing cost.

Despite the fact that some EAC countries have been in a position to control their public debt, other countries for example Kenya is going beyond the radar thus adversely affecting the economy. In EAC countries, governments have been using public debts (domestic and international debts) to fund their budgets and expenditures. As Meensel (2012) notes, the EAC community uses public debt and loans towards financing the infrastructure projects among many other projects. Compared to other parts of Africa, the EAC is one of the developed regions in Africa. In this study, the effects of public debt on capital development market of Rwanda, Uganda, Kenya, Tanzania, Burundi and Uganda were be assessed.

### **1.1.1 Public Debt**

Public debt is basically debt owed by a government to the holders of government securities. It consists of liabilities that a country's citizen and government owe. Domestic borrowing involves borrowing of government securities such as T-bills, T-bonds and infrastructure bonds thus internal borrowing. Public debt could also be external acquired from the international markets. According to Kandie (2015), domestic debt is borrowed in local currency and is shielded from foreign exchange risks while external debt is borrowed in foreign currency. Public debts are meant for

development of government projects, meet budget deficits and in any case of adverse situations such as war and natural disasters: be able to finance such expenses.

In this study, public debt as an independent variable is measured as a percentage of a country's GDP and when managed in a prudent manner; it ensures that a country reduces its borrowing cost, mitigates foreign exchange fluctuations and also prevent debt accumulation. Public debt therefore should be monitored so that it is not too high and also ensure that the funds collected are appropriately allocated to fund the governments development projects. It is hypothesized that the change (Increase or decrease) of the independent variable will affect the capital market development that is the dependent variable.

Public debt is mainly influenced by some indicators which could be interest rates and inflation rates. When the interest rates are high the public will actively engage in the capital market participation since they speculate a high return on their investments and hence the government will have more access to resources to finance its projects. Inflation on the other hand ,will negatively affect public debt. This is due to the fact that inflation will have an impact on the real interest rates causing interest rates to lower hence low return on investments.

### **1.1.2. Capital Market Development**

A capital market is a financial market where debt and equity securities are bought or sold. These markets channels wealth of savers to long term users who will put the resources into productive use. Capital market development is very key in contributing to economic growth of a country which helps in bringing together savings that will be used in a country's development. Stable capital markets are a good indicator of continued economic growth and a mitigate of financial

risks. The development of such strong and stable markets requires regulatory frameworks to ensure continued capital market supervision and development.

Capital market development being the dependent variable in this study is influenced by the following three independent variables that include the interest rate, the inflation rate and the domestic public debt. Independent variables are the variables that are changed and controlled in scientific experiments to test its effects on the dependent variable. It is usually measured as ratio of the gross capital formation to the GDP. The increase or decrease of the independent variables will either affect the capital market development negatively or positively. The effect of one variable to the other will be measured through the destructive survey method.

### **1.1.3. Public Debt and Capital Market Development**

There is a correlation between the dependent and the independent variables in this study. For example, it is hypothesized that the performance of these capital markets is affected by the independent variables shift. For example, when the domestic public debts get high, it influences the factors that cause distress of the financial market performance.

According to Babu (2015), reasonable domestic borrowing may enhance a country's economic growth that happens through capital accumulation and productivity growth. For example, countries that are at early stages of development tend to have small stocks of capital that it becomes hard to finance their projects. When such a country borrows money and uses it for productive investment, it does not suffer from macroeconomic instability and sizable adverse shocks among others. Through growth from the debt, timely repayment of debts happens (Mogaka and Ochieng, 2018).

The Kenyan government has been financing its development plans using the public debt for many years since the budgetary situation of the government has always been a deficit. In this case, a part



of the deficit is met through domestic debt and as a result, the Kenyan volume debt continues increasing. Despite its advantages, public debt has its implications especially when the government fails to keep the debt obligations. According to a study that was conducted by Maana, Owino and Mutai (2008), failure to meet debt obligations leads to severe economic sabotage.

#### **1.1.4. EAC Member Countries**

Capital market development has for many years been influenced by various economic factors either negatively or positively. Examples of these factors include the inflation rate, political climate, government policies, and lending rates among many other public finance management policies. In many of the poor countries globally, public debt remains a major economic policy issues. According to a study that was conducted by Chepkoiwo (2011), the debt levels especially among the Highly Indebted Poor and Low income countries have raised major concerns on financial institutions both locally and internationally.

When these factors are in place, they end up affecting the capital market development positively or negatively. An effective allocation of financial resources is largely affected by inflation. In East Africa among many other developing nations, investments are spearheaded by governments. In most cases, the real interest rate is the one that affects the investments.

When the rates of the borrowing go high, many people shun off from taking loans for various development activities because the outputs may turn out to be less compared to the inputs. However, the rising rates of the external indebtedness have caused various countries including Kenya to settle on domestic borrowing that has its cons and pros. In Kenya, the rise of indebtedness required an amortization from the foreign exchange that greatly increased the country's vulnerability. According to a study that that was conducted by Abbas and Christensen

(2007), it is evident that increase in real estate rates rarely affects the private investments. However, another study by Matwang'a (2000) argued that debt service ratio adversely affects the private investment. In addition, economic growth of countries may also affect the interest rate levels in various ways. For example, when a country's GDP goes high, it in a way forces the central bank to raise its interest rate that works by slowing the economic growth. Reduction in the real interest rates works by increasing the economic value where the investors get in a position to get loans for investments among many other developments.

When it comes to inflation, it is correlated with capital market development. In many ways, an appropriate allocation of the financial resources is affected by inflation. Inflation rates have a negative relation with capital market development where its increase leads to a low capital market development. As Brauninger (2003) argues, having a great nominal equity return in a low inflation country does not mean more inflation. As Brauninger (2003) argues in his work, a country's inflation is negatively correlated to its capital market development.

Another variable that affects the capital market development of a country is the government policies. The legal and broader institutional environments play an important role when it comes to capital market development. Policies and rules that protect investors define the property rights and contractual arrangements that affect the capital markets. In this case, many countries and especially the developing ones are experiencing financial crises. The governments in such countries are working hard to ensure that they restore the economy through Fiscal and Monetary policies. As Alemayehu (2002) argues, governments have the ability to tax and regulate the financial markets of a country that ends up affecting the capital markets development. Another way the government affects capital development is through the creation of political environments. For example, political instabilities that include wars, coups, and insecurities among many other uncertainties

affect economic activities. A government can either create a conducive or a harmful environment that affects economic activities. With less economic activities, the government finds itself borrowing more money to fund its projects. In summary, countries that have government policies that enhance economic activities tend to grow their economies faster.

Many of the EAC member countries have experienced high public debt rates. In Kenya for example, the current public debt stands at 4.884 trillion Kenyan Shillings. According to the report by Trading Economics (2017), this is about 56.4% of the country's GDP. According to IMF, the recommended ratio of the public debt to GDP is 40% and below that shows that the country's public debt is rising to dangerous levels. In Tanzania, the country recorded a debt of 37.40% of the country's GDP in 2017 where as Uganda was at 38.60% of the country's GDP. From 1997 until 2017, Uganda's public debt has averaged at 43.04 %. Burundi's public debt to GDP has been an interesting one: in 2017, the country recorded a public debt of 14.40% of the country's GDP. The country's debt averaged at 94.54% of the GDP and has ever reached up to 172.70 in 2004 and as low as 14.40% in 2017. In 2017, Rwanda recorded a debt equivalent of 40.20% of the country's GDP. On average, the country has recorded a debt of 58.90% reaching to 119.50% in 1995 and as low as 19.50% in 2008 (Trading Economics, 2017).

