

**PUBLIC EXPENDITURE AND ECONOMIC GROWTH  
IN UGANDA FROM 1995-2014**

By

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INTERNATIONAL UNIVERSITY (KIU)**

**FEBRUARY, 2017**

### DECLARATION

I declare that this thesis entitled PUBLIC EXPENDITURE AND ECONOMIC GROWTH is the result of my own research except as cited in the references. The thesis has not been accepted for any degree and is not concurrently submitted in candidate of any other degree.


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## APPROVAL

"I confirm that the work in this thesis was carried out by the candidate under my supervision and submitted for examination with my approval"

Signed  \_\_\_\_\_

Date 1/2/2017

Dr :SsekajugoDerrick  
Supervisor

## **DEDICATION**

I dedicate this thesis to my brothers and parents whose resources I used in my studies

## **ACKNOWLEDGEMENTS**

All praise is to Allah Almighty, the most Compassionate/sympathetic and the Merciful, Who bestowed and granted on me the potential and ability to complete this research work. I would also like to send and pay my homage, honor and sweet sensation of respect to my loving and caring parents whose love, prayers and encouragement kept me steadfast, dedicated and enabled me to attain this target and complete my studies successfully. Words are unlimited to pay special thanks to my brother Abdirahamn Aden Hassan who helped me financially during my studies.

I don't have to hesitate to underline the countless and outnumbered thanks to my parents , who sacrificed the little he had in investing my education.

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I cannot forget the tireless efforts of lecturers of KIU for their courage and as well as their contributions to shape me to be valuable product in this university.

Needless to say that for any errors and omissions which might still be there in this thesis, the researcher is solely responsible for the same.

## TABLE OF CONTENTS

DECLARATION.....	i
APPROVAL.....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENT.....	iv
TABLES OF CONTENTS.....	v
LIST OF TABLES.....	vii
LIST OF FIGURES.....	ix
ABSTRACT.....	x
<b>CHAPTER ONE.....</b>	<b>1</b>
<b>INTRODUCTION.....</b>	<b>1</b>
1.0 Introduction.....	1
1.1 Background of the study.....	1
1.1.1 Historical Perspective.....	1
1.1.2 Theoretical Perspective.....	3
1.1.3 Conceptual Perspective.....	4
1.1.4 Contextual Perspective.....	7
1.2. Statement of the problem.....	9
1.3. Purpose of the study.....	10
1.5. Specific Objectives.....	10
1.6 Research Questions.....	10
1.7. Hypothesis.....	10
1.8. Scope of the study.....	11
1.9. Significant of the Study.....	11

<b>CHAPTER TWO</b> .....	<b>12</b>
<b>LITERATURE REVIEW</b> .....	<b>12</b>
2.0. Introduction .....	12
2.1. Theoretical review .....	12
2.2. Conceptual review .....	13
2.3. The trend of public expenditure from 1995 -2014 .....	14
2.4. The trend of economic growth from 1995-2014 .....	16
2.4. Relationship between public expenditure and economic growth 1995-2014.....	19
2.5. Research Gaps .....	25
<b>CHAPTER THREE</b> .....	<b>26</b>
<b>METHODOLOGY</b> .....	<b>26</b>
3.0. Introduction .....	26
3.1. Research design .....	26
3.2. Data Type and Sources .....	27
3.3. Data analysis.....	27
3.4. Ethical consideration .....	28
3.5. Limitations of the study.....	28
<b>CHAPTER FOUR</b> .....	<b>29</b>
<b>ANALYSIS OF RESULTS AND FINDINGS</b> .....	<b>29</b>
4.0. Introduction .....	29
4.1. Description of the data.....	29
4.2. Determining the trend of economic growth from 1995-2014.....	31
4.3. Determining the trend of public expenditure.....	33

4.4. Relationship between public expenditure and economic growth .....	36
<b>CHAPTER FIVE .....</b>	<b>40</b>
<b>DISCUSSION, CONCLUSION AND RECOMMENDATION .....</b>	<b>40</b>
5.0 Introduction .....	40
5.1. Discussion of results .....	40
5.1.1. Trend of public expenditure from 1995 -2014 .....	40
5.1.2. The trend of economic growth from 1995-2014 .....	40
5.1.3. Relationship between public expenditure and economic growth from 1995-2014 .....	42
5.1. Conclusion .....	43
5.2. Recommendations .....	43
REFERENCES .....	44
APPENDICES .....	48
APPENDIX I: TRANSMITTAL LETTER FOR THE ORGANIZATION .....	48



## LIST OF TABLES

Table 4.1: Descriptive statistics of the major variables in the model.....	30
Table 4.2: Summary of the four variables in the study .....	31
Table 4.3a: Correlation between public expenditure and economic growth .....	36
Table 4.3b: Regression results of public expenditure on economic growth.....	37

## LIST OF FIGURES

Figure 4.1a: Percentage increase of real gross domestic product.....	32
Figure 4.1b: Scatter of percentage increase of Real GDP .....	33
Figure 4.2: Percentage of expenditure on health .....	34
Figure 4.3: Percentage of Public expenditure on consumption .....	35
Figure 4.4: Percentage of public expenditure on education .....	36
Figure 4.5: Variance Inflation factor statistics .....	38
Figure 4.6: Heteroscedasticity and Autocorrelation statistics .....	38

## ABSTRACT

The main purpose of this study was to establish the influence of public expenditure on economic growth in Uganda from 1995-2014. It was driven by three major objectives; To determine the trend of public expenditure from 1995 -2014; To determine the trend of economic growth from 1995-2014; To establish if there is significant relationship between public expenditure and economic growth from 1995-2014. Using time series data from the world bank and Uganda bureau of statistics, both correlational and regression analysis statistical tools were applied to investigate and build a model for explaining the variation in economic growth. The Gross Domestic Product (GDP) representing Uganda's GDP in Nominal terms is considered as the dependent variable in this study. Public expenditure (independent variable) is divided into three different attributes, for instance, public expenditure on consumption, public expenditure on education and public expenditure on health. The data shows that there have been irregular changes in real gross domestic product (RGDP) for years 1995 to 2014 throughout the nineteen-year period the study was conducted because the RGDP data registered some random increases and decreases within this time. The data further shows that there has been a rather constant variation in the percentage of public expenditure on health. Analysis of the public expenditure data reveals that public expenditure has registered some slight spikes for the last nineteen years. The data also shows that there has been an irregular and relatively low variation in the percentage of public expenditure on education. The results of the analysis indicate that there exists a negative relationship between Expenditure on health and economic growth. the results also show that there is a positive relationship between expenditure on consumption and economic growth. The data also reveals that the three different attributes to expenditure, for instance, expenditure on consumption, health and education explain only 16.96% of the variation in overall government growth. The study thus recommends that if the government is to spur economic progress through public expenditure, then the most appropriate of doing so should be through consumption. Furthermore, the data shows that although public expenditure, best form of government spending to stimulate the economy, is not a very reliable way of increasing economic activity.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.0 Introduction**

In this introductory chapter, consists of the background, problem statement, and purpose of the study, research objective, research questions, hypothesis, scope, Geographical scope, content scope, time scope, significance of the study and operational definitions of key terms.

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

This section was divided or categorized in to three subsections which historical perspective, theoretical perspective, conceptual perspective and contextual perspective. These are outline below.

##### **1.1.1 Historical Perspective**

The world economy grew at 2.8 per cent in 2011, down from 4 per cent in 2010, largely because of decreased demand and greater uncertainty. Gross domestic product (GDP) growth in developed economies declined from 2.7 per cent in 2010 to just 1.3 per cent in 2011, on both demand and supply factors. Public expenditure through domestic demand, particularly in the developed world, stagnated owing to obstinately high unemployment and depressed consumer and business confidence, as fear of a second recession became widespread (UN-DESA, 2012).

In the process of the growth of the European Union (EU) leveled off from 2 per cent in 2010 to 1.6 per cent as the euro area registered only 1.5 per cent growth in 2011 (UN-DESA, 2012). The euro area crisis struck at consumer and business confidence, and lowered private consumption and investment against a backdrop of re-emerging financial turbulence and a bank credit crunch. The public expenditure patterns in the Euro zone also escalated leading to the more spending on health, consumption and education prevailing affecting the economic growth.

There were considerable regional variations in growth in 2009 across African regions and countries. Growth was highest in East Africa at 3.9 per cent, followed by North Africa at 3.5 per cent, West Africa at 2.4 per cent and Central Africa at 0.9 percent, while Southern Africa posted a negative growth rate of 1.6 per cent. Of the 53 African countries, only 7 grew at 5 per cent or more in 2009, while 29 grew at less than 3 per cent. This compares to 25 countries growing at 5 per cent or more and 16 countries growing at less than 3 per cent in 2008. Africa's GDP growth trended downwards in 2009. Disparities among countries persisted and even increased in some

cases. In 2009, 29 countries grew by 3 per cent or less, 17 managed to record GDP growth rates in the range of 3 to 5 per cent and 2 (Ethiopia and Republic of the Congo) expanded by 7 per cent or more. This was a marked deterioration compared to the performance recorded over the past two years when the majority of countries witnessed GDP growth of more than 3 per cent (UNECA and AUC, 2009; IMF, 2009).

African economies continued to sustain the growth momentum of previous years, recording an overall real GDP growth rate of 5.7 per cent in 2006 compared to 5.3 per cent in 2005 and 5.2 per cent in 2004. For the second consecutive year, Africa's growth rate remains higher than that of Latin America (4.8 per cent) but lower than that of developing Asia (8.7 per cent). As many as 28 countries recorded improvements in growth in 2006 relative to 2005. Only one country—Zimbabwe - recorded a negative growth rate in 2006. North Africa recorded the highest acceleration in GDP growth, from 5.2 per cent in 2005 to 6.4 per cent in 2006, followed by Southern Africa, from 5.6 to 5.9. There was a notable deceleration in growth momentum in West Africa, from 5.4 per cent in 2005 to 4.2 per cent in 2006. Stronger growth performance in North Africa was mainly the result of higher oil prices, especially for Algeria, Libya, Sudan, and Mauritania. Mauritania achieved the highest increase in GDP growth rate (from 5.4 per cent in 2005 to 14.1 per cent in 2006) owing to the start of commercial exploitation of crude oil in 2006 (UNECA and AUC, 2005; IMF, 2005).

In 2013, Uganda saw the consolidation of macroeconomic stability and a gradual recovery of economic growth in which Real GDP growth in 2013 reached 5.6% compared to the 2.8% growth in 2012, this was mainly due to under execution of externally financed public investment and depressed exports as demand from trading partners stalled. Also, the economic growth in Uganda keep up escalating in the financial year in 2014 extended to 5.9% from 5.6% in 2013 and it is forecasting to improve in this year 2015, owing to the government's resolve to improve the fiscal space through domestic revenue mobilization efforts, scaled up public investment and a recovery in private investment (UBOS, 2014). In 2011, the Ugandan economy declined from economic growth (GDP) growth of over 6% the previous year to 4.1%. Over the course of the year, inflation averaged 18.8%, up from 4.1% in 2010, the exchange rate depreciated by 6.2% against the US dollar (USD), and the trade deficit increased from 9.6% to 10.8% of GDP.

