

INFLATION AND ~~THE~~ ECONOMIC GROWTH OF UGANDA (2000-2018)

BY

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**A RESEARCH REPORT SUBMITTED TO THE COLLEGE OF ECONOMICS
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DECLARATION

I, Musoke David the undersigned, hereby declare that the work contained in this research project is my own original work and that it has not previously in its entirety or in part been submitted to any university for academia award.

Signature..........

Date...10/07/2019.....

Musoke David

APPROVAL

This is to certify that this work has been under my supervision and is now ready for submission to the Department of Economics and Statistics for Examination.

Signature
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Date.....
10/07/2019

DEDICATION

This study is dedicated to my family especially my mother, Mrs. Pascalia, My father Mr. Pius Akuka, my brother Akakuka Justus and his wife, my sister, Akuka Evelyne, my friends Robert, Jane, Adolf and Yvone, my beloved girlfriend Nayebare Grace, my supervisor and all my lecturers. You have been an inspiration to me through your hard work, commitment, love and wisdom acquainted to me. Without you, I would not be what I am.

Thank you.

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I also give thanks to my dear friends at the University. I am so grateful for whatever assistance you accorded with me. May the Almighty God reward you abundantly? More so, I wish to thank my loving and caring brothers for your constant encouragement and help. You are the voice that motivated me when I was feeling defeated and comforted me when I was anxious. I am eternally indebted to you.

Most importantly, I praise and thank God for the love, grace, strength and providence. I pray that He leads me yet again into the green pastures.

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LIST OF ACRONYMS

ADF	Augmented Dickey-Fuller
ARDL	Autoregressive Distributed Lag Model
CPI	Consumer Price Index
ECM	Error Correction Model
GDP	Gross Domestic Product
IMF	International Monetary Fund
OLS	Ordinary least Square
PP	Phillips Peron
SIC	Schwartz Information Criterion
VAR	Vector Auto-Regression
VEC	Vector Error Correction
EAC	East African Community
LDCs	Less Developed Countries
IMF	International Monetary Fund
FY	Financial Year
UBOS	Uganda Bureau of Statistics

ABSTRACT

The topic of the study was inflation and the economic growth of Uganda (2000-2018). The purpose of the study was to assess the effect of Inflation on Economic Growth in Uganda (2000-2018) and the specific objectives of the study were to examine the trend of Inflation in Uganda (2000-2018), to find out the level of Economic Growth of Uganda (2000-2018) and to establish the relationship between Inflation and Economic Growth (2000-2018).

The null hypothesis was that there is no significant relationship between Inflation and Economic Growth versus the alternative that there is a significant relationship between Inflation and Economic growth.

The findings of the study revealed that currently the inflation of Uganda is increasing but at a slow rate and due to the reduction in inflation, economic growth is improving highly as Uganda registered a great improvement in Economic growth in 2018 since 2000 and it was found out that the highest inflation rate was experienced in 2012.

The study also found out that there is a weak positive linear relationship between inflation and economic growth meaning that as inflation increases at a low rate economic growth increases by 23.814. This means that to increase economic growth highly, inflation should be curbed down.

The study recommended that the government should implement policies that can curb down inflation to improve economic growth and that the government should curb down inflation in the short run since it affects economic growth in the long run.

The study suggested the areas for further study to be causality relationship between inflation and Economic in Uganda and Long run and short run effect of inflation on the economic growth of Uganda.

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CHAPTER ONE

BACKGROUND OF THE STUDY

1.0 Introduction

This chapter covered the background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, scope of the study (Conceptual scope and Geographical scope) and the significance/ justification of the study.

1.1.1 Historical Background

Globally, Achieving sustainable rapid economic growth is the objective of most countries. It has been a problem to achieve such objective due to many factors that affects economic growth. Economic growth and the rate of inflation is central subject of macroeconomics policy. Among many variables that can be stated as the determinant of economic growth is inflation (Barro, 1995). The deference between the growth rate in the developed countries and the LDCS has been brought about the decline in the performance of the more developed countries that is china, India and some latin American countries that were responsible for this superlative performance. It is believed that America is the most leading country that drives the economy of the world. The global growth was estimated at 3.6 in 2017, 3.8% in 20 18 and 4.2 in 2019 (Rodin 2016)

In Africa, the last decade has been an extra ordinary good one for their economies and their poor people in that it has become a common place to look upon themselves as potential saviors of the world economy. The economies of the countries have expanded at unprecedented rates resulting into large reduction in extreme poverty and a significant expansion of the middle class though most of them are still depending on donor funding. The rate of growth in African countries is less than 5% but most countries show evidence for growth annually. Over the past 15 years most countries in Africa experienced sustained economic growth with growth rates exceeding 5% per year. This has inspired much optimism about the continent's prospects to finally leave poverty and under development behind (Dan 2015). However the general economic context is now turning less favorable with growth slowing down especially in oil and mineral exporting countries. Overall growth is expected to continue but at a slower pace due to the changing climate.

The Sub Saharan African countries have experienced an economic boom which followed two decades of stagnation characterized in many of them by military conflicts, economic mismanagement and unsustainable external debt. The important feature to this boom is that it has largely been shared by all countries with exceptions of a few due to wars. The new growth has gone unnoticed inspiring much optimism among journalists, economists, business people and investors over the fate of the region which not so long ago was doomed to failure.

The East African Community (EAC) countries' economic performance during the past decade has been impressive as it is weighed at 6.2% currently with Kenya being the most leading. The EAC's unweighted average growth in 2016-2017 is in the top one fifth of the distribution of 10 year growth rate episodes experienced by all countries worldwide since 1960. Such performance is remarkable taking into account that the past decade encompasses the global economic and financial crisis that began in 2007 (IMF working paper by Nicloz (2018)).

Generally the economic conditions in East Africa have future prospects of increasing but less than 5% per annum due to the severe climatic changes in the region classified with a lot of drought yet this is an agricultural exporting region.

Uganda's economic history has gone through four distinct episodes since independence. Between 1960 and 1970, Uganda had one of the most vibrant economies in sub-Saharan Africa. Real GDP grew at an average rate of 4.8% and GDP per capita grew at 3% per annum.