EAC Countries are known to be one of the developed regions in Africa. Since 2000, the EAC countries have been performing well when it comes to development compared to various countries in Sub-Saharan Africa. However, the EAC countries growth has been uneven. For example, Uganda's growth acceleration started way back before other African countries where their per capita income growth averaged at 3.4%. Other countries for example Rwanda and Tanzania have been strong despite the stagnation in growth has been experienced by Kenya for a certain period of time.

## **1.2. Research Problem**

The main focus of this study is getting to understand the correlation between domestic public debt and East Africa capital market development. In many ways, the capital market is symmetrical to the country's public debt. In many developing countries, governments have given much attention to domestic debt compared to external indebtedness. According to a study that was conducted by Akram (2010), issuing of the domestic debt involves complex assessments that involve costs and benefits. Management of the public debt leads to economic growth and stability since it requires low borrowing costs and a reduced financial risk exposure. Despite the fact that domestic borrowing has many advantages; it also has negative impacts especially when it goes beyond a sustainable amount. Domestic debt affects a country's inflation rates, interest rates among many other factors. Through this study of how various concepts are affected by domestic borrowing, various governments will clearly understand the effects of domestic borrowing on their capital market development and align their domestic debts from the capital market institutions that will finally promote the development of the capital markets.

When it comes to the development of a market, instruments of debt becomes important. When a country takes large amounts of domestic debt, debt servicing costs largely increase that negatively affects the capital market development. In East Africa, countries have been performing differently when it comes to public debt. In Kenya, the policymakers have been increasing domestic borrowing that is affecting the economic growth. In Burundi, the government uses domestic borrowing to finance various infrastructure projects. For many years, governments' domestic debt has been affecting many countries' capital market development. However, many countries cannot survive without the use of such debts. In various countries in the world, high public debt has adversely been affecting various countries as Brauninger (2003) argues in his work. Because of

the lack of adequate information regarding the topic, many countries are making mistakes that could have been easily eliminated. The lack of adequate information regarding this topic makes this topic worth studying. In many ways, a well-managed public domestic debt leads to a great economic growth and stability. When the domestic public debt growth increases, the capital markets develop. However, when the debt goes beyond the sustainable amounts, it results on a negative effect on the government. Because of the increased interest rates, the investors are highly discouraged.

As Abbas and Christen (2007) argue in their work, increased real interest rates results in a financial liberalization among other reforms that were adopted in 1980. The concerns of Africa economy instability and high interest burdens are linked to domestic borrowing on the macro-economic elements. With the knowledge of how various factors affect the capital market development, it becomes easier for the government to manipulate the dependent variables.

The effects of domestic debt borrowing have been a major issue in Kenya among many East African countries. Since 2008, the detail of Kenya's debt burden is quite disheartening. As of August 2008, the public debt was at Kshs. 867 billion according to Kobey (2016). Currently, this debt has continued to increase at a high rate that is quite alarming. According to a study that was conducted by Nord, Harris & Giugale (2013), the increase of the Kenyan external debt is largely eroding the country's sovereign rating. Because of the limited studies on the effects of domestic debt on capital market development, getting research papers done by other scholars was a bit of a challenge. Thus, this created a research problem where the impacts of domestic debt need to be understood. What are the effects of domestic debt on capital market development on EAC member countries?

### **1.3. Research Objective**

The core objective of this study was to examine the impacts of domestic public debt on the capital market development in East Africa community member countries.

### **1.4. Value of the Study**

This study will be of help capital market stakeholders that include the academicians and scholars, EAC governments, investors, financial market players, and policy makers among others. These stakeholders will find this information of importance since it will help them to understand the role that they play when it comes to the country development. They will also get to understand how the domestic debt increases the capital market development and how reducing the external public debt will affect the country's interest rates. When it comes to academicians and scholars, this study will help them gain knowledge and even make them appreciate the role of domestic debt and capital market when it comes to an economy of a country. Also, the study will offer them an opportunity to do more study regarding the topic to fill the existing research gaps and through this, they will be in a position to identify topics for further studies that may be done in future.

Another beneficiary of this study is the EAC governments and especially the government of Kenya. Through this study, the government will clearly understand the effects of internal debts and in this case, it will work on aligning its internal debt borrowing from its capital markets that will work by promoting the development of the capital markets. When it comes to the policymakers, the information provided by this study will assist them in coming up with laws that benefit the country when it comes to capital market development. Because of the lack of knowledge, many policymakers have come up with laws that have deteriorated the country's domestic debt position. For example, when policymakers come up with laws to excessively

increase on domestic borrowing, this will end up adversely affecting the country's economic growth. With this knowledge, policymakers will make more prudent decisions.

When it comes to investors among other financial market players, knowledge on the effects of domestic debt on capital market development will assist them in making investment decisions. In many cases, both local and international investors choose to invest in a country that is economically stable. For many years, the domestic debt position has been used as one of the ways of gauging the country's economic state. Through this study, investors among many other financial market players will make prudent decisions.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1. Introduction**

The literature review part of this study explores related works on domestic debt effects on capital market development. This chapter reviews the determinants of capital market development. The chapter also conducts a review of the empirical literature and a summary of the literature review with intentions of identifying the research gaps that exists.

#### **2.2. Theoretical Review**

From an analysis of previous research and theories touching on the issue, it was evident most of theories on this issue touches on the effects of domestic public debt on capital market development. From an extensive research, many of the theories found touched on public debt while few others dealt with the financial intermediaries that various EAC countries use. In this case, this part of the review explored theories that deal with general capital market development and public debt. Some of the theories that were explored in this section include Keynesian model, David Ricardo theory on public debt and debt overhang theory

##### **2.2.1. Keynesian Model**

In his attempts to understand the great depression, John Keynes developed the Keynesian model back in 1930s. According to Keynes, the increase of the public debt through multiple effects ends up raising the National income. Keynes linked public borrowing with deficit financing that authorizes the government to borrow for all purposes that result to an increased demand in the economy that ends up increasing employment and output. This model is a macroeconomic model in that it follows the Keynesian economic principles (King, 1993).



The Keynesian model has three macroeconomic sectors that include the two sectors, three sectors and four sectors. This model has in the past been used to analyze various factors that include business cycles, monetary and fiscal policies. According to this model, public debt does not have a direct burden to the economic growth. However, an effect comes when expenditure is experienced. When it comes to the internal debt, this is the debt that the government owes to itself and may not contribute anything to the country's resources. On the other hand, external debt adds resources to the country as Mogaka (2017) notes. This model also explains what happens when a government enters a capital market to borrow. When the government goes to the banks to borrow, the banks have surplus since businesses that are regular customers are in most cases reluctant to borrow. Because of the businesses' increased capacity, they cannot borrow to create more. Lack of the private sector loan demand increases the bank's willingness to lend more finances to the government at a low interest (Mwakima, 2017). Through this model, one gets to understand the government's spending and the effects it has on outputs and inflation

### **2.2.2 David Ricardo Theory**

In this theory, Ricardo and Churchman (2001) argue that the society's burden from the government spending is as a result of the wastage use of the expenditure. According to this theory, there are many allocative effects of tax burden on the economy that comes from public borrowings. In this theory, Ricardo said that the government's wastage use of the debts borrowed affects its citizen as according to the Ricardian equivalence theorem. In this case, it doesn't matter where the government gets its money either through debts or taxation but what matters is its usage.