The 2012 African Economic Outlook projects real GDP growth to improve to 4.5% and 4.9% in 2012 and 2013, respectively, mainly premised on good prospects in the oil sector. However, attaining these rates will depend on the ability of the authorities to address major infrastructural constraints, particularly in the energy sector, and to mitigate risk factors, including those linked to climate change. Inflationary pressures are forecast to subside in 2012 and to reach single digits in 2013, reflecting both global declines in food and fuel prices, as well as the impact of monetary tightening by the Bank of Uganda (BOU). The government is expected to rein in expenditure growth; yet slower revenue collections brought about by the slowdown of economic activity are likely to offset any improvements on the fiscal balance. On the external front, the current-account deficit is projected to deteriorate in 2012 and 2013 to 10.2% and 11.1% of GDP, respectively, as import growth accelerates and exports are hit by the global economic slowdown.

During 2011 the Ugandan economy continued to perform strongly by regional and international standards, albeit with an important deceleration of GDP growth as of the third quarter of the year. This slowdown in economic activity has been particularly felt in the mining, manufacturing, construction and energy sectors, and is likely to bring real GDP growth for 2011 down to 4.1%, the lowest in over a decade. The slowdown in the Ugandan economy is partly due to difficulties in the European and US economies, both important markets for Ugandan exports. The BoU considers that the sustained slowdown forecast for the advanced economies in the near term, together with financial instability in global markets, will continue to dampen demand for Uganda's exports and reduce coffee and cotton production (FDI), remittances, and aid flows in the short to medium term. On a more optimistic note, the global economic downturn could cut Uganda's import bill, thus improving its external position, which deteriorated significantly, with the current account deficit (including grants) increasing from 9.6% of GDP in FY2009/10 to 12.6% in FY2011/12.

### **1.1.2 Theoretical Perspective**

The Keynesian theory (1936)

The study was premised on the Keynesian theory of (1936), the Keynesian model indicates that during recession a policy of budgetary expansion should be undertaken to increase the aggregate demand in the economy thus boosting the Gross Domestic Product (GDP). Keynes regards public expenditures as an exogenous factor which can be utilized as a policy instruments to

promote economic growth. From the Keynesian thought, public expenditure can contribute positively to economic growth. Hence, an increase in the government consumption is likely to lead to an increase in employment, profitability and investment through multiplier effects on aggregate demand. As a result, government expenditure augments the aggregate demand, which provokes an increased output depending on expenditure multipliers. In economic theory, it appears as Harrod-Domar-Keynesian theory of growth or simply, Harrod-Domar growth model. A mathematical equation of this model:  $y = f(k,s)$  shows the existence of a direct relationship between savings and the rate of economic growth..

### **1.1.3 Conceptual Perspective**

According to (Akrani, 2012) Public expenditure is spending made by the government of a country on collective needs and wants such as pension, provision, infrastructure, etc. Until the 19th century, public expenditure was limited as laissez faire philosophies believed that money left in private hands could bring better returns. Population growth: It increases with the increase in population, more of investment is required to be done by government on law and order, education, infrastructure, etc. investment in different fields depending on the different age group is required.

welfare activities- welfare, mid-day meals, pension provisions etc. Provision of public and utility services-provision of basic public goods given by government (their maintenance and installation) such as transportation. Accelerating economic growth- in order to raise the standard of living of the people. Price rise- higher price level compels government to spend increased amount on purchase of goods and services. Increase in public revenue- with rise in public revenue government is bound to increase the public expenditure. International Obligation- maintenance of socio economic obligation, cultural exchange these are indirect expenses of government (Singh, 2013)

### **Components of Public Expenditure**

Individual consumption expenditure by government: The actual and imputed final consumption expenditure incurred by general government on housing, health, recreation and culture, education, and social protection. Not all government expenditure on these services constitutes individual consumption expenditure. Expenditures on the overall policy-making, planning, budgetary, coordinating and monitoring responsibilities of ministries overseeing the services and

on the research and development carried out for the services are classified as collective consumption expenditure because they cannot be identified with specific individual households and are considered to benefit households collectively.

Collective consumption expenditure by government: The actual and imputed final consumption expenditure incurred by general government on collective services. It covers all government final consumption expenditure on general public services, defense, public order and safety, economic affairs, environment protection, and housing and community amenities. It includes as well government expenditure on the collective features of individual services mentioned in the previous bullet point

Economic growth is an increase in the capacity of an economy to produce goods and services, compared from one period of time to another. Economic growth can be measured in nominal terms, which include inflation, or in real terms, which are adjusted for inflation. For comparing one country's economic growth to another, GDP or GNP per capita should be used as these take into account population differences between countries (Al-Bartlett, 1972).

Economic growth is the increase in the inflation-adjusted market value of the goods and services produced by an economy over time. It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP. Of more importance is the growth of the ratio of GDP to population (GDP per capita, which is also called per capita income). An increase in growth caused by more efficient use of inputs (such as labor, physical capital, energy or materials) is referred to as intensive growth. GDP growth caused only by increases in the amount of inputs available for use (increased population, new territory) is called extensive growth. In economics, "economic growth" or "economic growth theory" typically refers to growth of potential output, i.e., production at "full employment".. The former is primarily the study of how countries can advance their economies. The latter is the study of the economic development process particularly in low-income countries (Galor,2005).

### **Components of economic growth**

Over decades and generations, seemingly small differences of a few percentage points in the annual rate of economic growth make an enormous difference in GDP per capita. In this module,



we discuss some of the components of economic growth, including physical capital, human capital, and technology.

The category of physical capital includes the plant and equipment used by firms and also things like roads (also called infrastructure). Again, greater physical capital implies more output. Physical capital can affect productivity in two ways: (1) an increase in the quantity of physical capital (for example, more computers of the same quality); and (2) an increase in the quality of physical capital (same number of computers but the computers are faster, and so on). Human capital and physical capital accumulation are similar: In both cases, investment now pays off in longer-term productivity in the future.

Foster and Mijumbi (2002) argued that the category of technology is the “joker in the deck.” Earlier we described it as the combination of invention and innovation. When most people think of new technology, the invention of new products like the laser, the smartphone, or some new wonder drug come to mind. In food production, the development of more drought-resistant seeds is another example of technology. Technology, as economists use the term, however, includes still more. It includes new ways of organizing work, like the invention of the assembly line, new methods for ensuring better quality of output in factories, and innovative institutions that facilitate the process of converting inputs into output. In short, technology comprises all the advances that make the existing machines and other inputs produce more, and at higher quality, as well as altogether new products.

It may not make sense to compare the GDPs of China and say, Benin, simply because of the great difference in population size. To understand economic growth, which is really concerned with the growth in living standards of an average person, it is often useful to focus on GDP per capita. Using GDP per capita also makes it easier to compare countries with smaller numbers of people, like Belgium, Uruguay, or Zimbabwe, with countries that have larger populations, like the United States, the Russian Federation, or Nigeria (Agenor and Blanca, 2006).

To obtain a per capita production function, divide each input in by the population. This creates a second aggregate production function where the output is GDP per capita (that is, GDP divided by population). The inputs are the average level of human capital per person, the average level of physical capital per person, and the level of technology per person. The result of having population in the denominator is mathematically appealing. Increases in population lower per

capita income. However, increasing population is important for the average person only if the rate of income growth exceeds population growth. A more important reason for constructing a per capita production function is to understand the contribution of human and physical capital (Sakar, 2007)

#### **1.1.4. Contextual Perspective**

Revenues earned by a government are very crucial for a country 's economic growth and poverty reduction. To fulfill budgetary obligation and other development as well as non-development expenditures almost every government in developing countries does rely heavily on revenue incomes and receipts. Utilizing Engle-Granger bivariate cointegration approach, Ewing and Payne (1998) studied the relationship between revenues and public expenditures relative to real GDP in Latin America. They developed and tested two important hypotheses concerning government 's revenues and spending namely the fiscal synchronization hypothesis and the tax-spend hypothesis. They found differential results. For the case of two countries like Chile and Paraguay the fiscal synchronization hypothesis became true as there were evidences of bi-directional causality between revenues and expenditures. For countries such as Colombia, Ecuador, and Guatemala the tax-spend hypothesis was appropriate because the researchers found evidence of causality from revenues to expenditures (World bank, 2012).

Taking Thailand as a test case, Komain and Brahmasrene (2007) checked the Granger causality association between government expenditure and economic growth and they found no co-integration. They discovered a positive correlation between government spending and GDP growth. Their results also revealed a unidirectional relationship where causality runs from the earlier (expenditure) to the latter (growth of the country). The relationship between social progress and growth of economic activity is explained by the so-called Wagner's law. Kalam and Aziz (2009) empirically investigated such a relationship in the Bangladesh economy using a time series data set from 1976 to 2007 within both a bivariate as well as a trivariate framework. Their estimated results provide evidence for a long-run co-integration relation among real public spending and real GDP where public spending is not only progressively tied with real output but also is Granger caused by GDP.

Government expenditure in different sectors of the economy may impose differential effects. Nurudeen and Usman (2010) employed a disaggregated analysis in an attempt to investigate the

impact of various government expenditures on Nigeria's economic growth. With the help of cointegration and error correction methodologies, they checked the relationship between some important expenditure variables such as government's total capital expenditure, total current expenditure, government expenditure on education, and government's rising expenditure on transport and communication. They reported that public expenditures in two key sectors like transport and communication, and health result to maintain a positive influence in economic growth. On the contrary, as the author concluded, all other typical expenditures by the Nigerian government appeared to have no effect at all in economic wellbeing of the country.

Robert Barro for the first time was able to formally endogenize government spending in a growth model. Barro (1990) also successfully analyzed the relationship between size of government in term of expenditure as a share of GDP and rates of economic as well as savings growth for a economy. The baseline findings of this study turned a conclusion that spending more public resources is correlated with lower per capita growth when they are devoted to non-productive but possibly utility enhancing government services (Fan, Yu, and Somchai, 2008).

At independence in 1962, Uganda showed prospects for sustainable development with high growth and savings rates, and a well-developed education system. The country was running a trade surplus, primarily through agricultural, textile, and copper exports. It was self-sufficient in terms of food, and small-scale industry supplied the domestic market with basic inputs. Uganda suffered, however, from political turmoil and economic mismanagement from the early 1970s until the mid-1980s. Many skilled workers fled the country, leading to a rapid deterioration of human capital and managerial skills. Industry was nationalized and placed under state control. Rampant inefficiency led to a collapse of the economy, and agricultural output plummeted because of insecurity and war in rural areas.

Uganda has made great strides toward economic growth and poverty reduction since the late 1980s. In the 1990s annual GDP growth climbed steadily to 6.9 percent from only 3 percent per annum during the 1980s. As a result, the share of the population below the poverty line fell from 56 percent in 1992 to 35 percent in 1999. This rapid poverty reduction over such a short period is rare, not only in Sub-Saharan African countries but across the developing world.<sup>1</sup> This success, however, was not equally distributed among regions or between rural and urban areas. The incidence of poverty in rural areas was 39 percent, while it was only 10 percent in urban areas in

1999/2000. Another major achievement in poverty reduction took place in China from 1978 to 1984. Within six years, the rural poverty rate was reduced from 33 to 11 percent, and the number of rural poor declined from 260 to 89 million (Fan, Zhang, and Zhang 2002). Uganda's success contrasts sharply with other African nations (World Bank 2002).