From 1971, the situation changed drastically. The economy experienced domestic and external shocks, which were worsened by the absence of sound macroeconomic policies to address them. Productive sectors were ignored in pursuit of informal trade, as most skilled personnel fled out of the country to escape the economic mismanagement and civil unrest, in which they were often thought of as soft targets. The breakdown of the East African Community, the rising prices of petroleum products, and the "economic war of 1972", which led to the expulsion of Asians and expropriation of their assets, further worsened the situation.

For most of the 1970s and 1980s the country suffered severe macroeconomic imbalances, including high rates of inflation and balance of payments deficits, because the growth of nominal aggregate demand consistently outstripped the growth of real supply in the economy. The main reason for this was the printing of money to finance public sector deficits, leading to large increases in money supply which fuelled high rates of inflation.

By 1980, the need to rehabilitate the economy was obvious. Structural adjustment measures, focusing on demand management, were introduced in 1981 to encourage economic growth through; realigning the value of the shilling, providing price incentives, removing price controls, increasing interest rates, and improving economic management through fiscal and monetary measures. The economy immediately responded to these adjustments. National output recovered from a -2.7% growth rate between 1971 and 1980 to 1.7% between 1980 and 1983. However, industrial production, which had initially reacted positively, then declined due to problems of foreign exchange allocations and the poor state of infrastructure. Industrial production fell by trickle down to the producers/farmers, resulting in the abandonment of the production of major export crops, especially cotton, tea and tobacco. Overall GDP growth averaged -0.4% between 1983/84 and 1985/86.

In May 1987, Uganda embarked on an Economic Recovery Program with support from the IMF, the World Bank and other multilateral and bilateral donors. The principal objectives were to rehabilitate the economy and enhance economic growth, to reduce inflation and to minimize the potential for a balance of payments crisis. Because of the consistency with which these measures were and are being implemented, real GDP growth rates have been positive since then, averaging 6.4% per annum from 1986/87 to 2003/04, and inflation has been contained at an average of 4.8% per annum from 1993/94 to 2003/04.

A sound economic framework conducive to private sector investment is the cornerstone of Uganda's growth strategy. One of the fundamentals required of this economic framework is low and stable inflation

After the experiences of the 1970s and 1980s, characterized by double and sometimes triple-digit inflation, control of inflation became one of the foundations of Uganda's

macroeconomic management from the early 1990s. Experience has demonstrated that high inflation is detrimental to growth. It generates uncertainty in the economy by reducing the efficiency of the price system and also erodes the real value of financial assets such as savings, as real interest rates become negative.

Since 1992/93 Uganda's fiscal policy has entailed very strict budgetary discipline. Government has kept firm control over its own expenditures to ensure that it does not have to borrow from the domestic banking system to finance budget deficits. Consequently, Uganda has been able to keep annual headline inflation at single-digit levels, and often below 5%, since 1993.

The macroeconomic stability that was ushered in by the low level of inflation immediately translated into a rebound in Uganda's real GDP growth rates. This was boosted by other reform programs such as liberalization of cash and produce marketing channels, as well as by exchange and interest rates. Average growth since 1986/87 is 6.4%, with a peak growth of 10.9% registered in 1994/95, during the coffee price boom. Growth in total factor productivity also made a significant contribution to GDP growth during the 1990s, reflecting the scale of rehabilitation of production processes after the restoration of peace to most of the country. However, government recognized the challenge of relatively slower GDP growth in the years 2001 to 2006, which has averaged 5.7%. (*OECD JOURNAL ON BUDGETING VOLUME 6,2006.*) and later it increased in the years 2008 to 2012 averaging to 9%. (*WORLD BANK REPORT*)

Over the past five years, the Ugandan economy recorded some positive growth, despite a number of challenges resulting from both domestic and external factors. In FY 2014/15, the rate of growth was 5.0 percent per annum. This growth rate sustained the momentum achieved after the economic growth rate had increased to 5.2 percent in FY 2013/14, from 3.6 percent recorded in FY 2012/13, according to the Uganda Bureau of Statistic (UBOS)'s revised GDP series. This recovery was mainly driven by a growth in consumption, since there was a deceleration in the rate of growth of gross investments over this period. To a certain extent, the economy stabilized, with the rate of inflation declining from 23.5 percent in FY 2011/12 to 3.0 percent in FY 2014/15, even though increasing food prices and currency depreciation began to exert an influence towards the end of the year. It was also challenging for policymakers to

manage the impact of the unpredictable global environment, with Uganda's external current account deficit increasing from a value of around 7.8 percent of GDP in FY 2012/13 to 9.6 percent in FY 2014/15. In addition, Uganda's economy operated in the context of significant regional political challenges, mainly due to the unrest in neighboring South Sudan and the Democratic Republic of Congo and to isolated terrorist incidents in Kenya. All of these factors had an impact on Uganda's spending needs, exports, and remittances.

At an estimated rate of 4.6 percent during FY 2015/16, Uganda's economic growth is far lower than the rate recorded in the decades following reform. With the low per capita income and high vulnerability to poverty, the rate of economic growth is not sufficient to reach the national target of achieving middle income status by FY 2019/20.

In FY 2014/15 Uganda recorded a rate of economic growth of 4.6 % in FY 2015/16. A rate significantly lower than recorded in recent history and lower than that of regional peers in the East African Community (EAC) have reached US\$ 740. While this is slightly higher than the average for low-income countries (US\$ 629), it is less than half of the average for Sub-Saharan Africa (developing only) countries (US\$ 1,638). The number of households living below the international poverty line, measured at US\$ 1.9 per day in 2011 PPP terms, is expected to have declined further to about 33.2 percent in FY 2014/15, from 41.5 percent five years ago. However, despite this impressive decline in the poverty rate, 43 percent of the population continues to live just above the poverty line and therefore remains highly vulnerable and at risk of falling back into poverty in the case of economic shocks. While the structure of the economy is slowly changing, approximately three-quarters of the population still depend primarily on low paying jobs in the agricultural sector, with the majority employed in subsistence farming, which contributes to approximately 25 percent of the total value of GDP.