When a country uses public debt to finance its projects, citizens tend to pay less money but future generation will have to pay more (Contessi, 2012). Through this theory, the study will examine the effects of government's public debt misappropriation and its effects on the future generations.

### **2.2.3 The Debt Overhang Theory**

The debt overhang theory by Krugman explains the sustainability of the external debts. According to Barro and Grilli (1994), who is the theory's author, debt overhang is a presence of an existing inherited debt where creditors lack confidence with the borrower. According to this theory, a likelihood of the country's inability to pay debt discourages further domestic and foreign investment. As Adofu and Abula (2010) notes in their work, a heavy debt burden impedes the economic growth especially in developing countries. Also, high debts tend to highly undermine the macroeconomic stability since budget deficits are increased. When a country is not in a position to pay its debts, the debtor country don't invest and the country is unable to meet debt obligations unless they take new loans as well as debt relief. Another way debt overhang affects the economic growth is the fact that large debt stock increase expectations that debt service will be financed through distortionary measures. As Adofu and Abula (2010), the future taxes uncertainty for private domestic agent affects the domestic economy.

In various countries where the indebtedness is heavy, debt overhang becomes the main cause of a slow economic growth. According to this theory, a slow economic growth can be explained by noting that a country that is serving debts may use all of its resources on that. In this case, the potential of gaining returns from the government's activities are challenged. As Cunningham (1993) argues in his work, debt overhang is not as a result of debt accumulation but rather difficulties a country faces when it comes to debt elimination. Debt overhang reduces a country's macroeconomic performance.

## **2.3 Determinants of Capital Market Development**

There are various factors that influence capital market development either positively or negatively. These factors include the country's interest rates, inflation rates, government policies and the political climate.

### **2.3.1. Government Policies**

In many East African countries, financial crisis has been a huge issue and to restore the economy, governments are engaging in both fiscal and monetary policies. Through their power, governments have the ability to invoke taxes and regulate the capital markets. The policymakers also have a say in this where they may come up with laws that encourage domestic borrowing. Their decision whether to borrow internally or externally largely affects the country's capital market development (Njoroge, 2013).

### **2.3.2 Inflation**

Inflation is one of the major issues in many developing countries. According to a study that was conducted by Adofu and Abula (2010), inflation acts as a key macroeconomic indicator of a country. When the public domestic debt is used properly, it may largely enhance the economic growth. Borrowing from central bank has a serious risk because of the excess aggregate demand that comes as a result of an increased money supply. When the government directly borrows from central bank, this is likened to printing money that has severe inflationary consequences. When governments take a debt with the central bank, they have to give out some treasury bills that are exchanged for debt. When the government borrows from non-financial institutions (NBFIs), the inflationary effect is felt. Whenever the NBFIs invest in purchasing the government securities, the shortage of liquidity is realized and the government has no option but to turn to central bank.

From the above analysis, it is evident that the relationship between domestic debt and inflation is direct and evident as Ahmad et al. (2012) argues.

### **2.3.3 Interest Rates**

Interest rate is the price that the borrower has to pay to the lender after using his/her money. According to the free market proponents, the government's intervention in the economy should be very minimal since state activities sometimes compete with the private sector for scarce funds. According to Abbas and Christensen (2010), it is evident that the origin of the Nigeria debt issue was as a result of the international oil price collapsing that occurred in 1981. Because of the domestic lapses, the persistent suffering of the international oil market continued. Since 2008, the detail of Kenya's debt burden is quite disheartening. As of August 2008, the public debt was at Kshs. 867 billion. Currently, this debt has continued increasing that is quite alarming. Because of the high rollover amounts, the government faces the risk of defaulting to service the debt. Occasional rollovers of the domestic debt result in high interest rates.

### **2.4. Empirical Review**

In this study, the empirical review on the effects of domestic public debt to the capital market development is quite restricted. The major cause of such a restriction is the fact that most of the past studies focused much on the effects of domestic debt on the economy. However, this empirical review tends to examine both the local and international studies touching on the topic.

From an analysis of past studies, it is evident that domestic debt is correlated to a country's capital market development. In many of the EAC countries, the public debt has been growing by the day that is affecting the countries' capital market development. In Kenya, for example, the public debt has been growing by the day as a result of the increasingly infrastructure related borrowing.

According to a study by Akram (2010), issues that surround the effects of accumulation of domestic debt in a country have been a controversial issue for many years. Because of many international debts, the country is seeking other ways of financing their projects that negatively affects the country's capital market development. In an attempt to improve the welfare of Kenyans, the government has engaged in public borrowing since the domestic savings cannot cater for all the expenditure. In 2013, the public debt was around 39.8 % of the GDP. This has continued to increase and in 2014, the debt went to 44.2 % and 52.8% in 2015. The increase of this debt continued increasing after the issuance of the \$2.75 billion that was offered in December 2015. This debt has been placed in infrastructural projects that include SGR among many others. From this analysis, it is evident that the public debt is growing and it may go to uncontrollable heights in future and if not effectively managed, the country's economic development will be largely affected.

In Mogaka (2017) work that was geared towards examining the effect of domestic debt on financial markets development, Mogaka argues that domestic debt has an effect on a country's financial market development. In this study that involved 5 East African Countries between 2007 and 2016, it was concluded that there is a positive relationship between the domestic debt and financial market development. Another study by Putunoi and Mutuku (2013) argues that domestic debt affects a country's economic growth. In a study that was conducted between 2000-2010 using the Engle-Granger (1987) residual based and Johansen (1988) VAR based co-integration tests; it was revealed that domestic debt largely supports a country's economic growth. Domestic debt expansion has significant effects on a country's economic growth (Putunoi and Mutuku, 2013).

In their work, Karazijienė & Sabonienė (2009) argued that public borrowing is inevitable especially when it comes to developing economies. According to their studies, public borrowing

especially in developing countries is inevitable and not a reprehensible phenomenon of economic growth. Domestic debt offers a country an opportunity to substitute delay of repayment with better rates (Ribeiro, Vaicekauskas and Lakstutiene, 2012). Despite the fact that Ribeiro, Vaicekauskas and Lakstutiene (2012) considers domestic debt as a safer option compared to external debt, they also argue that domestic debt can also wear country's economic growth. In their work, Emram and Farazi (2009) examined the negative effects of domestic debt to a developing country. According to their study, domestic debt may derail a country's economic growth. The study by Adofu and Abula (2010) also supports the idea that domestic debt affects an economy negatively. In their study that was conducted between 1986 and 2005, it was found that domestic debt negatively affected Nigeria's economic growth.

Domestic debt largely affects a country's capital market development. In their work, Bildirici and Ersion (2007) argue that inflation rates are affected by domestic debt. This study examined countries that had high inflation rates and according to this study, domestic debt increases a country's inflation. When the countries experienced an increasing debt to GDP ratio, the countries had to borrow at a higher cost. The study concluded by saying that the increased cost of borrowing is as a result of the non-Ricardian fiscal policies.