## **1.2. Statement of the problem**

The economic growth for the countries are usually varying, the causes of much of the variations in economic growth over time are not well understood. The effect of government expenditure on economic growth has not been explored exhaustively. Several studies have attempted to investigate the channels through which different types of government expenditure can affect growth (Landau, 1983; Diamond, 1984; Barro, 1990; Davarajan et al 1993; Kweka, 1995; Colombier, 2000; Njuguna 2009). From these studies, the effects of government expenditure on economic growth appear to be inconclusive. Despite this uncertainty, theory suggests that government expenditure has a positive effect on economic growth (Barro, 1990; Barro and Sala-i-Martin, 1992, and 1995). The variations in economic growth is sometimes negative especially in the developing countries (World Bank, 2002)

In 2011, the Ugandan economy declined from economic growth (GDP) growth of over 6% the previous year to 4.1%. Over the course of the year, inflation averaged 18.8%, up from 4.1% in 2010, the exchange rate depreciated by 6.2% against the US dollar (USD), and the trade deficit increased from 9.6% to 10.8% of GDP.

In 2013, Uganda saw the consolidation of macroeconomic stability and a gradual recovery of economic growth in which Real GDP growth in 2013 reached 5.6% compared to the 2.8% growth in 2012, this was mainly due to under execution of externally financed public investment and depressed exports as demand from trading partners stalled. Also, the economic growth in Uganda keep up escalating in the financial year in 2014 extended to 5.9% from 5.6% in 2013 and it is forecasting to improve in this year 2015, owing to the government's resolve to improve the fiscal space through domestic revenue mobilization efforts, scaled up public investment and a recovery in private investment (UBOS, 2014).

Uganda economic growth (GDP) has been facing problems and still characterized by a low levels of real GDP growth rate. Though Uganda's macroeconomic performance remains impressive, outcries heightened poverty and human suffering remains and the standard of living of the majority of the people is very low (UBOS, 2014). Uganda remains one of the developing countries in the world (IMF, 2005). The real GDP growth rate of Uganda (2.8%) is lower than that of Tanzania (6.4%) and Kenya (4.6%) in 2012 (World Bank). According to the World Bank, the real growth of GDP of Uganda in 2005 was 10%, 2007 was 1.8%, 2011 was 6.2% and further in 2014 was 5.9%. The GDP of Uganda has been haphazard for the last four years. The growth rate for each year from 2011 to 2014 was: 6.2%, 2.8%, 5.8%, and 5.9% respectively. This low growth rate of GDP could have negative impact and long lasting problems to the standard of living of the people and the national economic performance and hence deserves to be studied. The randomness in growth rate could be as a result of low growth of the labor force, low growth of the nations stock of the capital, low technological improvements hence the researcher set to investigate the effect of public expenditure on economic growth in Uganda.

### **1.3. Purpose of the study**

To established the influence of public expenditure on economic growth in Uganda from 1995-2014

### **1.5. Specific Objectives**

- i. To determine the level of public expenditure from 1995 -2014.
- ii. To determine the level of economic growth from 1995-2014.
- iii. To establish if there is significant relationship between public expenditure and economic growth from 1995-2014

### **1.6 Research Questions**

- i. What is the level of public expenditure from 1995-2014?
- ii. What is the level of economic growth from 1995-2014?
- iii. Is there a significant relationship between public expenditure and economic growth in Uganda from 1995-2014?

### **1.7. Hypothesis**

Ho: There is no significant relationship between public expenditure and economic growth in Uganda from 1995-2014.

## **1.8. Scope of the study**

### **1.8.1 Geographical scope**

This study would be conducted in Uganda using time series data of public expenditure and economic growth from 1995-2014

### **1.8.2 Content scope**

This study would be examining public expenditure as an independent variable and economic growth as the dependent variable since the two are interlinked.

### **1.8.3 Time Scope**

This study was used time series data from 1995-2014.

## **1.9. Significant of the Study**

The findings of this study would be used by academician as a reference material in case of related studies on public expenditure and economic growth.

The result of this study can benefit economists to come up models that can be used to forecast the future trends of economic growth rate due to the change of public expenditure which will facilitate to make informed decisions.

The study was also be benefit to the government and the concerned institutions to formulate a concrete policy to encourage public expenditure and uplift the economic growth rate.

The study enables in providing knowledge on public expenditure and the extent of its impact on economic growth rate and in turn on standard of living.

To the general public, it benefitted them through improved and increased services delivery and provision of public good either in the short or long, also this study will be so important the researchers specially students those wants to write their graduation thesis, and finally it will be important to NGOs. Lastly, it will be serve also a reference material for further studies.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0. Introduction

This chapter shows theoretical review, conceptual review, and empirical review. This chapter reviewed the related literature pertinent to this study with respect to the variables under study. It begins with theoretically reviewing the model in question which supports the main view of this study. It goes ahead to conceptualize the main variables of the study, then to actually perform a review of related studies, and finally identifying the gaps the literature reviewed.

#### 2.1. Theoretical review

##### The Keynesian theory(1936)

The Keynesian model indicates that during recession a policy of budgetary expansion should be undertaken to increase the aggregate demand in the economy thus boosting the Gross Domestic Product (GDP). Keynes regards public expenditures as an exogenous factor which can be utilized as a policy instruments to promote economic growth. From the Keynesian thought, public expenditure can contribute positively to economic growth. Hence, an increase in the government consumption is likely to lead to an increase in employment, profitability and investment through multiplier effects on aggregate demand. As a result, government expenditure augments the aggregate demand, which provokes an increased output depending on expenditure multipliers. In economic theory, it appears as HarrodDomarkeynesian theory of growth or simply, HarrodDomar growth model. A mathematical equation of this model:  $y = f(k,s)$  shows the existence of a direct relationship between savings and the rate of economic growth.



## 2.2. Conceptual review

### 2.2.1 Conceptual frame work showing the relationship between public expenditure on economic growth

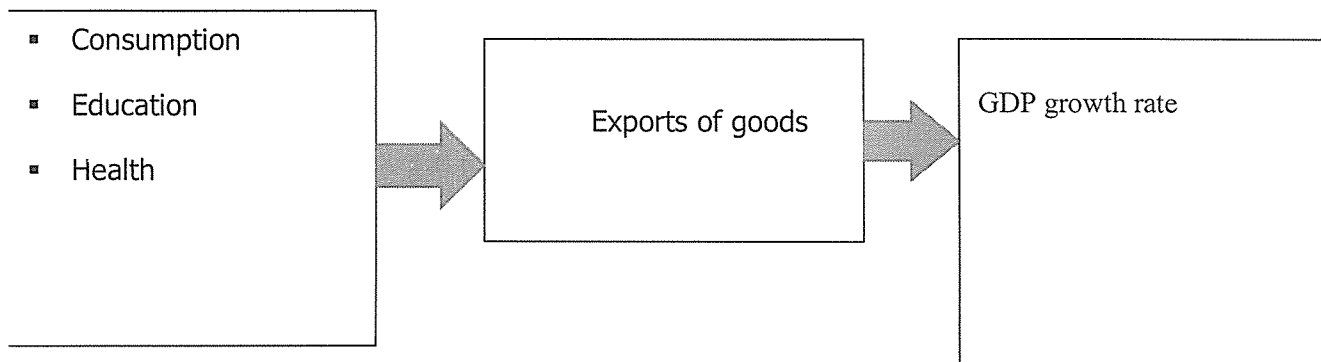
Independent Variable

intervening variable

Dependent Variable

**Public Expenditure**

**Economic Growth (DV)**



**Source: Researcher, 2016**

Figure1: The conceptual frame work illustrates the relationship between public expenditure and economic growth. Public expenditure independent variable was measured as consumption and education and health .On the other, hand economic growth which dependent variable will measure in terms of GDP Growth Rate .Therefore there is intervening variables those are: exports of goods. The above figure highlights a conceptual frame work for the relationship between Public expenditure and economic growth.

### **2.3. The Level of public expenditure of Uganda from 1995 -2014**

Public expenditure is spending made by the government of a country on collective needs and wants such as pension, provision, infrastructure, etc (*Singh, 2004*). Until the 19th century, public expenditure was limited as laissez faire philosophies believed that money left in private hands could bring better returns. In the 20th century, John Maynard Keynes argued the role of public expenditure in determining levels of income and distribution in the economy. Since then government expenditures has shown an increasing trend. Akpan (2005) disaggregated public expenditure into capital, recurrent, administrative, economic service, social and community service, and transfers to ascertain which of them enhance growth, and those that do not. The author concluded that there was no significant association between most components of government expenditure and economic growth in Nigeria.

Studies have investigated the impact of particular (functional) categories of public expenditure on economic growth. Devarajan et al (1995), using a sample of 14 OECD countries, found that spending on health, transport and communication have positive impacts, while spending on education and defense did not have a positive impact. On the contrary, Donald and Shuanglin (1993) investigated the differential effects of various forms of expenditures on economic growth for a sample of 58 countries. Their findings indicate that government expenditures on education and defense have positive influence on economic growth, while expenditure on welfare has insignificant negative impact on economic growth.

Niloy, (2003) confirmed that government capital expenditure in GDP has a significant positive association with economic growth, but the share of government current expenditure in GDP was shown to be insignificant in explaining economic growth. At the sectoral level, government investment and expenditure on education are the only variables that had significant effect on economic growth, especially when budget constraint and omitted variables are included. Ramirez (2004) used Mexican data for the period 1955 to 1999, and found that public infrastructure, which comprises transport, communications, water and sewer systems, education and health care; positively affects growth. Saad and Kalakeck (2009) examined the growth effects of government expenditure in Lebanon over a period from 1962 to 2007, with a particular focus on sectoral expenditures. Four major sectors - defense, education, health, and agriculture- were considered. They used a multivariate co integration analysis to examine the effect of each sector

on economic growth. The results reveal that government spending on education has a positive effect on growth in the long-run and negative impact in the short-run; while spending on defense has a negative effect on economic growth in the long run and insignificant impact in the short-run. As to health spending, it is negatively correlated to growth in the long-run and there is insignificant linkage in the short-run. Finally, spending on agriculture is found to be insignificant in both cases.

Nurudeen and Usman (2010) examined the effect of both economic and functional classification of government expenditure on economic growth. The results reveal that government total capital expenditure, total recurrent expenditures, and government expenditure on education have negative effect on economic growth. However, rising government expenditure on transport and communication, and health results to an increase in economic growth. This particular study focused on public expenditures on consumption, health and education.

### **2.3.1. Public expenditure on Consumption**

Public expenditure enables redistribution of income in favour of poor. It improves the capacity of the poor to consume. Thus public expenditure promotes consumption and thereby other economic activities. The government expenditure on welfare programmes like free education, health care and housing certainly improves the standard of the poor people. It also promotes their capacity to consume and save (Singh,2008) the public expenditure is used as mechanism to control instability. The modern economist Keynes advocated public expenditure as a better device to raise effective demand & to get out of depression. Public expenditure is also useful in controlling inflation & deflation. Expansion of Public expenditure during deflation & reduction of public expenditure during inflation control money supply & bring price stability (Coricelli&Fabrizio, 2007).