High inflation which happened in 70's and 80's affected the economic growth in the 90's and when inflation started improving its then realized that in the recent years GDP is growing.

1.1.2 Theoretical Background

The study employed the Keynesian theory of inflation which posits that the dynamic adjustment aggregate demand and aggregate supply yields positive relationship between inflation and economic growth.

1.1.3 Conceptual Background

According to Mungawu Peter 2013, Inflation is the persistent increase in the general price level of goods and services.

According to Johansen 2012, Economic growth refers to the measure of the quantity of goods and services in an economy.

1.1.4 Contextual Background

The study was carried out in Uganda considering data from 2000 to 2018 as there is doubt among the populace that inflation is high evidenced from reduction in money supply contrarily to the reports that say that the inflation rate is not high in Uganda

1.2 Problem Statement

According to UBOS report for FY 2018/19, Uganda's economic growth should increase by an additional percentage point to reach approximately 6.8 percent. Thereafter, it should remain on an upward trajectory into the medium term, perhaps facilitating a further reduction in poverty levels by around 1 to 2 percentage points per year while making investments in oil extraction and infrastructure. It is assumed that these investments will boost construction activity to accelerate the rate of economic growth in the near term, and if managed well should to be expected to lead to improvements in the productivity of the economy to sustain higher growth in the medium to long term

It is expected that capital expenditures will gradually increase to around 11 percent of GDP by FY 2019/20. With only modest improvements to revenue collection, the overall deficit is projected to decline only marginally, to around 6.2 percent of GDP by FY2017/18. It is then expected to remain at around the level of 6.5 percent of GDP in subsequent years

The government of Uganda has taken most of the measures to reduce inflation and has managed to succeed in improving economic growth rate but the GDP figures are still at a slow rate less than 5% per annum as this is attributed to the inflation figures which are increasing all the time.

Thus this study sought to examine the impact of inflation on economic growth in Uganda.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of the study was to assess the effect of Inflation on Economic Growth of Uganda (2000-2018).

1.3.2 Specific Objectives

- i) To examine the trend of Inflation in Uganda (2000-2018).
- ii) To find out the level of Economic Growth of Uganda (2000-2018).
- iii) To establish the relationship between Inflation and Economic Growth (2000-2018).

1.4 Research Hypotheses

Ho: There is no significant relationship between Inflation and Economic Growth.

HA: There is a significant relationship between Inflation and Economic growth

1.5 Scope of the study

1.5.1 Time Scope

The study considered values of inflation and real GDP from 2000 to 2018.

1.5.2 Subject Scope

The study focused on only two variables that is, inflation as the independent variable and economic growth as the dependent.

1.5.3. Geographical Scope

The study was carried out in Uganda since inflation and economic growth are macro economic problems.

1.6 Significance of the Study

The research findings will enable Uganda's policy makers to come with policies regarding the growth of the whole economy.

The research findings will contribute to the ongoing academic debate about the contradictions of the causal relationship between inflation and economic growth.

The research results will add on the existing literature which will be used as reference by various academicians for further research conduction on this topic and other related issues.

The findings will act as a requirement in fulfillment for the award of bachelor's degree of Business administration of Kampala International University.

1.7 Operational Terms

Inflation

In economics inflation is a sustained increase in the general price level of goods and services in an economy over a given period of time, when the general prices rise, each unit of currency buys fewer goods and services. Consequently inflation reflects a reduction in the purchasing power per unit of money.

Real Gross Domestic Product

GDP is the measure of total final goods and services produced with in a country during a given period of time.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

In this section, an extensive review of the previous scholars and academic work was done specifically on inflation and economic growth and this was guided by the specific objectives of the study and Keynesian theory of inflation was elucidated.

2.1. Theoretical Review

The phenomenon of inflation and its relationship with real economic variables has been discussed since the emergence of classical economic theory and studies on this matter have been promoted in subsequent periods as the development of modern economic theories. This section is devoted to the review of different economic theory, while focusing on the explanations of inflation and its relationship with economic growth under the framework of the theory without a lengthy explanation of the details about the theory.

2.1.1. Keynesian Theory of Inflation

Keynesian theories and the so called Keynesianism were born out of the works of John Maynard Keynes. His book “The General Theory of Employment, Interest and Money” played a key role in establishing the foundation of Keynesianism and also the modern macroeconomics. Keynesians believe that interventions in the economy by governments through expansionary economic policies will increase investment and promote demand to reach full production. Keynesians define the concept of potential output as a level of GDP where the economy is at its optimal level of production given institutional and natural constraints. This level of output corresponds to the Non-Accelerating Inflation Rate of Unemployment (NAIRU) or the natural rate of unemployment. If GDP exceeds its potential, that is unemployment is below the NAIRU, the theory says that inflation will accelerate as suppliers increase their prices and built-in inflation worsens. If GDP falls below its potential level, that is unemployment is above the NAIRU, inflation will decelerate as suppliers attempt to fill excess capacity, cutting prices and undermining built-in inflation. Finally, if GDP is equal to its potential and the unemployment rate is equal to NAIRU, then the rate of inflation will remain unchanged, so long there are no supply shocks. Furthermore,

Keynesians believe that the Phillips curve is vertical in the long-run. That is, the rate of unemployment is given and equal to the natural rate of unemployment, while there are a large number of possible inflation rates that can prevail at that unemployment rate (Gokal and Hanif, 2004).

In their linking of inflation to economic growth, Keynesian theorists use the Aggregate Demand (AD) and Aggregate Supply (AS) framework and attribute inflation to the demand-pull phenomenon. According to demand-pull inflation theory of Keynes, a policy that reduces any component of total demand is effective in reducing the pressure of demand and inflation. For instance, the reduction in government expenditure or tax increase and to control volume of money alone or together can be effective in reducing effective demand and inflation control. In difficult conditions, for example in times of hyperinflation, the control of volume of money or decrease in general expenditure may not be practical hence increase in tax can be used for control on demand (Keynes, 1936).