According to a study that was conducted by Nyambura (2012), domestic debt is largely affecting the country's investment projects. When a country has a large domestic debt, it concentrates in debt servicing and neglects investments in economic infrastructure and expenditures. On the other hand, countries that have little debt to manage focuses much on infrastructural and economic projects that ends up increasing a country's economic growth. However, some countries have largely benefitted from domestic debt especially when the government manages the debt in an appropriate manner. According to a study that was conducted by Carlin and Mayer (2003),

country's financial system structures have a strong relationship with economic growth. Another study that linked economic growth and financial market development is the study by Garretsen, Lensink and Sterken (2004). In this study, the authors argued that 1% of economic growth improvement determines up to 0.4% rise in the market capitalization. In their work, Beck, Lundberg and Majnoni (2006), found that there is a positive correlation between capital market development and economic growth. When a country borrows money and invests in projects that contribute to economic growth for example SGR in Kenya or Hydropower project in Burundi, it becomes easier for them to pay the debt on time.

Since the 1980s, the country has been highly indebted and the macroeconomic mismanagements that occurred in 1990s worsened the issue. Because of this mismanagement, the donor inflows largely reduced. Since the governments had infrastructure projects that it was funding, they recorded in occasional domestic borrowing that was quite expensive. In his work, Maana et al. (2010) examined the effect of domestic debt in Kenya through the Modified Barro and Grilli (1994) growth regression model. This study happened between 1996 and 2007 and the study results showed that the country is largely benefiting from domestic debt. However, the debt has its significant cons when the money is mismanaged. In their work, Adofu and Abula (2010) conducted a similar study in Nigeria and the results were that domestic debt had negatively affected the growth of the Nigerian economy. The recommendations of Adofu and Abula (2010) study were that the country would increase its tax revenue base and rely low on the domestic debt.

When one examines the relationship between domestic debt and economic growth in Nigeria, it is evident that the domestic debt has adversely affected the economic growth. Because of the debt mismanagement, the country has found itself using many of its incomes to finance the debts. According to a study by Adofu and Abula (2010), such kind of borrowing should be highly

discouraged. The two argue that the country should look for other ways to finance their projects (Adofu and Abula, 2010). In his work, Charan (1999) did an investigation on the effects of domestic debt in India. Charan (1999) used the co-integration and Granger causality test between 1959 and 1995. In many ways, the co-integration and Granger causality tests tends to support the Ricardian equivalence hypothesis is when it comes to domestic debt and economic growth. According to the Ricardian hypothesis, the effect on the total level of demand when it comes to the economy is the same regardless.

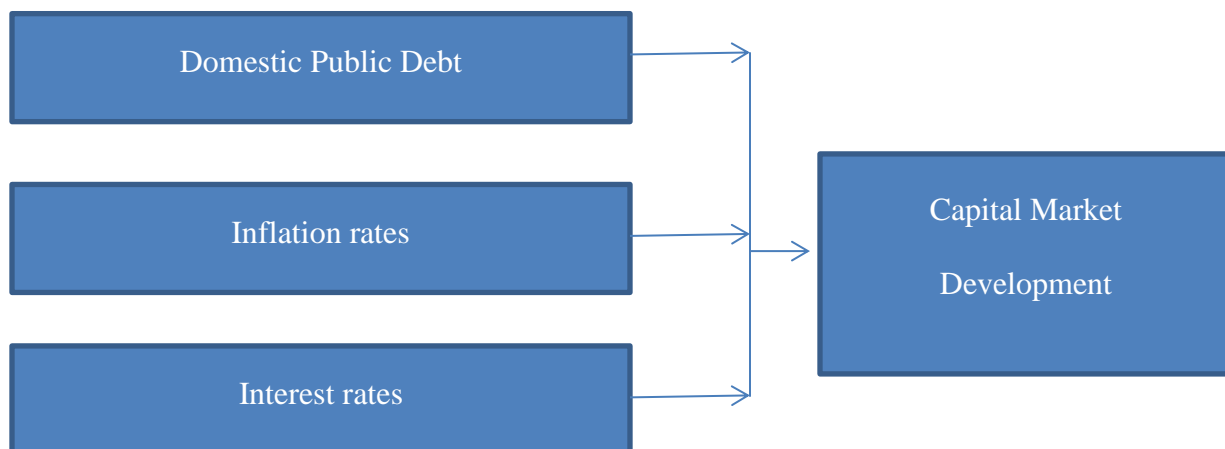
In his work, Kemal (2001) examines the effects of debt accumulation when it comes to capital market development in Pakistan. According to this study, public debt has major effects on the poor in the country. When a country concentrates in debt servicing, it may lose focus on other development projects. In Kemal (2001) study, it is evident that despite the fact that Pakistan has a high public debt, it still has the capacity to service its debt. Another study by Rabia and Kamram (2012) examined the effects of both external and domestic debt in Pakistan. This study examined the determinants of economic growth in Pakistan from 1980 to 2010. Using the Ordinary Least Square approach to co-integration among other measures, the study concluded that there is an inverse relationship between domestic debt and economic growth. The study concluded by pointing out that external debt has adverse effects on economic growth compared to domestic debt amount. Christensen (2005) conducted a study where he wanted to examine the role that domestic debt markets in Sub-Saharan Africa countries. Christensen (2005) used the cross country survey to conduct a 20 year study between 1980-2000 and during this period, the domestic debt of these countries were low. The study also found that domestic debt affects a country's economic growth negatively since it presents a significant burden to a country's budget.



Makau (2008) also conducted an empirical analysis with an intention of examining the effects of public debt on a country's economic growth. The study concluded that Kenya's public debt is increasing steadily since the 1990s that is affecting the country's economic growth. In a work that Reinhart and Rogoff (2010) conducted, high levels of public debt are negatively correlated to a country's economic growth. From the above analysis, it is evident that domestic debt affects a country's capital market development. When a country borrows much domestic debt and a less external debt, this ends up increasing the capital market development in a long run. As the studies have also shown, the inflation rate of a country has a negative effect on a country's capital market development. When comes to the interest rate, it impacts the capital market development positively. When the interest rates increases, the country continues increasing in capital market development.

## 2.5. Conceptual Framework

Conceptual review Diagram



**(Independent variables)**

**(Dependent Variable)**

### **Figures 2.1: Conceptual Framework**

The above figure shows a conceptual framework that will be used in this study. When it comes to the dependent variable, this includes various capital markets that exist in the EAC economies. The working of such markets is affected by various factors also known as independent variables. In this case, the hypothesized independent variables include inflation and interest rates and domestic public debt. When the country's domestic public debt goes high, it highly influences factors that cause misery to the capital markets' performance.

### **2.6 Operationalization Matrix**

Table 2.1 presents the operationalization of the study variables.