The government allocates funds for the growth of various sectors like agriculture, industry, transport, communications, education, energy, health, exports, imports, with a view to achieve impressive growth. Public expenditure has been very helpful in maintaining balanced economic growth. Government takes keen interest to allocate more resources for development of backward regions. Such efforts reduces regional inequality and promotes balanced economic growth (Chu & Schwartz, 2004).

### **2.3.2. Public expenditure on health**

Public expenditure on health refers to expenditure by government in the provision of health amenities such as infrastructure, personnel, medicine and equipment that enables citizens to access the health services (UN- DESA, 2012).

Public spending on health care can be viewed as an insurance benefit provided to all those covered by public health care plans. The value of this benefit differs amongst individuals as health care needs may differ by age, gender, or even income level. As in the case of education, the allocation of these benefits requires two steps. In the first step, the average benefit for each selected group is calculated by dividing the costs of selected health care services by the number of people in each age-gender group (World bank, 2002). This cost, which is equated to the average benefit received, is then allocated to the household or family unit to which the members of a group belong. What is being allocated under this approach is the average benefit for the representative member in each age-gender group, independently of the actual utilization rate of each individual member. The more detailed is the breakdown of health care expenditures into their components and the disaggregation of the population, the more accurate is the allocation of the benefits of public spending on health care. Similar procedures are used in the allocation of all government purchases of goods and services for which specific beneficiaries can be identified.

### **2.3.3. Public Expenditure on Education**

This entails the expenditures of the government on educational materials and requirements such as educational infrastructure, professional educational management teams, teachers salaries and provision of scholastic materials to the education sector (Katema, 2006). Although the gap in enrolment at both primary and secondary level between high and low income countries is reducing, there is still much difference especially at the secondary school level. As at 2007 gross secondary school enrolment in high income countries is 99.9 per cent, while that of low income countries stands at 36.3 per cent (UNESCO Institute for Statistics). An examination of public education expenditure between these two groups of countries also reveals the same trend. For instance, in Luxembourg, average public expenditure on education per pupil in primary school between 2003 and 2006 was US\$9953. In the same period, Congo recorded US\$39 (Human Development Report, 2009). Notwithstanding the fact that access to education does not

necessarily imply enrolment, a number of studies have examined the extent to which public education expenditure has been instrumental to the level of education attainment.

#### **2.4. The level of economic growth from 1995-2014**

Coricelli (1997) defined economic growth as the increase in the level on goods and services of a country within a fixed period of time, in this case economic growth will be measured in term of Gross Domestic Product therefore GDP is defined as Jeff Holt (2007) defined Gross domestic product as the total market value of all final goods and services produced annually within the boundaries of the country whether by national or foreigner-supplied resources.

Gross domestic product (GDP) which is measurement of Economic Growth was first developed by Simon Kuznets for US congress report in 1934, who immediately said not to use it as a measure for welfare. After the Britain Woods conference in 1944, GDP became the main tool for measuring the country's economy. GDP per capita income is an indicator of country's standard of living and is not a measure of personal income.

Barro (1995) examined the determinants of economic growth and the empirical findings for a panel of around 100 countries from 1960 to 1990 strongly support the general notion of conditional convergence. For a given starting level of real per capita GDP, the growth rate is enhanced by higher initial schooling and life expectancy, lower fertility, lower government consumption, better maintenance of the rule of law, lower inflation, and improvements in the terms of trade while growth is negatively related to the initial level of real per capita GDP.

Dewan and Hussein (2001) used a sample of 41 middle-income developing countries to develop an empirical model for growth. The study also presents a wide-ranging examination of both theoretical and empirical evidence on the many ways macroeconomic policies affect growth. The results suggest that apart from growth in the labor force, investment in both physical and human capital, as well as low inflation and open trade policies are necessary for economic growth. Furthermore, the ability to adopt technological changes in order to increase efficiency is also important. Since many developing countries have a large agricultural sector, adverse supply shocks in this sector was found to have a negative impact on growth.

Generally, economic growth theory deals with long-run growth trend of the economy, or potential growth path (Branson, 2002). The focus is on factors that lead to economic growth over

time and analysis of the forces that allow some economies to grow rapidly, some slowly and others not at all. Early growth theories emphasized on different aspects of the economy. For instance, Mercantilists emphasized surplus balance of trade, Physiocrats emphasized agriculture as the source of all wealth while the Cameralists favored taxation and state regulation for strong economy (Grosman and Elhanan, 2001).

Within the framework of the classical models of Smith and Malthus, economic growth is described in terms of fixed land and growing population. But without technological change, increasing population eventually exhausts the supply of free land and triggers law of diminishing returns which results to declining real wage down to subsistence level at which point Malthusian equilibrium obtains.

The reforms of the early 1990s, especially the dismantling of the agricultural public enterprises and liberalization of the economy, led to greater participation of the private sector in marketing agricultural produce. The agricultural reforms implemented since the mid-1990s, however, have largely benefited only a small fraction of farmers, particularly richer and better-educated farmers, who have been able to diversify their agricultural production. Once these efficiency gains were exploited, other innovations were needed to maintain growth in the sector (Okidi and others 2007).

Uganda's per capita GDP at purchasing power parity remains about half that of Sub-Saharan African as a whole. During the decade following the end of political instability and civil war in 1986, Uganda's economy grew at an average rate of 7.7 percent a year. (Economic growth declined by 1.4 percentage points between 2008/09 and 2009/10.) Initially, economic growth was driven by postwar recovery and reconstruction. Since the early 1990s it has been driven by comprehensive macroeconomic and structural reforms. Investment growth also remained strong, with private investment rising by an estimated 17 percent and public investment rising 15 percent. Private investment growth was led by construction.

Uganda is one of the few Sub-Saharan African countries to achieve the first MDG of halving extreme poverty before 2015 (annex table 2.A3). The proportion of the population living below the absolute poverty line declined from 56.4 percent in 1992/93 to 31.1 percent in 2005/06 and to 24.5 percent in 2009/10 (table 2.5).<sup>1</sup> Income poverty remains a key development challenge, however, with the absolute number of poor people declining only marginally, from 9.8 million in

1992 to 8.4 million in 2005/06 and to 7.5 million in 2009/10, as a result of a population growth rate of 3.2 percent a year. The majority of the poor live in rural areas, in particular in northern Uganda (Ssewanyana and Okidi 2007; Uganda Bureau of Statistics, 2010).

Uganda is likely to attain MDG 3 (promoting gender equality and empowering women), MDG 6 (combating HIV/AIDS), MDG 7 (ensuring environmental sustainability), and MDG 8 (developing a global partnership for development). The stagnation in net primary school enrollment since 2003 at about 85 percent is a clear indication that intensified efforts are required if Uganda is to meet MDG 2, however, and attainment of MDG 4 (reducing child mortality) and MDG 5 (improving maternal health) is unlikely even with improved policies, institutions, and funding (UNDP, 2010).

Other sectoral reforms that contributed to the liberalization and stabilization of the economy included the Medium-Term Competitive Strategy for the Private Sector, the Strategic Export Program, and the Strategic Export Intervention Program. These policies were accompanied by important institutional reforms, such as decentralization efforts, the abolition of state-owned marketing boards, and the restructuring of the public administration. The 1990s saw a substantial reversal in the decline of the economy that had characterized the 1970s and early 1980s, suggesting that reform worked. Confidence in the economy was restored, spurring substantial inflows of aid and foreign direct investment and a reversal of capital flight (figure 2.6). Most economic indicators rebounded, and by 1996 the economy had recovered to its nominal 1971 dollar per capita GDP (World Bank, 2008).

Dowrick and Golley (2014) pointed out productive-sector activities in 2011 have continued to be dominated by developments in the power and oil industries, both of which are critical to Uganda's development prospects. With current national hydro generation levels at around 200-250 megawatts (MW) and electricity demand at 440MW in peak hours, energy poses one of the most important challenges to sustained economic development in Uganda. In 2011 the main power distribution company, Umeme, implemented a load-shedding (rationing) program that has led to nationwide power cuts of up to 12 hours per day, disrupting production activities and causing considerable social unrest. The commissioning of the Bujagali hydropower dam, which is planned to start operating in 2012 and which will increase generation capacity by 170 250MW, is expected to ease power shortages in the short term. Uganda is planning to start large-scale oil

production and expects to reach a peak of 200 000 barrels per day in 2015/16. It could yield revenue of up to USD 2 billion annually to the government.

#### **2.4. Relationship between public expenditure and economic growth 1995-2014**

The economic literature related to the relationship between public expenditure and economic growth is delineated along the two contending views, which are the hypotheses of Wagner (1883) and Keynes (1936). However, for this study, the relevant literature is that pertaining to the former. Wagner considered public expenditure as a behavioral variable and offered three reasons for a faster rate of increase in public expenditure relative to economic growth. First, as a nation develops, the need for law and order, as well as regulatory activities increases. Second, with development, the need for culture and welfare expenditures, particularly education expands. Third, as development accelerates, rising technological requirements will cause governments to undertake certain economic services that would not otherwise be undertaken by the private sector. In contrast, Keynes viewed public expenditure as an exogenous policy instrument for correcting cyclical fluctuations in aggregate demand.

Olugbenga and Owoeye (2007) investigated the relationships between public expenditure and economic growth in a group of 30 OECD countries for the period 1970-2005 using regression analysis. Their analysis showed that a long-run relationship exists between government expenditure and economic growth. The study also indicated a unidirectional causality from government expenditure to growth for 16 of the countries, thus supporting the Keynesian hypothesis government intervention. But, causality runs from economic growth to government expenditure in 10 of the countries, thereby confirming the Wagner's law. For the remaining four countries, findings indicated existence of feedback relationship between government expenditure and economic growth.

In a study of public expenditure and economic growth in the United States, Liu et al (2008) examined the causal relationship between GDP and public expenditure for the period 1947-2002. The causality results revealed that while total government expenditure causes growth of GDP, the latter does not cause expansion of government expenditure. The study concluded that since public expenditure grows the US economy, based on the causality test, Keynesian hypothesis exerts more influence than the Wagner's law in US.



Coricelli, Fabrizio (2007) investigated the differential effects of various categories of expenditures on economic growth for a sample of 58 countries. Their findings suggested that while government expenditures on education and defense have positive effect, expenditure on warfare has insignificant negative effect, on economic growth.

An obvious deficiency of economic theory is that it does not provide a well developed methodology to incorporate government expenditures in standard growth models. To assuage this, empirical studies have been carried out to establish a relationship between size of government and economic growth. While some studies have found a negative relationship between government expenditure and economic growth (Barro, 1990), others have found a positive relationship. Fajingbesi and Odusola (1999) showed that government capital expenditure has a significant positive effect on real output, but that real government recurrent expenditure has insignificant effect on growth.