2.2 Conceptual Framework

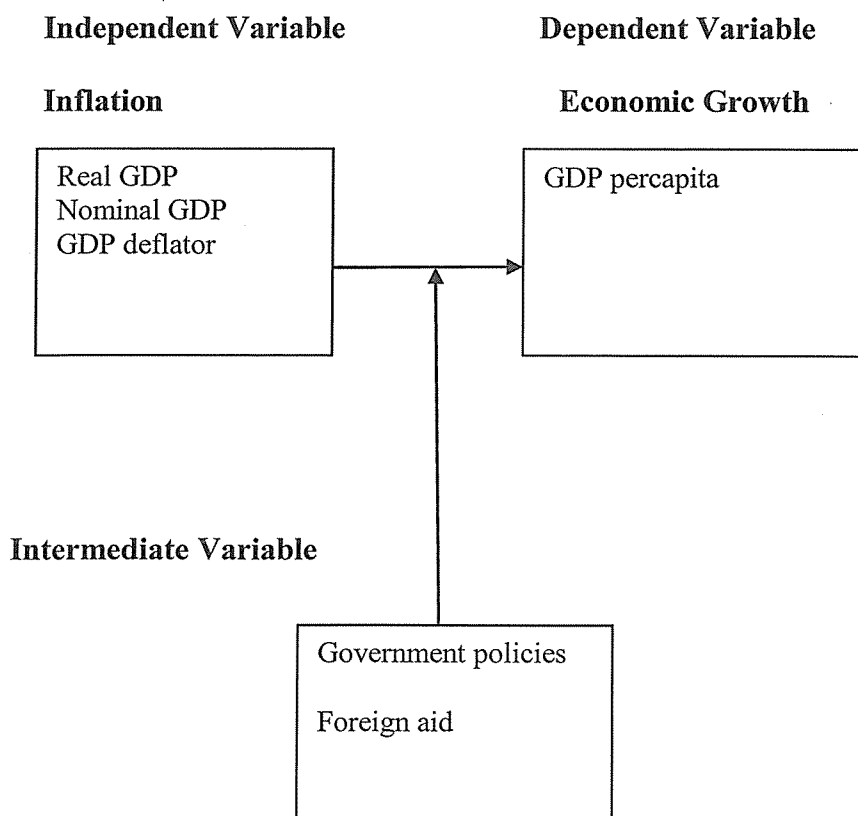


Figure 1: Conceptual Framework

From figure one above the independent variable was measured in terms of real GDP, Nominal GDP and GDP deflator, the dependent variable was measured by only GDP percapita and finally the intermediate variable was measured in terms of government policies and foreign aid.

2.3 Related Literature

2.3.1 Trend of Inflation and Economic Growth in Uganda (2000-2018)

The recent spike in inflation comes after a long period of low and stable single digit inflation that has been entrenched in Uganda since the 1990s. The long term commitment of the BOU remains to maintain price stability at all times. In this regard, it is important to understand the reasons for the recent surge in inflation, and also explain the stance that Bank of Uganda has adopted to deal with the problem.

Two developments need to be explained. First, at the international level, data from the World Economic Outlook indicates headline inflation in advanced economies to have risen to 3.5 percent in May 2008. The rise in inflation in advanced economies has led central banks to express growing concerns in regard to the current price environment. The increase in inflation is more marked and broader in developing economies, particularly Sub Saharan Africa where headline inflation has registered an average of 20.0 percent; the highest rates since the beginning of the current decade. In these economies, food and fuel make up a larger share of consumption baskets and sustained strong growth has tightened capacity constraints. The major part of the spike in inflation reflects sharp increases in global energy and food commodity prices, and other commodities. In part, the rise in prices was driven by the commodity boom that resulted from both accelerated demand and constrained supply. In particular, the increased demand from emerging economies for various commodities; demand for specific food crops and bio fuels; and slow supply responses, amplified the price pressures.

Second, on the domestic front, core inflation had remained in single digits since 1996 but rose above the 10 percent mark after April 2008. In the same vein, headline inflation was recorded at single digit levels for most of the period from August 1993 to May 2008. It was only some episodes in 1997, 2003 and 2005 that inflation rose above the 10 percent level, mainly due to the world oil prices increasing after the genesis of the gulf war, supply constraints after the closure of the sugar factories among others, and periods

of elongated drought. Figure 1 maps the inflation profile.

The domestic food crop prices, as reported by the Uganda Bureau of Statistics, rose mainly due to seasonal factors, poor harvest, substitution effect and high domestic and regional demand. The rise in prices of processed foods were brought about by increased costs of raw materials, the impact of supply constraints as a result of the Kenyan crisis, together with increased transportation costs due to the surge in the world oil prices, among others.

In the 1970s, Uganda experienced hyperinflation. Inflation was recorded at 216% per annum in 1979 (Bigsten & Kayizzi-Mugerwa 1999). As part of the ERP and PEAP initiatives, inflation started to decline, indicated by the Consumer Price Index (CPI).

With donor support, CPI started to decline. For example, it went from 154% to 101.10% per annum in 1996. Though CPI started to rise to the current 216% per annum, headline inflation reduced from 157.66% per annum in 1985 to 4.3% per annum in 2014. Despite advances in macroeconomic stability, CPI again increased to 216% per annum in 2014.

Inflation in Uganda can be attributed to increasing money supply, world energy and food prices. Since inflation leads to price increases, rural poor communities (comprising 80% of the total population in Uganda) are most affected. This is because, first, the share of consumption in total income is larger for consumer goods such as food, soap, salt and cloth. Second, the income for agricultural products and salary earners does not increase in a similar proportion to manufactured products. Thus, increases in price reduce the range of goods available and real incomes to the poor. In turn, savings, future investment and welfare reduce.

Considering the effects of inflation became the avenues through which macroeconomic stability could be achieved in Uganda. Targeting inflation and achieving high economic growth are two fundamental macroeconomic objectives of most economies (Mwanga & Sanday 2013; Kasidi & Mwakanemela 2013). In Uganda, the government uses interest rates to control inflation, often increasing them. However, this means that the cost of borrowing increases while investments reduce. Since inflation affects consumption, production slows due to low purchasing power, and in-turn employment reduces.