**Table 2.1: Operationalization Matrix**

<b>Variable Type</b>	<b>Variables</b>	<b>Measurement</b>
Independent Variable	Domestic Public Debt	log of Total Debt Value
Independent Variable	Inflation Rate	Inflation Rate (%)
Independent Variable	Interest Rate	Interest Rate (%)
Dependent Variable	Capital Market Development	Gross Capital Formation (% of GDP)

## 2.7. Summary of the Literature Review

From an extensive empirical review, it is evident that a research gap exists when it comes to domestic debt impacts on capital market development. In many ways, the financial intermediary tends to play a big role in the financing of the public debt in a country but less focus has been given to the area. An analysis of the Kenyan GDP shows that it has continued to decrease despite the increased domestic debt borrowing. According to the predictions that were given by the government, the public debt borrowing was to raise the GDP to 56%. From the Nigeria study, it is also evident that the increased domestic debt has continued to adversely affect the country. Table 2.2 summarizes the key findings in the empirical studies and the gap the study intends to fill.

**Table 2.2 Summary of the Literature Review**

<b>Author of study</b>	<b>Focus of Study</b>	<b>Methodology</b>	<b>Findings</b>	<b>Knowledge Gaps</b>	<b>Focus of current study</b>
Adofu and Abula (2010)	Domestic Public Debt on the Nigerian Economy	Descriptive analysis, Time series and Regression	The study concludes that domestic debt slows economic growth	Study's limited scope	The effects of domestic borrowing on capital market development in East Africa

<b>Author of study</b>	<b>Focus of Study</b>	<b>Methodology</b>	<b>Findings</b>	<b>Knowledge Gaps</b>	<b>Focus of current study</b>
Hybens & Smith (1999)	Inflation, financial markets and long run real activity	Financial ratios analysis  Debts ratios correlation	Volume of financial market activity and inflation are negatively correlated in countries with high rates of inflation	A highly short time period.  The period gap that the study used was short for one to examine how some variables change	The effects of domestic borrowing on capital market development in East Africa
Mogaka (2017)	The effect of domestic public debt on financial market development in the East Africa Community	Multiple Regression analysis and descriptive analysis	The study found out that there is a positive correlation between domestic debt and capital market	Scope of study not exhausted.  The study focused on listed firms market capitalization and it's evident that	The effects of domestic borrowing on capital market development in East Africa

Author of study	Focus of Study	Methodology	Findings	Knowledge Gaps	Focus of current study
			<p>development.</p> <p>There is a weak correlation between inflation rates and capital market development</p>	<p>the study never managed to go into analysis of all the 5 countries market capitalizations because of the limited information.</p>	
International Monetary Fund (2010)	Managing public debt and it's financial stability implications	Trend Analysis	The governments balance sheet is affected by the debt management and policy makers	Limited scope of East Africa Countries	The effects of domestic borrowing on capital market development in East Africa

<b>Author of study</b>	<b>Focus of Study</b>	<b>Methodology</b>	<b>Findings</b>	<b>Knowledge Gaps</b>	<b>Focus of current study</b>
Charan (1999)	The relationship between domestic debt and economic growth in India	The study was examined through co-integration and granger causality tests from 1959-95	The study concluded that domestic debt and economic growth correlate	Limited scope for India community that may not apply to the EAC countries.	The effects of domestic borrowing on capital market development in East Africa

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1. Introduction**

Chapter three of the study analyzed the methods and procedures that were used in this study to attain the set objective. The chapter also explains the research design, the population sample and size, data collection and the analysis of data procedures.

#### **3.2 Research Design**

This study decided to adopt the descriptive study design. The descriptive study tends to explain the effects on behavior of a variable to another. In this case, it tends to examine the correlation between independent and dependent variable (Kothari, 2005). The study chooses to use this study design since it is trying to establish the effects of domestic public debt on the capital market development.

#### **3.3 Population**

This study used 5 EAC capital markets as its population. These countries that include Kenya, Uganda, Burundi, Rwanda and Tanzania were chosen as the population since they have similar regulations and legislatives in relation to domestic public debt. Due to the small population, no sampling were conducted.

#### **3.5. Data Collection**

Unlike many studies, this study used secondary data. One of the importance of secondary data is the fact that makes it easier to carry on further research. The secondary data that was used in this study was 10 years old and below. This data was obtained from various sources that include East

African Countries Central Banks, World Bank information, National Treasury Public Debt Department and Kenya Bureau of Statistics. Examples of data to be collected in this case include EAC countries Total Debt Value, inflation rate interest rates and Gross Capital Formation.

### **3.6. Diagnostic Tests**

#### **3.6.1 Tests of Normality**

To test validity, the study examined methods that include skewness and kurtosis. Validity is close to normal when the skewness and kurtosis ranges between -2 to 2+ or -1 to +1.

#### **3.6.2 Multicollinearity Tests**

Another way that the validity of the test was tested is through multicollineality tests. Through this test, the correlation between the variables was tested. In case the regression analysis produces a high R-squared but low t-statistics that are insignificant, the multicollineality was a problem.

### **3.7. Data Analysis**

To establish the impacts of domestic debt on the capital market development, the study used the multivariate regression model. The regression model was as follows;

$$Y=A+B_1X_1+B_2X_2+B_3X_3$$

Where:

Y was the capital market development which is measured by Gross Capital Formation (% of GDP)

X<sub>1</sub> was public debt which is measured by log of Total Debt Value in USD

X<sub>2</sub> was the inflation rates

and X<sub>3</sub> is the interest rates



### **3.7.1. Test of Significance**

P-values was used when it comes to testing the statistical significance. The study has a prior significance level of 95%. If the p-value is greater than 0.05, the null hypothesis is true. In this case, there was no statistically significant relationship between domestic debt and economic growth. If the p-value is below 0.05, it was concluded that there is a statistically significant relationship between the variables. To provide the measure of how well the observed outcomes was replicated; the coefficient of determination was used.

## CHAPTER FOUR

### DATA PRESENTATION AND DISCUSSION OF FINDINGS

#### 4.1 Introduction

The general objective of this study was to examine the impacts of domestic public debt on the capital market development in East Africa community member countries. The secondary data collected was total debt value, inflation rate, interest rates and gross capital formation for the East African countries from 2008-2017. The results of the regression analysis output and analysis are detailed in this section.

#### 4.2 Descriptive Statistics

Table 4.1 gives descriptive findings including mean, standard deviation, minimum values as well as maximum values for total debt value, inflation rate interest rates and gross capital formation for the 5 East African Countries. The period under study was 10 years from 2008 to 2017.