Other researchers have examined the effect of public expenditure on economic growth. Laudau (2007) examined the effect of government expenditure on economic growth for a sample of 96 countries. He found that public expenditure exerts a negative effect on real output. Similarly Gilpin, 2001), employing the Granger causality test, examined the relationship between government expenditures and economic growth in Thailand and found that government expenditures and economic growth are not co-integrated. The result also suggested that a unidirectional relationship, as causality runs from government expenditures to growth. However, the result indicated a significant positive effect of government spending on economic growth.

Empirical studies on the relationship between public expenditure and economic growth have adopted either the aggregated or disaggregated approach. With respect to studies that adopt the disaggregated approach, the general view is that public expenditure, notably on physical infrastructure or human capital is growth-enhancing, while government consumption is expected to be growth retarding (Barro, 1990); thus, the concept of productive and unproductive government expenditure (Odedokun, 2001). Kweka and Morrissey (2000) however, noted that in empirical work it is difficult to determine which particular item of expenditure should be categorised as investment and which as consumption. Most empirical studies have supported either of the two views stated above. Few, however, have found no relationship. It is important to note that these results differ by country / region, analytical method employed, and categorization

of public expenditure. Initial studies on this topic focused on the aggregate size of government spending, while recent studies emphasize the composition of public expenditure.

Thirlwall (2013) the relation between the share of total public expenditure in GDP and the growth in per capita real GDP and found negative and significant relationship between the two. Using an endogenous growth model of the U.S. economy in which government purchases directly affect both the utility of consumers and the productivity of firms, Kentor (2003) examined the relationship between government expenditure and economic growth in Saudi Arabia using the series of the growth rate in per capita real GDP and the share of government spending in GDP. He found no consistent evidence that government spending can increase Saudi Arabia's per capita output growth.

Erkin (2007) examined the relationship between public expenditure and economic growth, by proposing a new framework for New Zealand. The empirical results showed that higher government expenditure does not hurt consumption, but instead raises private investment that in turn accelerates economic growth.

Foster and Mijumbi (2002) found a robust negative relationship between public expenditure and growth. The study was based on advanced countries between 1970 and 1995. Their estimated coefficient suggested that a 10 percentage increase in government expenditure is associated with a decrease of 0.7 percentage point in growth rate. Ramayandi (2003) investigated the impact of government size on economic growth using a sample of time series data on Indonesia (1969-1999). He found consistent evidence that the share of government consumption spending decreases economic growth.

Mitchell (2005) argued that the American government expenditure has grown too much in the last couple of years and has contributed to the negative growth. The author suggested that government should cut its spending, particularly on projects/programmes that generate least benefits or impose highest costs. Sáez and García (2006) studied the relationship between government expenditure and economic growth in the EU-15 countries. The results obtained based on regressions and panel techniques suggest that government spending is positively related with economic growth in the EU countries. Gregoriou and Ghosh (2007) used the heterogeneous panel to investigate the impact of government expenditure on economic growth. The authors

employed the GMM technique, and discovered that countries with large government expenditure tend to experience higher growth, but the effect varies from one country to another.

Komain and Brahmairene (2007) study the relationship between government expenditures and economic growth in Thailand, by employing the Granger causality test. The results showed that government expenditures and economic growth are not co-integrated. However, the results indicated a unidirectional relationship, as causality runs from government expenditures to growth. Furthermore, the results illustrated a significant positive effect of government spending on economic growth.

Olugbenga and Owoye (2007) investigated the relationships between public expenditure and economic growth for a group of 30 OECD countries during the period 1970-2005. The regression results showed the existence of a long-run relationship between government expenditure and economic growth. In addition, the authors observed a unidirectional causality from government expenditure to growth for 16 out of the countries, thus supporting the Keynesian hypothesis. However, causality runs from economic growth to government expenditure in 10 out of the countries, confirming the Wagner's law. Finally, the authors found the existence of feedback relationship between government expenditure and economic growth for a group of four countries. In India, Ranjan and Sharma (2008) examined the effect of government development expenditure on economic growth in India from 1950-2007. The authors found a significant positive impact of government expenditure on economic growth.

Based on Barro's (1990) endogenous growth model, Taban (2010) re-investigate the linkages between government spending and economic growth in Turkey with the bounds testing for co integration approach developed by Pesaran et al. (2001) and the modified WALD (MWALD) causality test developed by Toda and Yamamoto (1995). The study covered the sample period from 1987:Q1 to 2006:Q4. He found the share of the total government spending and the share of the government investment to GDP to have negative impacts on the growth of real per capita GDP in the long run. Nevertheless, there is no evidence of co integrating relation between government consumption spending to GDP ratio and per capita output growth.

The MWALD causality test indicates strong bi-directional causality between the total government spending and economic growth. Whereas no statistically significant relationship between the share of the government consumption spending to GDP and economic growth, a

unidirectional causality was been found running from the per capita output growth to the ratio of the government investment to GDIslam and Kamrul (2006) As in other parts of the world, the appropriate government spending response to a negative demand shock in SSA depends on the size and nature of the shock, as well as country-specific characteristics. Fiscal policy may be able to help smooth the impact of the crisis, maintaining critical government services and investment programs and providing countercyclical support to domestic demand.

Countries that have macroeconomic stability and fiscal space (i.e., sufficiently strong fiscal accounts that allow them access to financing at sustainable rates) can run expansionary fiscal policy by allowing automatic stabilizers to work and through additional discretionary fiscal stimulus, when appropriate, to contain the impact of a sharp decline in private sector demand in the short run. However, when countries are constrained by a lack of financing or high levels of debt distress, then the scope for an expansionary fiscal policy is limited and there may be no alternative to tightening fiscal policies in the near term. The appropriate speed of adjustment will again depend on debt levels and the availability of financing on sustainable terms.

Nijkamp and Poot (2002) conducted a meta-analysis of past empirical studies of fiscal policy and growth and found that in a sample of 41 studies, 29% indicate a negative relationship between fiscal policy and growth, 17% a positive one, and 54% an inconclusive relationship. One of the contributory factors to these varied empirical results is the measure used to proxy for fiscal policy. Different investigators have used different measures of government spending as proxies for government size, e.g. total government spending, government consumption, total government revenue, or functional categories of government expenditure among others. Most of these measures are expressed as shares in GDP (GNP) either as levels or as growth rates. Admittedly, the choice of a given measure depends on which data series are available to the researcher, and given that some measures are better than others, results are bound to differ.

Kamin and Rogers (2000) assert that governments spending influence the level of aggregate demand in the economy, in an effort to achieve economic objectives of price stability, full employment, and economic growth. Keynesian economics suggests that increasing government spending and decreasing tax rates are the best ways to stimulate aggregate demand, and decreasing spending & increasing taxes after the economic boom begins. Keynesians argue this

method be used in times of recession or low economic activity as an essential tool for building the framework for strong economic growth and working towards full employment.

### **2.5. Research Gaps**

There are prevails studies on public expenditure and economic growth growth, these previous studies despite existence are not particularly anchored on the Ugandan environment as most are out side Uganda. This study explored this empirical, theoretical and geographical gaps and added a value on the existing literature by exploring the significance of the relationship between Public expenditure and economic growth.. More over most studies used data of 2009 and don't included the latest on the topic. Therefore, this study provided an update to previously conducted studies..

## CHAPTER THREE

### METHODOLOGY

#### 3.0. Introduction

This chapter comprises the research design, data type and sources, data analysis, ethical consideration and limitations of the study.

#### 3.1. Research design

This study used a correlational design as part of the non-experimental research design. The reason it is non-experimental because it does not involve manipulating the variable of interest. The correlational design simply aims to determine the relationship between two variables, as well as how strongly these variables relate to one another (Saunders et al, 2007). A correlation research design is used in determining the relationship between variables in which the data sets for the independent and dependent variables are entered in a software and through comparison a relationship is attained OnwuegbuzieandTurner, (2007).

Furthermore, the research design is chosen because data fromattained from the international statistical publications world bank reports and world economic outlookwere used as data sources. The collecteddata sheets presented on the it focuses on specific area of investigation within a specific period of time with the intension that the researcher attains and analyze time series data.

The data was be collected from the published data sets recognized under international and world bodies' therefore descriptive statistics and t statistics was used to establish the distribution of data.

The data sets were attained published on line or by visiting the IMF, World Bank and World economic data for Uganda over the period of 19 years. The analysis of data took into consideration the trend analysis on government expenditure and economic growth. The scatter diagram, correlations and regressions analysis were used to determine the relationship between government expenditure and economic growth. The design enabled determination of the relationship and nature of the effect between the government expenditure and economic growth from 1995-2014 (Mugenda and Mugenda,1999). Saunders *et al.*, 2007) contend that secondary data analysis can be done on data time series data to determine the relationships and effects of one variable on another.

### **3.2. Data Type and Sources**

The data type would be time series data attained through secondary data sources from the publications of statistical abstracts. Time series analysis comprises methods for analyzing time series data in order to extract meaningful statistics and other characteristics of the data. Time series forecasting is the use of a model to predict future values based on previously observed values. While regression analysis is often employed in such a way as to test theories that the current values of one or more independent time series affect the current value of another time series which focuses on comparing values of a single time series or multiple dependent time series at different points in time Cowpertwait (2009). The time series analysis is used the data for analysis is historical and known; (Durbin, 2011) it is available and can be accessed through websites from published authenticated sources like International monetary fund and World Bank. Time series analysis is used when the data or information required for the study is available and reliable. Time series data was used in this study. The data used was collected among time series available in the world bank development indicators from 1995 to 2014 and world economic outlook. Data was collected to cover the period of 19 Years because, the study has to consider updated data and cover at least 19 years in order being econometrically feasible

### **3.3. Data analysis**

The Statistical package for social sciences (SPSS) was used to analyze the data with respect to the specific objectives. Objective one and objective two, the researcher also analyzed by using time series graph and stationary test variable over time. In the third objective the researcher used correlation analysis, regression analysis and diagnostic tests of Heteroscedasticity and autocorrelation.

Economic growth:  $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$

y = Dependent variable

$\beta_0$  = constant

$\beta_1 - \beta_3$  = parameters (regression coefficient)

$x_1$  = consumption

$x_2$  = education

$x_3$  = health

$\varepsilon$  = Error term.

### **3.4. Ethical consideration**

The principle underlying research ethics regarding confidentiality, honest, and respect for individual rights was highly observed. An institution from which the data was collected and would be inform in writing about the objectives of this study and request to participate. The works of the other people were used in the study would be fully recognizing through quoting and referencing.

### **3.5. Limitations of the study**

The validity of the findings of the study can be estimated by the some factors out of the researcher control such as personal bias and environment bias. The margin of error is set of 5% and the research was taking necessary measures to minimize the error. There is an expected difficulty into collecting data since the rates of Government expenditure and economic growth may not be acquired with ease. The scattered nature of the information may not be attained and compiled with ease. In Uganda, evaluating the quality of data, there is no adequate, consistent data in domestic sources. For example, there is a discrepancy of GDP data reported by International Financial Statistics year book and the bank of Uganda. Despite all the above anticipated challenges, the researcher was making efforts to adequately address them so as not to compromise the findings of the study in any way.