With respect to inflation, the country experienced a high inflation in FY 2011/12 which averaged 23.5 percentage change compared to 6.5 percent change registered in FY

2010/11. Inflation reduced to 4.9% in 2013 and to 31.1 in 2014. From 2015 up to date, inflation figures have been increasing but less than 6% due to certain factors like presidential campaigns and electoral process

2.3.2 Level of Economic Growth of Uganda 2000-2018

Over the past five years, the Ugandan economy recorded some positive growth, despite a number of challenges resulting from both domestic and external factors. In FY 2014/15, the rate of growth was 5.0 percent per annum. This growth rate sustained the momentum achieved after the economic growth rate had increased to 5.2 percent in FY 2013/14, from 3.6 percent recorded in FY 2012/13, according to the Uganda Bureau of Statistic (UBOS)'s revised GDP series. This recovery was mainly driven by a growth in consumption, since there was a deceleration in the rate of growth of gross investments over this period. To a certain extent, the economy stabilized, with the rate of inflation declining from 23.5 percent in FY 2011/12 to 3.0 percent in FY 2014/15, even though increasing food prices and currency depreciation began to exert an influence towards the end of the year. It was also challenging for policymakers to manage the impact of the unpredictable global environment, with Uganda's external current account deficit increasing from a value of around 7.8 percent of GDP in FY 2012/13 to 9.6 percent in FY 2014/15. In addition, Uganda's economy operated in the context of significant regional political challenges, mainly due to the unrest in neighboring South Sudan and the Democratic Republic of Congo and to isolated terrorist incidents in Kenya. All of these factors had an impact on Uganda's spending needs, exports, and remittances.

At an estimated rate of 4.6 percent during FY 2015/16, Uganda's economic growth is far lower than the rate recorded in the decades following reform. With the low per capita income and high vulnerability to poverty, the rate of economic growth is not sufficient to reach the national target of achieving middle income status by FY 2019/20. In FY 2014/15, the average per capita income is estimated to increase

Uganda recorded a rate of economic growth of 4.6 % in FY 2015/16. A rate significantly lower than recorded in recent history and lower than that of regional peers in the East African Community (EAC) have reached US\$ 740. While this is slightly higher than the average for low-income countries (US\$ 629), it is less than half of the average for Sub-Saharan Africa (developing only) countries (US\$ 1,638). The number

of households living below the international poverty line, measured at US\$ 1.9 per day in 2011 PPP terms, is expected to have declined further to about 33.2 percent in FY 2014/15, from 41.5 percent five years ago. However, despite this impressive decline in the poverty rate, 43 percent of the population continues to live just above the poverty line and therefore remains highly vulnerable and at risk of falling back into poverty in the case of economic shocks. While the structure of the economy is slowly changing, approximately three-quarters of the population still depend primarily on low paying jobs in the agricultural sector, with the majority employed in subsistence farming, which contributes to approximately 25 percent of the total value of GDP.

The Ugandan economy is estimated to have grown at a rate of 4.6 percent during FY 2015/16, which was much slower than the projected rate of 5.8 percent. With the take-off of a number of the energy projects boosting public investment, the slower than anticipated growth can be attributed to the adverse impact of both domestic and external volatilities. The tightening of monetary policy was necessary to address inflation pressures, but raised the cost of credit, which affected private consumption and investment. Fiscal policy was implemented well, keeping overall expenditure within the budgeted levels, even though there were reallocations of funds to recurrent expenditures, mainly on account of election-related pressures.

FY 2015/16, Uganda began the implementation of its second National Development Plan (NDPII), the same year that it conducted its national elections. The NDPII, which covers the period from FY 2015/16 to FY 2019/20, is the second of a series of six five-year plans intended to facilitate the achievement of a vision for Uganda's economic and social transformation by 2040. The NDPII builds on a number of projects and initiatives implemented under the previous plan, with a particular focus on addressing Uganda's infrastructure deficit and on preparing for the production of oil. The beginning of the period of the new plan coincided with the preparations for presidential, parliamentary, and district-level election period, which took place in February-March 2016. With memories of tensions in the area of economic management during the previous election period, in 2011, there were concerns regarding the possible re-occurrence of similar events. With additional challenges created by the volatile external environment, policymakers had to manage these concerns carefully while remaining focused on an economic management drive intended to address structural issues to sustain overall growth and economic development over the longer term.

During FY 2015/16, Uganda recorded a rate of growth of 4.6 percent (preliminary estimate) as a result of both domestic and external uncertainties. This was lower than 5.4 percent, the rate which had been forecast in our previous economic update released September 2015, with the largest shortfall in growth coming from private investments. On the basis of revised data from the Uganda Bureau of Statistics this rate is lower than 5.0 percent recorded for FY 2014/15.

The services sector remains the main driver of growth, accounting for an estimated 52 percent of all economic activities. However, increased construction activities also significantly boosted the contribution of the industrial sector. During FY 2015/16, the services sector grew by 6.6 percent, with the bulk of this growth driven by activity in the information and technology sub-sectors. The rate of growth of the construction sector, increased to approximately 5.7 percent, more than doubling the rate recorded in FY 2014/15, when the sector grew by a mere 2.5 percent. This development is largely attributed to the take-off of large public construction works. With a deceleration in the rate of growth of all other sub sectors, particularly manufacturing, the overall rate of growth of the industrial sector during the year was significantly lower than in the corresponding period in the previous year

The agricultural sector grew at a rate of 3.2 percent during the year, after benefitting from favorable weather conditions, particularly during the first half of the year. This is a higher rate of growth than the rate of 2.3 percent recorded during the corresponding period in FY 2014/15. The impact of low commodity prices at the international market, the sector's performance during the year was better than might have been expected. This is because the average global prices for Uganda's major export commodities, particularly coffee, tea, maize and fish, were generally lower than in the corresponding period in the previous year. A positive factor was the weather conditions during the first half of the year, before the El Nino set in with more volatile and unfavorable patterns during the latter part of the year. (Uganda Bureau of Statistics, 2012 and World Bank Staff Estimates. Preliminary estimates of annual GDP growth).