**Table 4.1: Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Gross Capital Formation	50	16.8917	33.2404	25.18152	3.7080602	0.23	2.98
Domestic Public Debt	50	152	14368	3551.89	3453.63	0.2	2.7
Inflation	50	1.8	26.2	8.683	5.2418	0.54	2.77
Interest Rate	50	4.1039	16.2284	8.636319	2.5231526	0.69	3.06

The findings show that the minimum value for gross capital formulation was 16.89% with a maximum of 33.24%. The mean value was 25.18% with a standard deviation of 3.7 with a

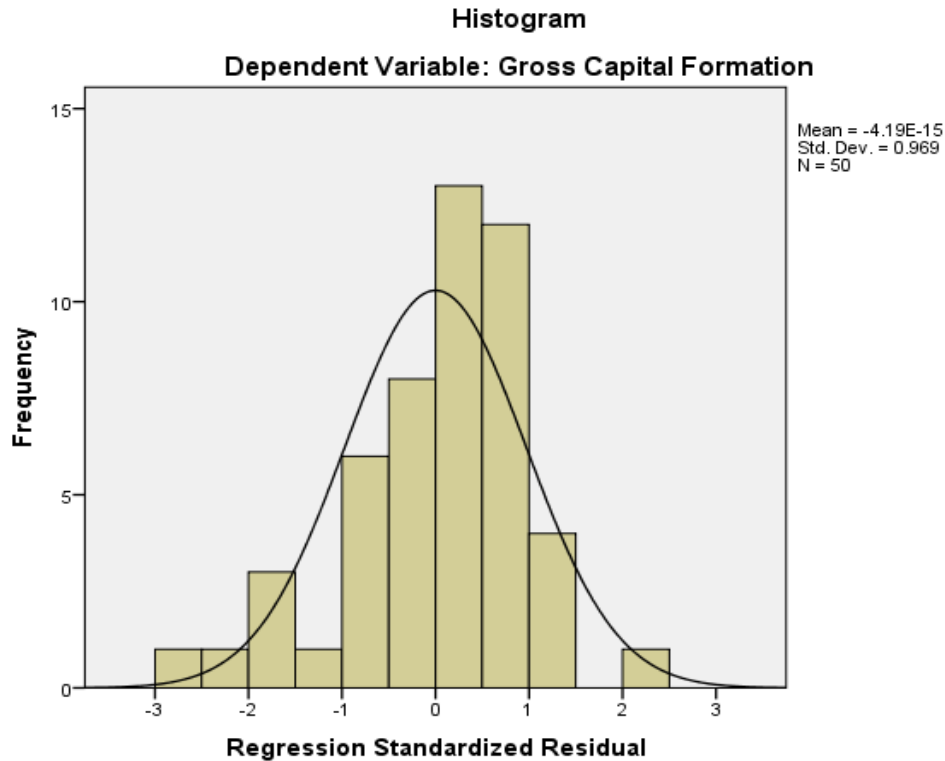
Skewness and Kurtosis value of 0.23 and 2.98 respectively. The minimum value for domestic public debt ('000 000 USD) was 152 with a maximum of 14,368. The mean value for domestic public debt was 3,453.63 with a standard deviation of 3,453.63 with a Skewness and Kurtosis value of 0.2 and 2.7 respectively. Inflation rate had a minimum of 1.8% and a maximum of 26.2%. The mean value was 8.683% with a standard deviation of 5.24% with a Skewness and Kurtosis value of 0.54 and 2.77 respectively. Lastly, interest rate had a minimum of 4.103% with a maximum of 16.23%. The mean value for interest rate was 8.64% with a standard deviation of 2.52% with a Skewness and Kurtosis value of 0.69 and 3.06 respectively.

### **4.3 Diagnostics Tests**

The study conducted normality and multicollinearity tests as shown below.

#### **4.3.1 Normality Test**

Normality test was conducted in order to check if the data was normally distributed.



**Figure 4.1: Histograms of Residuals**

The results in Figure 4.1 indicate that the residuals are normally distributed. According to Brooks (2008), a normal distribution is symmetric about its mean, while a skewed distribution will not be, but will have one tail longer than the other tail. If the residuals are normally distributed, the histogram should be bell-shaped. Thus, the results in Figure 4.1 show that data is normally distributed since the histogram should be bell-shaped and the tails have the same length.

**4.3.2 Multicollinearity Tests**

Multicollinearity was assessed in this study using the variance inflation factors (VIF). According to Field (2009) VIF values in excess of 10 is an indication of the presence of Multicollinearity. As shown in Table 4.2, the results revealed that there were no multicollinearity since all the values for VIF were less than 10.

**Table 4.2: Multicollinearity Results**

<b>Variable</b>	<b>Tolerance Value</b>	<b>VIF</b>
Domestic Public Debt	0.614	1.629
Inflation	0.674	1.483
Interest Rate	0.890	1.124
<b>Mean VIF</b>		<b>1.412</b>

Dependent Variable: Gross Capital Formation

#### 4.4 Correlation Analysis

The study conducted correlation analysis for the variables that are domestic public debt, inflation rates and interest rates on capital markets development in order to examine the nature of the statistical relationships between each pair of variables. Table 4.3 shows the correlation matrix of all the variables.

**Table 4.3: Correlation Matrix**

<b>Variable</b>		<b>Gross Capital</b>	<b>Debt in</b>	<b>Inflation</b>	<b>Interest Rate</b>
		<b>Formation</b>	<b>USD</b>		
Gross Capital	Pearson				
Formation	Correlation	1.000			
	Sig. (2-tailed)				
Domestic Public	Pearson				
Debt	Correlation	.746**	1.000		
	Sig. (2-tailed)	0.000			

	Pearson				
Inflation	Correlation	-.526**	.568**	1.000	
	Sig. (2-tailed)	0.000	0.000		
	Pearson				
Interest Rate	Correlation	.494**	-.327*	-0.137	1.000
	Sig. (2-tailed)	0.000	0.021	0.342	

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

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

The results in Table 4.3 show that domestic public debt (0.746, 0.000) had a positive and significant relationship with gross capital formation while inflation (-0.526, 0.000) had a negative and significant relationship with gross capital formation. Interest rate (0.494, 0.000) revealed a positive and significant relationship with gross capital formation.

#### 4.5 Regression Analysis

Regression analysis was conducted in order to examine the coefficient of determination, the statistical significance of the model used and the regression model. The results of the regression analysis are presented in the following tables.

The results presented in Table 4.4 present the fitness of model used of the regression model in explaining the study phenomena. Domestic public debt, inflation and interest rate were found to be satisfactory variables in explaining capital markets development. This was supported by coefficient of determination also known as the R square of 64.6%. This means that domestic public debt, inflation and interest rate explain 64.6% of the variations in the dependent variable, which is capital markets development.

This results further means that the model applied to link the relationship of the variables was satisfactory.

**Table 4.4: Model Fitness**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.804a	0.646	0.623	2.2769971

a Predictors: (Constant), Interest Rate, Inflation, Domestic Public Debt

b Dependent Variable: Gross Capital Formation

In statistics, significance testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found were less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else, the model would be regarded as non-significant( Kothari, 2004)

Table 4.5 gives the outcomes on the analysis of variance (ANOVA). The outcomes show that the general model was statistically significant. Further, the outcomes suggest that the independent variables are good indicators of capital markets development. This was supported by an F statistic of 27.982 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level.

**Table 4.5: Analysis of Variance (ANOVA)**

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	435.239	3	145.08	27.982	.000b
	Residual	238.497	46	5.185		

Total 673.736 49

a Dependent Variable: Gross Capital Formation

b Predictors: (Constant), Interest Rate, Inflation, Domestic Public Debt

Regression of coefficients results in Table 4.6 shows that domestic public debt and capital markets development are positive and significant related ( $r=4.518$ ,  $p=0.030$ ). The results further indicated that inflation and capital markets development are negatively and insignificantly related ( $r=-0.093$ ,  $p=0.116$ ). It was further established that interest rate and capital markets development were positively and significantly related ( $r=0.345$ ,  $p=0.003$ ). This implies that an increase in domestic public debt ( $r=4.518$ ,  $p=0.030$ ) and interest rate ( $r=0.345$ ,  $p=0.003$ ) led to an improvement in capital markets development. However an increase in inflation ( $r=0.093$ ,  $p=0.116$ ) led to a reduction in in capital markets development as shown in Table 4.6.