## CHAPTER FOUR

### PRESENTATION , INTERPRETATION AND ANALYSIS OF THE DATA

#### 4.0. Introduction

This section presents a review of the data with an empirical analysis concentrating on the major variables that were stated in methodology. The study models Public Expenditure and Economic Growth using three different variables categorized as independent and dependent variables in the study. The Gross Domestic Product (GDP) representing Uganda's GDP in Nominal terms is considered as the dependent variable in this study. It is used as the measure of economic growth in this study. Public expenditure (independent variable) is divided into three different attributes, for instance, public expenditure on consumption, public expenditure on education and public expenditure on health. Each of these variables is a quantitative variable running for the years 1995 to 2014, a twenty-year period considered for this study. The analysis uses a combination of graphical and empirical tools for carrying out the analysis in order to answer all the objectives that were inherently stated in the previous sections of the study. The first section of the analysis involves carrying out a comprehensive univariate analysis of each of the variables. This is intended to discover any forms and nature of trend in the data prior to carrying out an in-depth analysis. It involved the use of both the descriptive statistics and graphics for summarizing the data.

#### 4.1. Description of the data

Table 4.1: Descriptive statistics of the major variables in the model

	<i>DV:</i> <i>RGDP</i>	<i>IV:</i> <i>HEALTH</i>	<i>IV:</i> <i>Consumption</i>	<i>IV:</i> <i>Education</i>
Mean	6.8759	31.0735	12.4079	13.1493
Standard Error	0.5432	1.9575	0.5724	0.8712
Standard Deviation	2.4291	8.7542	2.5600	3.8959
Sample Variance	5.9004	76.6363	6.5533	15.1783
Kurtosis	-0.8656	-0.5652	-0.8139	3.6502
Skewness	0.2449	0.9306	-0.2478	1.4371
Minimum	3.1419	19.7945	7.9733	6.5
Maximum	11.5232	48.5557	16.7925	24.7
Count	20	20	20	20

Source: Researcher analysis (2016)

Table 4.2: Summary of the four variables in the study

Period	DV: RGDP	IV: HEALTH	IV:Consumption	IV: Education
1995	11.52324381	19.79446765	11.17829378	10.24
1996	9.072114582	25.02738155	11.7569346	9.78
1997	5.100001864	27.35360849	13.29077143	10.24
1998	4.905265484	30.56555241	12.86694627	24.7
1999	8.053948377	26.84649775	12.86425888	6.5
2000	3.141907338	27.135743	14.5043244	10.35489
2001	5.183661126	27.27020651	15.58184486	13.86
2002	8.732685764	27.05144551	16.7924697	14.446
2003	6.473258671	25.84907917	15.74505335	14.42
2004	6.807233344	25.46733718	13.88730227	20.30833
2005	6.332565116	25.22974109	14.49276339	13.816
2006	10.78474439	33.90156306	14.1023118	13.551
2007	8.412425966	28.45826871	12.89303481	13.7623
2008	8.708751901	25.29473719	11.21088681	13.4645
2009	7.251045316	21.52391592	9.375153981	13.85372
2010	5.170342974	48.55570218	9.596441242	9.38318
2011	9.673224959	45.51811672	12.73312054	12.07702
2012	4.411259872	42.96726396	8.178220771	12.60984
2013	3.270736613	44.42562101	7.973287149	11.76472
2014	4.509524514	43.234564	9.135073694	12.3567

Source: World Bank data base, 2015

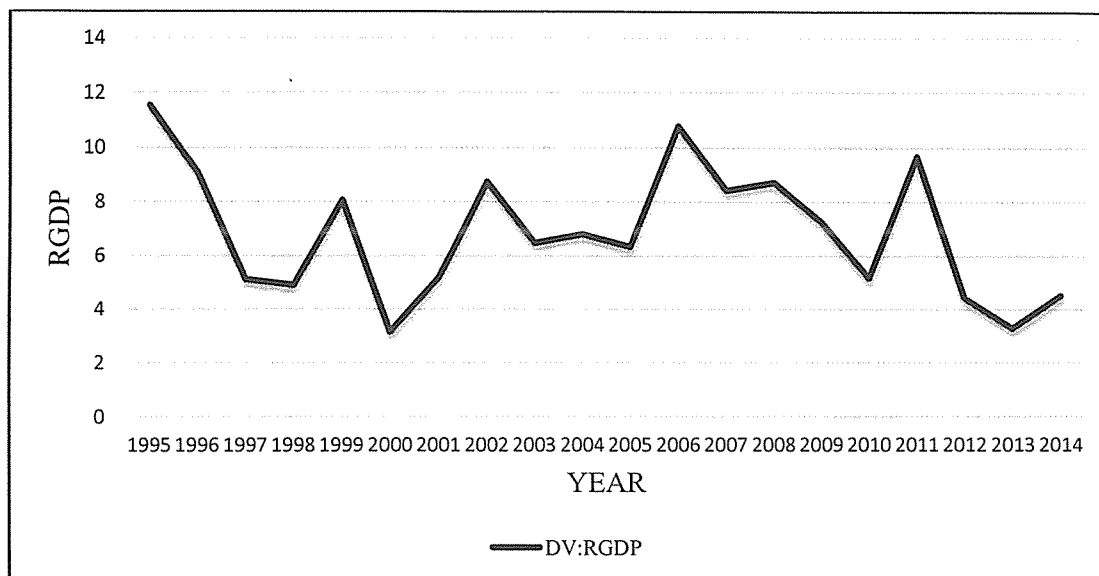
RGDP: is the percentage increase of real gross domestic product

HEALTH: is the public expenditure on health as percentage of total expenditure.

Consumption: is the spending on military as percentage of total expenditure

Education: Spending on education as percentage of the overall expenditure.

#### 4.2. Determining the trend of economic growth from 1995-2014

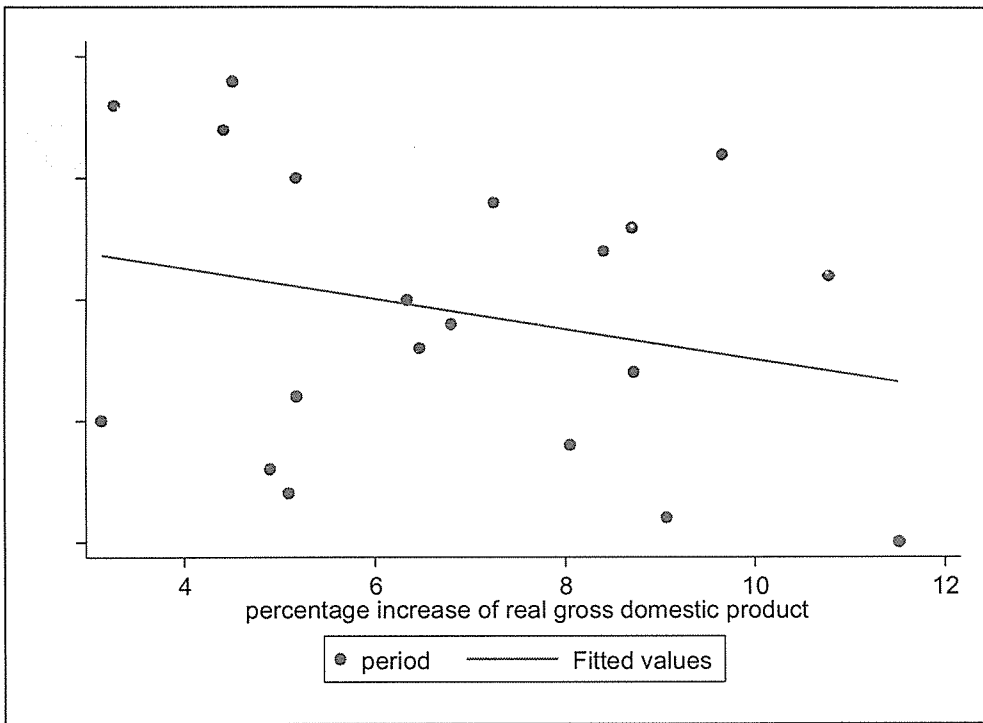


**Figure 4.1a: Percentage increase of real gross domestic product**

Source: Secondary data from World Bank data base

A growth was represented in the percentage of the GDP figures putting into consideration the kind of GDP under consideration. In this study, economic growth was measured by the percentage increase of real gross domestic product for the economy for any given time period. This percentage was obtained by comparing the values for a previous period or year to that in the current period. This was then used to generate percentage change in the GDP rate.

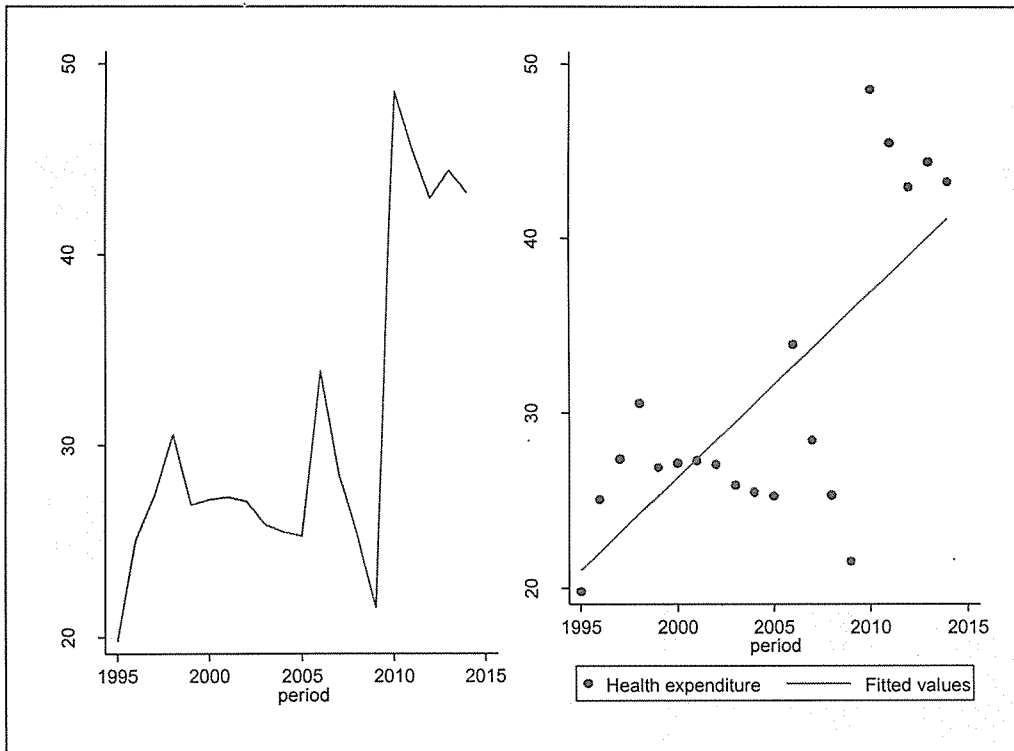
The data shows that there have been irregular changes in real gross domestic product (RGDP) for years 1995 to 2014 throughout the nineteen-year period the study was conducted because the RGDP data registered some random increases and decreases within this time. The data shows that the lowest values for RGDP were reported in 2013 (3.27%) whereas the largest increase in the RGDP value was recorded in the year 1995 (11.523%) as shown in figure 4.1a. Table 4.1 further indicates that for the 1995-2014 twenty-year period considered for this study, an average RGDP of 6.8759 (SE = 0.5432) has been recorded.