Uganda's economic outlook for 2018 is a lot more positive thanks to a recovery in private sector credit, favorable weather conditions, increase in Foreign Direct Investment (FDI) and the continued robust government investment in infrastructure.

According to Bank of Uganda's most recent Monetary Policy Statement (MPC), there are very good signs of recovery and revival of the private investment activity in the economy.

FDI has rebound from the slump of 2016, and is estimated to have increased by 18.5% during the 2017 calendar year.

There has been a year on year increase in private sector credit, with local currency credit extension up by 10.8% in December 2017 compared to the modest growth of only 7.9% in December 2016.

The manufacturing sector is also showing signs of recovery with an increase in the export of manufactured goods particularly construction materials such as iron and steel products. Export of processed consumer goods and agricultural items such as dairy products and edible oil is also on the rise.

In addition to this, there has been an increase in imports of raw materials and capital goods, registering growth of 17.4% in the calendar year 2017 compared to a decline of 21.1% in 2016.

All these positive developments, together with the continued improvements in the global economic outlook, indicate that 2018 will definitely be a better year for businesses in Uganda.

This is all very good news. The ongoing recovery in the economy has also been noticed by Standard & Poor Financial Services LLC, a global economic rating firm. As a result of this, S&P has rated Uganda's economic outlook for 2018 as "stable", and also affirmed the country's "B/B" long and short term sovereign credit rating.

According to S&P's report, in the next twelve months, Uganda's fiscal and external metrics will remain broadly in line with projected forecasts. The report says that its projected stable economic outlook assumes that government will stay on track with its Policy Support Instrument with the International Monetary Fund (IMF) and with its wider relations with official creditors.

Uganda's economy is projected to grow by 5.0% to 5.50% this financial year 2017/18 and the outlook for the future is even more positive. Overall, we expect a very positive

outlook for the financial 2018/2019 and beyond.(Francis Kamulegeya 2018).

This positive economic outlook is collaborated by the latest data on the economy published by the Uganda Bureau of Statistics (UBOS). According to the latest UBOS report on the Key Economic Indicators, real GDP for the first quarter (Q1) of FY 2017/18 grew by 1.3%.

Although this is lower than the 2.5% GDP growth of the fourth quarter (Q4) of FY 2016/17, it represents a year on year quarterly GDP growth of 7.5% compared to the growth of 2.5% registered in Q1 of 2016/173.

According to the report, all sectors of the economy grew in the first quarter of the current FY 2017/18 compared to the same period last financial year.

For example, value added in the agriculture sector grew by 9.0%, year on year quarterly GDP compared to the decline of 2.0% in the first quarter of FY 2016/17. This was mainly due to an increase in food crop growing activities that grew at 11.0%, thanks to the more than normal rainfall and the generally favorable weather conditions we have had over the last six months.

Likewise, year on year industry activities value added grew by 5.0% in the first quarter of FY 2017/18, compared to the growth of 4.2% in quarter one of FY 2016/17. The main drivers of this growth were manufacturing and construction activities which grew by 3.7% and 5.6% respectively.

Year on year quarterly growth of the services sector value added was 8.7% in the first quarter of FY 2017/18, compared to the growth of 3.7% in quarter one of FY 2016/17.

The main drivers of growth in the services sector were Information & Communication (2.9%), Financial services & Insurance (2.6%), Public Administration (1.4%), Education (3.3%) and Health (0.5%).

The increase in information & communication activities was mainly due to the growth in Telecommunication services. The increase in value added in financial and insurance activities was largely from increased activity within commercial banks.

The sluggish growth of the economy in the last three years has resulted in a slight

deterioration of the poverty levels in the country

The recent slowdown of the economy has constrained growth on a per capita basis, resulting in a deterioration of the poverty levels in the country. Ten years ago, when the economy was growing at an average of 7.0% per year, the proportion of Ugandans living below the national poverty line declined from 31.1% in 2006 to 19.7% in 2013.

However, the recent slowdown in growth of the economy has resulted in an increase in the proportion of people living in poverty.

According to the revised National Household Survey Report published by UBOS in February 2018, the proportion of people living in poverty now stands at 8 million. In percentage terms that mean that 21.4% of Ugandans are living in poverty.

The key reason for the increase in poverty is that growth has slowed down, while at the same time the population is increasing. In addition, to this, the modest growth we have been having over the last five years has been driven by the services sector. This sector employs a small proportion of the population compared to agriculture and manufacturing sectors that have very strong forward and backward linkages and spill-over effects in the economy.

In fact, the recent slowdown in economic growth is attributed mainly to productivity losses in the agriculture sector. These losses arise mainly because of lack of access to market, lack of affordable agricultural financing, weather vagaries and associated climatic changes.

Looking ahead, real GDP is expected to grow by 5.5% in 2018 and then accelerate to between 5% to 7% per year, during the period 2018 to 2022.

However, despite the projected recovery in growth of the economy, wealth levels measured by GDP per capita are likely to remain below the magic number of USD 1,026 that is required to attain middle income status. This means that Uganda is most likely not attain middle income status by her target date of 2020.

2.4 Examining the Relationship between Inflation and Economic Growth.

The existence and nature of the link between inflation and economic growth have extensively been investigated in the economic literature; Keynesian Model explains that there is no permanent trade-off between output and inflation.

Since 1970, numerous studies have been devoted to finding of effect of inflation on economic growth since the economies around the world have experienced hyper-inflation and massive un-employment. Those studies showed that sustained high rates of the inflation can have an adverse consequence on real economic growth even in the long run and repeatedly confirm that inflation has a considerable negative effect on economic growth, at least at sufficiently high level of inflation [S. Gerlarch and F. Smets “Contagious Speculative Attacks”].

M. Bruno and W. Easrely,1998,shows that inflation has no impact on long run economic growth except the situation where the inflation rate is over 40% that has negative impact on economic growth.

The studies based on cross country data by S. Fisher,1993, R. C. Kermendi and P. G. Mequire,1985, show the evidence that long term growth is adversely affected by inflation.