**Table 4.6: Regression of Coefficients**

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	41.718	3.721		11.211	0.000
Domestic Public Debt	4.518	0.913	0.554	4.947	0.000
Inflation	-0.093	0.058	-0.171	-1.601	0.116
Interest Rate	0.345	0.111	0.290	3.114	0.003

a Dependent Variable: Gross Capital Formation

The multiple regression model was laid as below.



$$Y = 41.718 + 4.518X_1 - 0.093X_2 + 0.345X_3$$

#### **4.6 Interpretation of the Findings**

A fitness of model was used in the regression model in explaining the study phenomena. Domestic public debt, inflation and interest rate were found to be satisfactory variables in explaining capital markets development. This was supported by coefficient of determination also known as the R square of 64.6%. The skewness and Kurtosis in the descriptive analysis confirmed that the data was normally distributed. Correlation results revealed that domestic public debt had a positive and significance relationship with gross capital formation. Further, regression of coefficients results revealed that domestic public debt and capital markets development are positive and significant related. Domestic debt should be encouraged since it has a positive effect on financial market development in all the East African Countries this will promote stability and financial independence in the economy, inflation should be well managed since it's increase could harm the development of financial markets this can clearly be seen in the correlation coefficients where inflation rates have a negative relationship with financial markets development this means that the higher the rate of inflation the lower the rate of financial development. The findings of the study support the Keynesian model.

The findings are consistent with Putunoi and Mutuku (2013) who argues that domestic debt affects a country's economic growth. In a study that was conducted between 2000-2010 using the Engle-Granger (1987) residual based and Johansen (1988) VAR based co-integration tests; it was revealed that domestic debt largely supports a country's economic growth. Domestic debt expansion has significant effects on a country's economic growth (Putunoi & Mutuku, 2013). The findings also agree with Karazijienė & Sabonienė (2009) who argued that public borrowing is inevitable especially when it comes to developing economies. According to their studies, public

borrowing especially in developing countries is inevitable and not a reprehensible phenomenon of economic growth. Domestic debt offers a country an opportunity to substitute delay of repayment with better rates (Ribeiro, Vaicekauskas and Lakstutiene, 2012). Despite the fact that Ribeiro, Vaicekauskas and Lakstutiene (2012) considers domestic debt as a safer option compared to external debt, they also argue that domestic debt can also wear country's economic growth.

Correlation results revealed that inflation (-0.526, 0.000) had a negative and significant relationship with gross capital formation. Regression results further indicated that inflation and capital markets development are negatively and insignificantly related ( $r=-0.093$ ,  $p=0.116$ ). This implies that an increase in inflation rates leads to a unitary reduction in capital markets development by 0.093 units other factors held constant. These results are in agreement with Ersion (2007) who examined countries that had high inflation rates and according to this study, domestic debt increases a country's inflation and thus lowers capital markets development.

Lastly, correlation results revealed that interest rate (0.494, 0.000) had a positive and significance relationship with gross capital formation. Regression results showed that interest rate and capital markets development were positively and significantly related ( $r=0.345$ ,  $p=0.003$ ). This implies that an increase interest rates leads to a unitary improvement in capital markets development by 0.345 units other factors held constant. These findings agree with Kariuki (2003) who did a study on gross fixed capital formation in Kenya and found that an increases in real interest rates improve private investment.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary of the results of the study and the main conclusions drawn from the analysis of the data in chapter Four. This chapter contains the summary of findings, conclusion, recommendations, limitations of the study and finally recommendation for further studies in the gaps that still exist in the area.

#### **5.2 Summary of Findings**

The objective of the study was to examine the impacts of domestic public debt on the capital market development in East Africa community member countries. The study was conducted for five East African Countries with a 10-year period with secondary data from the period of 2008 to 2017 was used in the analysis. Regression analysis was used in analysis of the data. The study sought to understand the effects of domestic public debt on the capital market development in East Africa community member countries. The skewness and Kurtosis in the descriptive analysis confirmed that the data was normally distributed.

The descriptive statistics findings show that the mean value for gross capital formulation was 25.18% with a standard deviation of 3.7. The mean value for domestic public debt ('000 000 USD) was 3,453.63 with a standard deviation of 3,453.63. Inflation rate had a mean of 8.683% with a standard deviation of 5.24%. Lastly, interest rate had a mean of 8.64% with a standard deviation of 2.52%. The outcomes show that the general model was statistically significant. Further, the outcomes suggest that the independent variables are good indicators of capital markets

development. This was supported by an F statistic of 27.982 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level. Diagnostics tests for normality and multicollinearity were conducted and showed that the data was normally distributed and did not suffer from multicollinearity.

Correlation results revealed that domestic public debt had a positive and significance relationship with gross capital formation. Further, regression of coefficients results revealed that domestic public debt and capital markets development are positive and significant related. From the findings, that domestic public debt had a positive and significance relationship with gross capital formation while inflation had a negative and significance relationship with gross capital formation. Interest rate revealed a positive and significance relationship with gross capital formation. Regression of coefficients revealed that domestic public debt and capital markets development are positive and significantly related. The results further indicated that inflation and capital markets development are negatively and insignificantly related. It was further established that interest rate and capital markets development were positively and significantly related. This implies that an increase domestic public debt and inflation led to a reduction in in capital markets development. However, an increase in interest rate led to an improvement in capital markets development.

Domestic debt should be encouraged since it has a positive effect on financial market development in all the East African Countries this will promote stability and financial independence in the economy, inflation should be well managed since it's increase could harm the development of financial markets this can clearly be seen in the correlation coefficients where inflation rates have a negative relationship with financial markets development this means that the higher the rate of inflation the lower the rate of financial development.

Understanding the effect of domestic public debt on capital markets development is important to Investors, financial market players and participants, policy makers and researchers as it has an implication on various financial models and debt management practices. The study focused on determining the relationship between domestic public debts on capital markets to clearly understand the impact it has on the development of capital markets, which are key players in the determination of growth in the economy in the long run.

### **5.3 Conclusion**

The study concluded that there is a positive relationship between high domestic public debt and capital market development, an increase in domestic debt causes the capital market development to decrease. When a country borrows more domestic debt and less external debt it promotes capital markets development in the long run. The regression model used in the study was statistically significant in explaining the effect of domestic public debt on capital markets development in East African Community. The study further concluded that inflation rate has a negative impact on financial market development this implies that inflation had a negative impact on capital markets development. It also conclude that an increase in interest rate impact positively the capital markets development.

Moderate levels of domestic debt promote financial deepening and institutional and foreign participation which then drives capital markets development. The outlook on domestic issuance capacity in low middle income countries looks broadly favorable. The quality and span of domestic debt markets can have a significant impact on the optimal size of domestic debt. A higher level of domestic debt can likely be sustained without compromising growth if the domestic debt is issued in the form of marketable securities, bears positive real interest rates, and is issued to investors outside the banking system.

Domestic debt expansion had a positive significant effect on East Africa capital markets growth. The relationship between capital markets growth and domestic debt is evidenced by the fact that domestic debt markets promote financial depth and economic efficiency. This is as a result of increased expansion of capital market and financial sector liberalization in the EAC recently which drives capital markets development.