**Figure 4.1b Scatter of percentage increase of Real GDP**

A scatter plot of the percentage increase of Real GDP over the 19-year period in figure 4.1b with a superimposed line of best fit shows that on average, the percentage increase in real GDP has been dwindling between 1995 and 2014. That is an indication that although the economy has been increasing as per the GDP figures, the percentage increase has always been minimal as implied by the plot in figure 4.1b. The figure further reveals that besides decrease in the GDP growth, this decrease has been quite steep basing on the slope of the line of best fit. However, since the line of best fit is developed from the regression model, a statistical tool prone to outliers, it is not possible to draw conclusions from this data because it is known that the data may be plugged with several outliers as implied by dots way beyond the line of best fit.

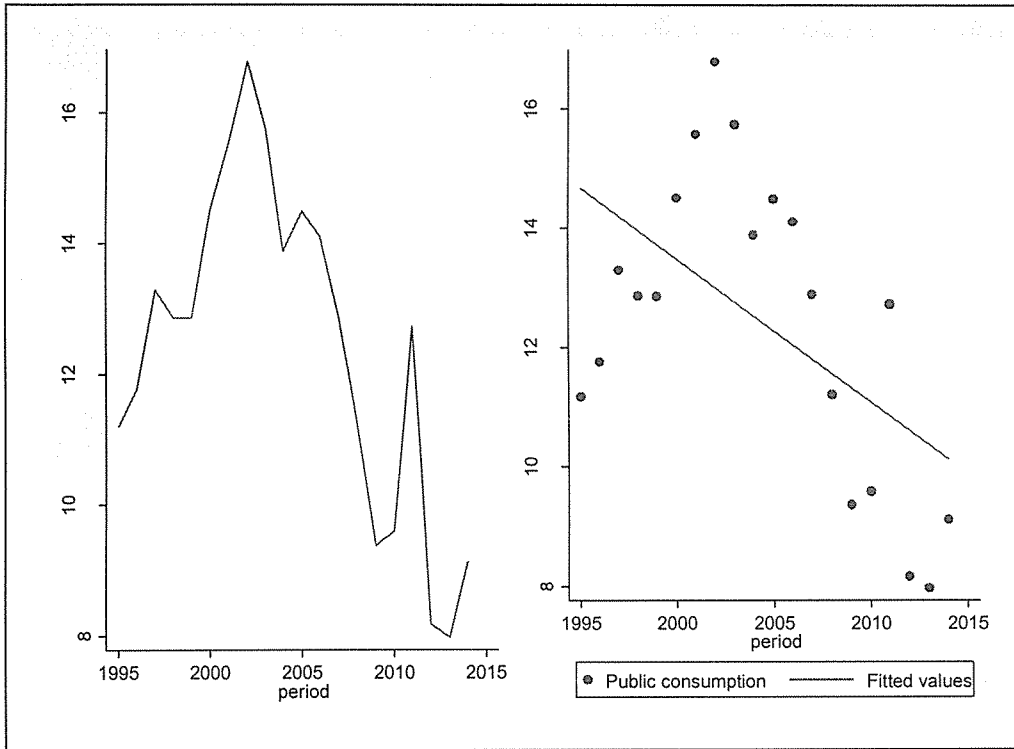
### 4.3. Determining the trend of public expenditure on health



**Figure 4.2 Percentage of expenditure on health**

Source: Researcher analysis (2016)

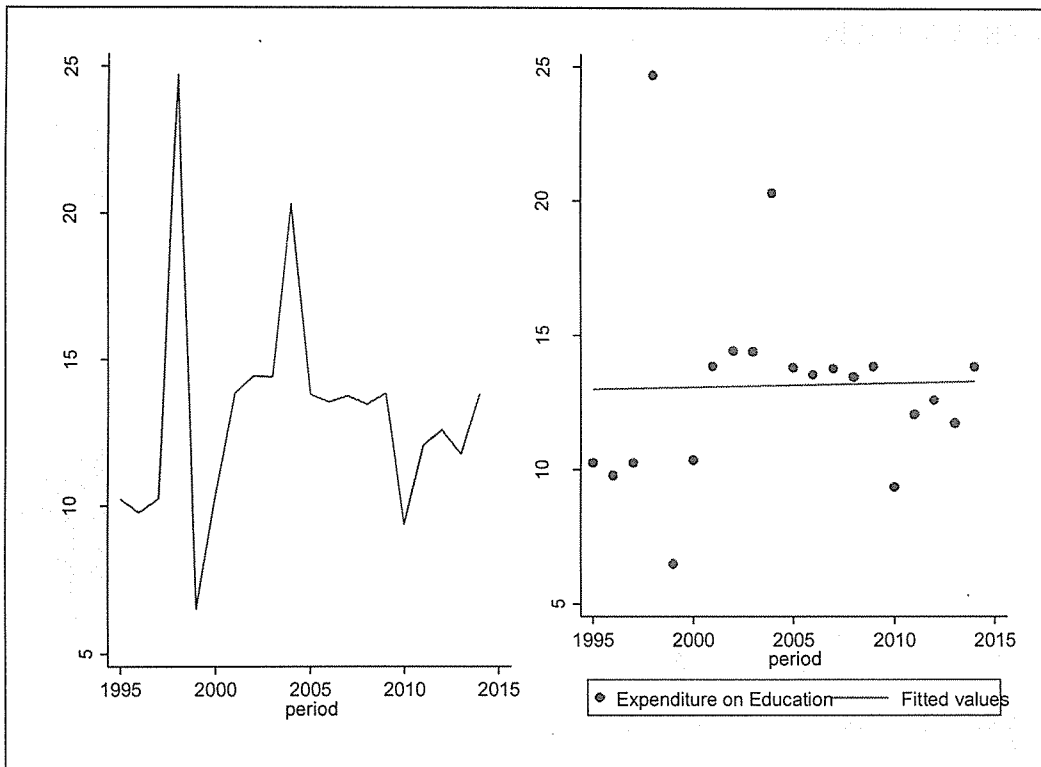
The data further shows that there has been a rather constant variation in the percentage of public expenditure on health. The data shows that the lowest values for the expenditure on health was reported in 2002 (27.051%) whereas the largest increase in the expenditure on health was recorded in the year 2010 (48.5557%) as shown in figure 4.2. Table 4.1 further indicates that for the 1995-2014 nineteen -year period considered for this study, an average value of 31.0735 (SE = 1.9575) has been recorded regarding public expenditure on health. However, figure 4.2 shows that on average, the percentage of government expenditure on health out of it national budget has been increasing for the 19-year period this study was conducted. That shows the government's commitment to tackling the welfare of the citizens through catering for their health needs.



**Figure 4.3 Percentage of Public expenditure on consumption**

Source: Researcher analysis (2016)

Analysis of the public expenditure data reveals that public expenditure has registered some slight spikes for the last nineteen years. The largest of such increase was recorded between 1999 and 2002 where public expenditure increased from 12.86 to 16.7 but was followed by a reduction in 2004 to 13.887. This reduction was sustained up to 2009 where a value of 9.37 was recorded for public expenditure. Nevertheless, the average value of public expenditure for the twenty-year period was 12.4079 (SE = 0.5724). The same period had a maximum value of 16.7% for 2002 and a minimum value of 7.9 for 2013 as depicted in figure 4.4. However, figure 4.3 also shows that public expenditure on consumption as a percentage of the overall national expenditure has been decreasing steeply over the last nineteen or so years as shown above.



**Figure 4.4 Percentage of public expenditure on education**

Source: Researcher analysis (2016)

The data further shows that there has been an irregular variation in the percentage of public expenditure on education. The most irregular and largest of such variation was recorded between 1997 and 1999 where this figure moved from 10.24% in 1997 to 25% in 1998 then to 6.5 in 1999. This was then followed by a random increase that was later on sustained for the years 2002 through 2004 with slight random irregularities between 2003 and 2005. The year 1998 recorded the largest value of public expenditure on health yet the year 1999 recorded the smallest allocation of government budgetary allocation as shown in figure 4.4. Nevertheless, public expenditure on education recorded an average value of 13.1493 (SE = 0.8712). The data thus shows that the public expenditure on education has been relatively stable for the last twenty years as shown by the plot in figure 4.4 above.

#### 4.4. Relationship between public expenditure and economic growth

Table 4.3a: Correlation between public expenditure and economic growth

	<i>DV:</i> <i>RGDP</i>	<i>IV:</i> <i>HEALTH</i>	<i>IV:</i> <i>Consumption</i>	<i>IV:</i> <i>Education</i>
<b>DV: RGDP</b>	1			
<b>IV: HEALTH</b>	-0.36	1		
<b>IV: Consumption</b>	0.23	-0.51	1	
<b>IV: Education</b>	-0.137	-0.105	0.204	1

Source: Research,2016

The correlational results in table 4.3a indicate that there is weak negative relationship between economic growth and public expenditure in health (-0.36). It further shows that there is a weak positive relationship between average economic growth and public consumption. Lastly, the results also indicate that there exists a very weak negative relationship between economic growth and public expenditure on education. There exist no serious inter-correlations between any of the independent variables in the model as detailed in table 4.3a above. However, in order to imply causality between public expenditure and economic growth, a regression model was run and the results are detailed in the subsequent sections.

Table 4.3b: Regression results of public expenditure on economic growth

Source	SS	df	MS	Number of obs = 20		
Model	19.0094421	3	6.3364807	F( 3, 16) =	1.09	
Residual	93.0982097	16	5.81863811	Prob > F	= 0.3822	
				R-squared	= 0.1636	
				Adj R-squared	= 0.0139	
Total	112.107652	19	5.90040273	Root MSE	= 2.4122	
RGDP	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ExpHealth	-.0921082	.0735774	-1.25	0.229	-.2480854	.063869
ExpCons	.0942712	.2555785	0.37	0.717	-.447531	.6360734
ExpEduc	-.1197911	.1450847	-0.83	0.421	-.4273569	.1877747
_cons	10.14348	4.939735	2.05	0.057	-.3282903	20.61525

Source: Researcher analysis (2016)

$$Y=10.14+0.09X_1+0.11X_2+0.092X_3$$

$$Y=10.14+0.09X_1-0.11X_2-0.092X_3$$



In order to develop an understanding of the real relationship between public expenditure and economic growth, a regression was developed using the three different attributes to public expenditure against the variable of economic growth as summarised in table 4.3. The results of the analysis indicate that there exists a negative relationship between Expenditure on health and economic growth ( $\beta = -0.092; P - value > 0.05$ ). Furthermore, the results also show that there is a positive relationship between expenditure on consumption and economic growth ( $\beta = 0.094; P - value > 0.05$ ). The data also indicates that there is a negative relationship between expenditures on education and economic growth in the country ( $\beta = -0.1197; P - value > 0.05$ ). The data also reveals that the three different attributes to expenditure, for instance, expenditure on consumption, health and education explain only 16.96% of the variation in overall government growth ( $R^2 = 0.1696$ ).