J. De Gregorio, 1993, reports that countries which experienced high inflation rates have also witnessed lower long term growth.

R. J. Barro,1995, validates the long term positive relationship between inflation and economic growth using a large sample in relation to more than 100 countries for 1960-1999. His finding shows that even though for adverse influence of inflation on growth appeared small, the long term effects on standard of living are really sizeable.

A. Saaed ,2007, found a strong long term inverse relationship between CPI and GDP in Kuwait from the data covering 20 years, G. Mallik and Chowdhury (2001) analysis about inflation- growth dynamics in South Asia finds a significant positive relation between the two variables in the long run.

Also S. Ahamed and G. Mortaza, 2005, established divergent results, a long term positive relationship between inflation and economic growth, by studying the long

term and short term dynamics of the relationship for four south Asian countries; Bangladesh, India, Pakistan and Sri Lanka. Conversely, S. Ahamed and G. Mortaza, 2005, found a long term negative relationship between inflation and economic growth in Bangladesh. According to Hojat Allah Joudaki1, Dr.Mohammad Hossein Hassani Sadrabadi , Dr.Ahmad Sarlak(1078-2011) in their research about the relationship between these two variable found along run negative relationship.

On the other hand, cross country evidences show that countries which experienced higher growth are those with lower inflation rates and higher inflation has an adverse impact on long run economic growth. Some of studies argue that negative relationship between inflation and economic growth may be varied between opened and closed economies whereas the relationship is expected to be stronger in opened economies which rely on foreign direct and domestic investment.

The concept of Phillips Curve hypothesises that high inflation is positively affected economic growth by contributing creation of a low unemployment rate in the short run, The Tobin Effect suggests the inflation causes individuals to substitute out of money into interest earning assets, which leads to greater capital increasing and promotes economic growth.

E. Erbaykal and H. A. Okuyan, 2008, studied inflation and growth relationship in Turkey over 20 years and found a negative short term relationship between the variables.

According to Shahzad Hussain in his research about Inflation and Economic Growth: Evidence from Pakistan

To examine the extent to which economic growth is related to inflation and vice versa, Error Correction Models (ECM) have been employed. With the help of this procedure, it is possible to examine the short-run and long-run relationship between two variables. The Error Correction Model (ECM) test is essential to see whether an economy is converging towards equilibrium in the short- run or not. According to the outcome of the study, inflation is away from its equilibrium value. For instance, the error correction term -0.49 implies that 49 percent of the adjustments towards the short-run equilibrium relation for Pakistan occur within a year through changes in growth rates. On the other hand, 58 percent (error correction term -0.58) of the

deviation of the inflation from its short-run equilibrium level is corrected each year.

M. Bruno and W. Easrely, 1998, shows that inflation has impact on short run economic growth more so when the inflation rate is over 40% that has negative impact on economic growth.

Erricsson, Irons and Tryon (2001) found that regression analysis conducted to explore the relationship of inflation and growth has not been proved robust but signified a negative relationship. The study does not support a short term relationship between economic growth and inflation because during the time series analysis these two variables were observed to be co-integrated. These co-integrating relationships showed that a positive correlation between growth and inflation which is astounding result but authors justify the results in the perspective of price markup model.

A period of 1980 to 2005 has been used by Ahmed and Mortaza (2005) so as to analyze growth- inflation relationship while using the data of real GDP and consumer price index of Bangladesh economy. Refined time series econometric techniques have been employed by them for examining the relationship. They observed that a significant and negative relationship between CPI and GDP has been evident for a long time period while a significant and positive relationship between CPI and GDP has been evident for a short time period.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This section presents the procedures that were followed in execution of data so as to arrive at statistically meaningful results. The section contained the research design, study population, sample size, data type and source, data methods/techniques, data processing and analysis, model specifications and problems and solutions.

3.1 Research Design

The study mainly focused on time series data of inflation and GDP therefore; quantitative kind of data was used.

3.2 Study Population

Since inflation and GDP are macro-economic indicators therefore the population to be studied was the whole Economy of Uganda.

3.3 Sample Size

The study used a sample of annual data from 2000 to 2018 thus 18 data points were used in this report.

3.4 Data Type and Source

The study used Time series data and the data was collected from the IMF website by Mundi.

3.5 Methods/ Techniques

3.5.1 Inflation

A chief measure of price changes is inflation rate. The quarterly percentage change in the general price index (normally the consumer price index) over time

3.5.2 Real GDP

Nominal values of GDP (other income measures) from different time periods can differ due to changes in amount of goods and services and/or changes in the general price levels. As a result taking price levels (or inflation) into account is necessary if we are determining whether we are really better or worse off when making comparisons between different time periods. Values of real GDP are adjusted for differences in price level and the nominal GDP are not.

The GDP deflator is an economic metric that converts output measured at current prices into constant dollar GDP and it shows how much change in the base year's GDP relies upon changes in price level. GDP deflator is a preferred price index because it does not focus on a fixed basket of goods and services and automatically reflects changes in the consumption patterns and/or introduction of new goods and services. Therefore this study used real GDP values at market price in the analysis.

Real GDP for a given year, in relation to a base year is computed by multiplying the nominal GDP for a given year by a ratio of GDP price deflator in the base year to the GDP price for a given year.

3.6 Data Processing and Analysis

The researcher used SPSS and STATA analysis packages for data analysis as they are the most preferable while dealing with time series data. He further carried out a normality test using the Shapiro wilkson test, this aimed at seeing whether the variables are normally distributed.

The correlation analysis was also carried out under the null hypothesis that there is no correlation between the variables.

Because time series data was used, to avoid having spurious results there is always need to first test for stationarity therefore the researcher tested for unit root using Phillips peron. Phillips peron was used because GDP was expected to be trended.

Since poor lag selection always leads to biased results and can result into residuals being serially correlated, the researcher used Schwartz Information Criteria (SIC) to determine the number of lags. This criterion was chosen among the many because it has a higher penalty on the degrees of freedom as sited by Gujarati, 4th Edition.