#### **5.4 Recommendations**

Based on these findings, the study recommends on continued deepening of the capital markets to lengthen further the maturity profile of domestic debt and diversification of the investor base. The study further recommends on continued implementation of policies to support macroeconomic stability and faster economic growth. This includes restructuring public debt towards external borrowing which is comparably cheaper than domestic debt, and rationalization of recurrent expenditures to contain the widening deficit in the primary balance would be necessary in the medium-term to ensure that public debt remains on a sustainable path to allow for capital markets development. A notable advantage of restructuring public debt towards external borrowing through issuance of sovereign bonds is that it will help to benchmark East Africa community in credit and facilitate access to international capital markets by corporate entities in the country thereby stepping up investment activities.

To ensure the success of the domestic borrowing programme, the government should continue to implement measures to maintain confidence in the capital markets through prudent fiscal policy and adherence to the annual domestic borrowing calendar. The government should also develop a framework for capturing and monitoring non-residents investment in government securities for purposes of improving the monitoring of foreign direct investment in the country.

The governments of the EAC member countries should promote moderate levels of domestic borrowing which can be sustained by the respective countries as it promotes economic growth if used in productive and efficient avenues. However, domestic debt is usually expensive and should be minimized since it has wider negative macroeconomic effects for instance, if interest rate on treasury bills rise, banks target treasury bills and not lending to borrowers, interest rates and inflation also goes up. The governments can privatize some of the public assets in order to cut large public expenditure and also raise revenue on a temporary basis. Non-growth recurrent expenditure should not exceed the accepted levels, for example, the wage bill for Kenya has surpassed. Corruption and leakages in public funds should be reduced so as to ensure that government expenditure promotes capital markets development and growth.

### **5.5 Limitations of the study**

The study examined the effects of domestic public debt on capital markets development in the EAC Countries. The research relied on data from the World Bank that had been recorded for the entire period under survey. The independent variables analyzed only managed to cover a section of the effects of Domestic Public Debt on capital markets development in EAC Community. The study data was used as obtained and the researcher had no means of independently verifying the validity of the data which was assumed to be accurate for the purpose of the study. The study findings are, therefore, partly subject to the validity of the secondary data used.

The scope of the study focused on listed firms' market capitalization and GDP to acquire financial capital development in each country. The study did not manage to go into the analysis of Gross Capital Formation owing to limited information in the other East African Countries. The study data was used as obtained and the researcher had no means of independently verifying the validity

of the data which was assumed to be accurate for the purpose of the study. The study findings are, therefore, partly subject to the validity of the secondary data used.

### **5.6 Suggestions for Further Research**

The study independent variables were only able to cover a section of the effect on capital markets development as shown in the regression model. Therefore, further research should be conducted to investigate the other factors that affect the capital markets development such as exchange rates, money supply and budget deficits.

Behavioral factors should be studied in order to establish whether they affect capital market development. The impact of political risk on capital market development in East Africa Countries should also be examined to determine whether the political environment affect the development of the stock market. It will also recommend policies and measures which will cushion on the same.

The study recommends further research on the factors that formulate the capital markets development i.e. market capitalization since the listed companies may vary from year to year in performance which in turn affects the market capitalization of the country per annum, GDP and other factors in the Economy that affect the development of financial markets development.



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## Appendices I: East African Countries

No	Country
1	Kenya
2	Uganda
3	Rwanda
4	Tanzania
5	Burundi

## Appendices II: Data Collection Template

Country	Year	Debt in USD	Inflation	Interest Rate	Gross Capital Formation
Kenya	2008	10,489	26.2398	5.3021	19.61271142
Kenya	2009	12,287	9.2341	5.9670	19.33262283
Kenya	2010	14,730	3.9614	4.5574	20.7348876
Kenya	2011	16,497	14.0215	5.6286	21.70275889
Kenya	2012	19,444	9.3784	11.5700	21.54126901
Kenya	2013	22,924	5.7183	8.6418	20.16536299
Kenya	2014	28,439	6.8775	8.3734	22.49439609
Kenya	2015	35,327	6.5824	9.1889	21.2056194
Kenya	2016	35,327	6.2975	8.6901	22.3287159
Kenya	2017	43,106	7.9900	9.0000	22.8488441
Uganda	2008	5,500	12.0509	10.6700	22.97777384
Uganda	2009	5,954	13.0173	9.7525	25.00868173
Uganda	2010	6,826	3.9766	7.6873	25.55596152
Uganda	2011	7,285	18.6929	13.0184	27.06451837
Uganda	2012	7,607	14.0161	16.2284	26.86463568
Uganda	2013	8,151	5.4644	11.8408	27.90750592
Uganda	2014	8,343	4.2882	10.8095	26.82539772
Uganda	2015	9,282	5.2254	12.7676	24.32972766
Uganda	2016	10,500	6.1626	13.2388	24.31010867
Uganda	2017	11,100	7.0999	13.7100	23.44142544
Tanzania	2008	15,596	10.2784	8.2527	32.07615694
Tanzania	2009	15,710	12.1422	7.9718	25.12516139
Tanzania	2010	16,274	6.2002	6.5658	27.29602726
Tanzania	2011	16,690	12.6910	6.7770	33.240365
Tanzania	2012	17,014	16.0011	9.5118	28.5028742
Tanzania	2013	17,184	7.8707	9.8180	30.32429379
Tanzania	2014	18,776	6.1316	9.8553	30.13070405
Tanzania	2015	21,225	5.5878	9.8965	27.87534879
Tanzania	2016	21,500	5.9934	10.0682	28.68926371
Tanzania	2017	22,300	5.1114	10.1874	28.48164712
Burundi	2008	1,652	24.1074	6.0247	26.66390822
Burundi	2009	457	10.9815	5.3844	23.24776453
Burundi	2010	952	6.4012	4.1039	30.51985271
Burundi	2011	955	9.7350	5.9290	27.58877261

Burundi	2012	966	18.0128	6.9500	28.37304824
Burundi	2013	930	7.9507	5.7533	28.74508988
Burundi	2014	1,049	4.3798	6.8003	27.81257545
Burundi	2015	1,360	5.5542	8.9174	16.89167613
Burundi	2016	1,671	5.5385	8.9575	19.29583273
Burundi	2017	1,982	5.5385	9.6856	17.10036616
Rwanda	2008	947	15.4449	6.7200	24.1707968
Rwanda	2009	1,051	10.3942	8.5400	23.66589327
Rwanda	2010	1,152	2.3091	7.1000	23.20192597
Rwanda	2011	1,289	5.6707	7.9600	23.53094124
Rwanda	2012	1,460	6.2709	10.0400	25.88500564
Rwanda	2013	2,038	4.2348	8.5800	26.52138158
Rwanda	2014	2,333	1.7841	7.7570	26.06116775
Rwanda	2015	2,766	2.5181	7.5892	26.36628405
Rwanda	2016	3,161	5.7255	6.9846	27.42701037
Rwanda	2017	3,226	7.2839	6.4892	28.01169514

## Appendices III: Plagiarism Report

### THE EFFECT OF DOMESTIC BORROWING ON CAPITAL MARKET DEVELOPMENT IN EAC MEMBER COUNTRIES

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