**Diagnostics tests of the regression model**

Figure 4.5: Variance Inflation factor statistics

Variable	VIF	1/VIF
ExpCons	1.40	0.715412
ExpHealth	1.35	0.738150
ExpEduc	1.04	0.958517
Mean VIF	1.27	

Source: Researcher analysis (2016)

Figure 4.6: Heteroscedasticity and Autocorrelation statistics

Diagnostic	Test statistic	Test statistic	P-value
Heteroscedasticity	Breusch-Pagan	0.31	0.5784
Autocorrelation	Durbin Watson statistic	0.248	0.6185

Source: Researcher analysis (2016)

The diagnostic tests for the regression model show that there exist no instances of collinearity as the VIF statistics associated with each of the independent variables in the model were within the

acceptable range. For instance, consumption (VIF = 1.4), Health (VIF = 1.35) and Education (VIF = 1.04). Further tests reveal that under the assumption that there is constant variance (homoscedasticity) there is no sufficient evidence for rejection of the null hypothesis as per Breusch-Pagan / Cook-Weisberg test for heteroscedasticity as summarised in table 4.4. The Durbin Watson tests of auto-correlation also show that under the assumption that there is no serial auto-correlation in the data, we fail to reject the null hypothesis as implied by the Durbin Watson statistic summarised in table 4.6.

**Hypothesis: There is no significant relationship between public expenditure and economic growth in Uganda from 1995-2014.**

The individual T-statistics associated with each of the attributes associated with the regression model as summarized in table 4.3 indicates that none of these attributes was significant in explaining the variation in economic growth. They were all associated with very large p-value (above the level of significance) as shown in table 4.3. Individual regression of each of these attributes with the economic growth also reveals that none of these individual attributes is related to economic growth. The Fischer's F-statistic associated with the overall regression model further reveals that the expenditure as represented by the three attributes is not significant in explaining the variation in economic growth. Consequently, there is no sufficient evidence for rejection of the Null hypothesis stated above.

Thus,

*There is no significant relationship between public expenditure and economic growth in Uganda from 1995-2014.*

## **CHAPTER FIVE**

### **DISCUSSION, CONCLUSION AND RECOMMENDATION**

#### **5.0 Introduction**

This chapter presents a discussion of findings, conclusion and recommendation of the research.

#### **5.1. Discussion of results**

##### **5.1.1. the level of public expenditure in uganda from 1995 -2014**

The study divided public expenditure into three different attributes whose data was thoroughly analysed empirically in this study. The first component was the government expenditure on health. The data shows that the percentage of government expenditure on health out its overall budget has been increasing for the nineteen-year period the study was conducted. This increase can be explained by a number of factors. For instance, the population increase has increased the demand for health care services in the country. That means that the government has to keep building new health care facilities, employ more health care providers and stock more drugs in the hospitals. The implication of this is that the percentage of government budget on this sector of the economy also has to increase from year to year. Furthermore, the growing need for eradication of some diseases like HIV/AIDS and a growing demand for immunisation of diseases like Hepatitis B in the recent years has also led to such an increase in the health budget thus explaining the huge increase in the government budgetary allocation to the health department. The data also shows the government/public expenditure on consumption has been generally decreasing in the recent years. This is due to the fact that Uganda is more of a liberal/free economy where most services and goods are provided by individuals/private sector with in the economy rather than the government besides the most essential items. The largest avenue for the government to spend money is through infrastructural development. However, since infrastructural projects often take at least two years to get completed it is not possible for their impact on the economy to be felt thus the decrease in the percentage. On the contrary, most of the big infrastructural projects that have taken place in Uganda were mainly financed by aid and not necessarily the government directly explaining why government expenditure has been decreasing generally on average. These results are commensurate with a study conducted by Niloy (2003), Ramirez (2004) and Akpan (2005) that implied that an increase in sectoral public expenditure is associated with an increase in the overall level of GDP in a given economy.

Further studies by Saad&Kalakeck (2009); Nurudeen&Usman (2010) also concluded that an increase in the sectoral government expenditure was associated with a significant increase in the overall level of GDP in a given economic entity.

### **5.1.2. The level of economic growth in Uganda from 1995-2014**

The results of the analysis revealed that although the GDP of the Uganda has been increasing from time to time, the percentage change in this increase has often been decreasing on average. There have been irregular changes in this percentage especially for those years the global economy was in a recession, for instance, late 2000s and early 2010s. In these years, the world's largest economies that trade with Uganda experienced significant shortfalls in their economies as it became increasingly unprofitable to carry out business due to reduced demand for goods and commodities. These years were marked by a significant decrease in the average changes in RGDP in Uganda. These years were then followed by random blossoms in economic activity though it was not maintained for longer years. Such recessionary periods imply that it would not be possible for the GDP in a given year to increase at the same rate as that in the previous years. Any large increases in the RGDP for a given year were cut short by significant decreases in the subsequent years. Thus, due to the fact the economy has gone through global recessionary periods, the average changes in the RGDP percentages are lower than would be expected.

These results are conformed to Ullah and Rauf (2013) study that showed that due to an increase in output, the level of economic growth is expected to increase as the GDP changes. The decelerating increase in the economic growth is in line with Barro (1995) study that showed that improvements are due to development in trade while growth is negatively related to the initial level of real per capita GDP. Branson (2002)'s study also adds to this body of literature by claiming that factors like surplus balance of trade agriculture, taxation and state regulation as the major drivers to changes in economic growth.

### **5.1.3. Relationship between public expenditure and economic growth in Uganda from 1995-2014**

Policymakers are divided as to whether government expansion helps or hinders economic growth. Advocates of bigger government argue that government programs provide valuable "public goods" such as education and infrastructure. They also claim that increases in

government spending can bolster economic growth by putting money into people's pockets. Proponents of smaller government have the opposite view. They explain that government is too big and that higher spending undermines economic growth by transferring additional resources from the productive sector of the economy to government, which uses them less efficiently. They also warn that an expanding public sector complicates efforts to implement pro-growth policies- such as fundamental tax reform and personal retirement accounts- because critics can use the existence of budget deficits as a reason to oppose policies that would strengthen the economy. In this study, it was discovered that public expenditure is not effective enough in explaining the variation in RGDP. This finding appears to defy economic theory but could be explain by the fact that only a few attributes of public expenditure, for instance, expenditure on health, Education and consumption were considered in the analysis. Since expenditure on some sectors like education and health are not necessarily economic activities it is not possible have a significant effect on overall RGDP. However, the study reveals that expenditure on consumption has a positive relationship with RGDP although it is also not significant enough in explaining the variation in RGDP. This is because whenever the government spends money, it serves as an injection in the economy where some money will be brought into circulation. That will have a stimulatory effect on the overall economy as the service providers will have extra income. Due to the multiplier effect, these traders will also use this money to do more trade with other partners subsequently leading to an increase in the GDP level within the economy.

These results are commensurate to Olugbenga and Owoeye (2007) exists between public expenditure and economic growth. They are also in line with Donald and Shuanglin (1993) that showed that while public expenditures on education and defense have positive effect, expenditure on warfare has insignificant negative effect, on economic growth. Laudau (1983) also conducted a similar study and concluded that public expenditure exerts a negative effect on real output. Further studies by Devarajan, *et al.* (1996) examined the relation between the share of total public expenditure in GDP and the growth in per capita real GDP and found negative and significant relationship between the two. Erkin (1998) study produced results that show that higher government expenditure does not hurt consumption, but instead raises private investment that in turn accelerates economic growth. Other studies by Al-Yousif (2000) also indicates that government spending has a positive relationship with economic growth in Saudi Arabia.

### **5.1. Conclusion**

The results of the analysis revealed that although the GDP of the Uganda has been increasing from time to time, the percentage change in this increase has often been decreasing on average due to the two economic recessions experienced in 2000s and 2010s. Thus, due to the fact the economy has gone through global recessionary periods, the average changes in the RGDP percentages are lower than would be expected.

The data also shows the government/public expenditure on consumption has been generally decreasing in the recent years. This is because most of the big infrastructural projects that have taken place in Uganda were mainly financed by aid and not necessarily the government directly explaining why government expenditure has been decreasing generally on average.

The data shows that the percentage of government expenditure on health out its overall budget has been increasing for thenineteen-year period the study was conducted. This increase can be explained by an increase in the population and increased demand for health care services in the country. It was discovered that public expenditure is not effective enough in explaining the variation in RGDP. The study reveals that expenditure on consumption has a positive relationship with RGDP although it is also not significant enough in explaining the variation in RGDP. Other expenditure for instance on education do not have an economic value attached to them in return thus have no significant effect on the overall level of economic growth in the country.

### **5.2. Recommendations**

The study thus recommends that if the government is to spur economic progress through public expenditure, then the most appropriate of doing so should be through consumption. Other forms of expenditure for instance in education and health although will improve the welfare of the citizens within the country have a minimal effect on the overall level of economic activity in the country.

Furthermore, the data shows that although public expenditure, best form of government spending to stimulate the economy, is not a very reliable way of increasing economic activity. Thus, the government should develop other means of stimulating economic activity like promoting private investment through respective expansionary fiscal and monetary policies.

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## APPENDICES

### APPENDIX1: TRANSMITAL LETTER FOR THE ORGANIZATIONS

Dear sir/Madam

Greetings!

I am a master of economic policy and planning at Kampala international university. Part of the requirement of the award of masters degree of economic policy and planning. My study is entitled, public expenditure and economic growth 1995-2014

Within the context, my I request you to participate by assisting me with some relevant statistical data to the above mentioned research topic for academic purpose only and no information of such kind shall be disclosed to the others

Thanks you very much in advance

Yours faithfully

Mr. Saed Adam Hassan

Table 4.2: Summary of the four variables in the study

Period	DV: RGDP	IV: HEALTH	IV:Consumption	IV: Education
1995	11.52324381	19.79446765	11.17829378	10.24
1996	9.072114582	25.02738155	11.7569346	9.78
1997	5.100001864	27.35360849	13.29077143	10.24
1998	4.905265484	30.56555241	12.86694627	24.7
1999	8.053948377	26.84649775	12.86425888	6.5
2000	3.141907338	27.135743	14.5043244	10.35489
2001	5.183661126	27.27020651	15.58184486	13.86
2002	8.732685764	27.05144551	16.7924697	14.446
2003	6.473258671	25.84907917	15.74505335	14.42
2004	6.807233344	25.46733718	13.88730227	20.30833
2005	6.332565116	25.22974109	14.49276339	13.816
2006	10.78474439	33.90156306	14.1023118	13.551
2007	8.412425966	28.45826871	12.89303481	13.7623
2008	8.708751901	25.29473719	11.21088681	13.4645
2009	7.251045316	21.52391592	9.375153981	13.85372
2010	5.170342974	48.55570218	9.596441242	9.38318
2011	9.673224959	45.51811672	12.73312054	12.07702
2012	4.411259872	42.96726396	8.178220771	12.60984
2013	3.270736613	44.42562101	7.973287149	11.76472
2014	4.509524514	43.234564	9.135073694	12.3567

Source: World Bank data base. 2015

RGDP: is the percentage increase of real gross domestic product

HEALTH: is the public expenditure on health as percentage of total expenditure.

Consumption: is the spending on military as percentage of total expenditure

Education: Spending on education as percentage of the overall expenditure

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