The regression analysis and correlation ware performed to determine the relationship between the variables of the study.

3.8 Model Specification

The regression model $Y = a+bx$ was fit to determine the predictive power of the independent variable on the dependent variable and to explain the relationship in general.

Where $Y =$ Economic growth

$x =$ Inflation

$a =$ is the intercept of the model

And b is the slope of the model

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

This chapter presents empirical findings in reference to the research questions in chapter one. The findings below were obtained from both secondary data sources. They were presented and analyzed using frequency tables and graphs to establish a relationship between the variables.

4.1 Testing the Variables for Normality

4.1.1 Normality Test for Economic Growth

Table 4.1.1: Normality Test for Economic Growth

Variable	Obs	W	V	Z	Prob>Z
Economic Growth	19	0.95171	1.103	0.196	0.42229

Source: Research 2019

Table 4.1.1 shows that data about economic growth is normally distributed since the test static w (0.95171) is almost approaching to one. This implies that reliable inferences will be made using this data.

4.1.2 Normality Test for Inflation

Table 4.1.2: Normality for Inflation

Variable	Obs	W	V	Z	Prob>Z
Economic Growth	19	0.93723	1.433	0.723	0.23490

Source: Research 2019

Table 4.1.2 shows that data about inflation is normally distributed since the test static w (0.93723) is almost approaching to one. This implies that reliable inferences will be made using this data.

4.1.3 Lag selection

Table 4.1.3: Lag Selection

Lag	LL	LR	df	P	FPE	AIC	HQIC	SBIC
0	-178.939				6.9e+06	24.2586	24.2571	24.4002
1			9		0*			
2	291.772		9		3.2e-20	-36.5029*	-36.512*	-35.6532*
3	297.162	10.781	9	0.291	4.4e-20	-35.4216	-36.4337	-35.2888
4	298.104	1.8834	9	0.993	1.4e-19	-35.7472	-35.7623	-34.3311

Source: Research 2019

The criterion is that you choose the number of lags on the point that has many stars.

Table 4.1.3 shows that the data had two lags since most of the stars lie on 2.

4.1.4 . Unit Root Test for Economic Growth

Table 4.1.4: Philips Peron Unit Root Test for Economic Growth

	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
Z(rho)	2.300	-17.200	-12.500	-10.200
Z(t)	1.648	-3.750	-3.000	-2.630

Source: Research 2019

With time series data it is better check for stationary to avoid using spurious results that give unreliable results.

The criterion is that we reject H_0 that the time series data is not stationary if the test statistic is less than the critical value. Table 4.1.4 shows that the test statistic (1.648) is greater than the critical value (-3.00), thus we accept the alternative that the time series data about economic growth is stationary.

4.1.5 Unit root Test for Inflation

Table 4.1.5: Philips Peron Unit root Test for Inflation.

	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
Z(rho)	-13.377	-17.200	-12.500	-10.200
Z(t)	-3.288	-3.750	-3.000	-2.630

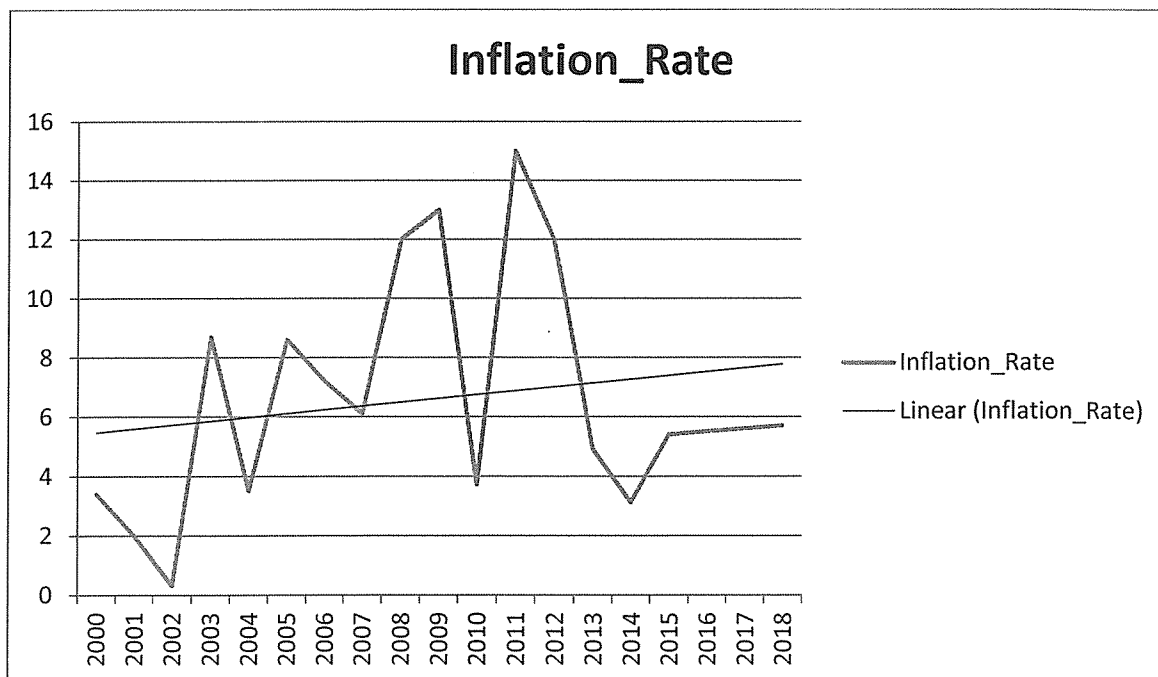
Source: Research 2019

The criterion is that we reject H_0 that the time series data is not stationary if the $z(\rho)$ Statistic is more negative than the critical value. Table 4.1.5 shows that the Test Statistic (-13.777) is more negative than the critical value (-3.00), thus we accept the alternative that the time series data about inflation is stationary.

4.2 Trend of Inflation in Uganda (2000-2018)

The first objective of the study was to examine the trend of Inflation in Uganda (2000-2018).

Figure 4.2: Trend of Inflation in Uganda (2000-2018)



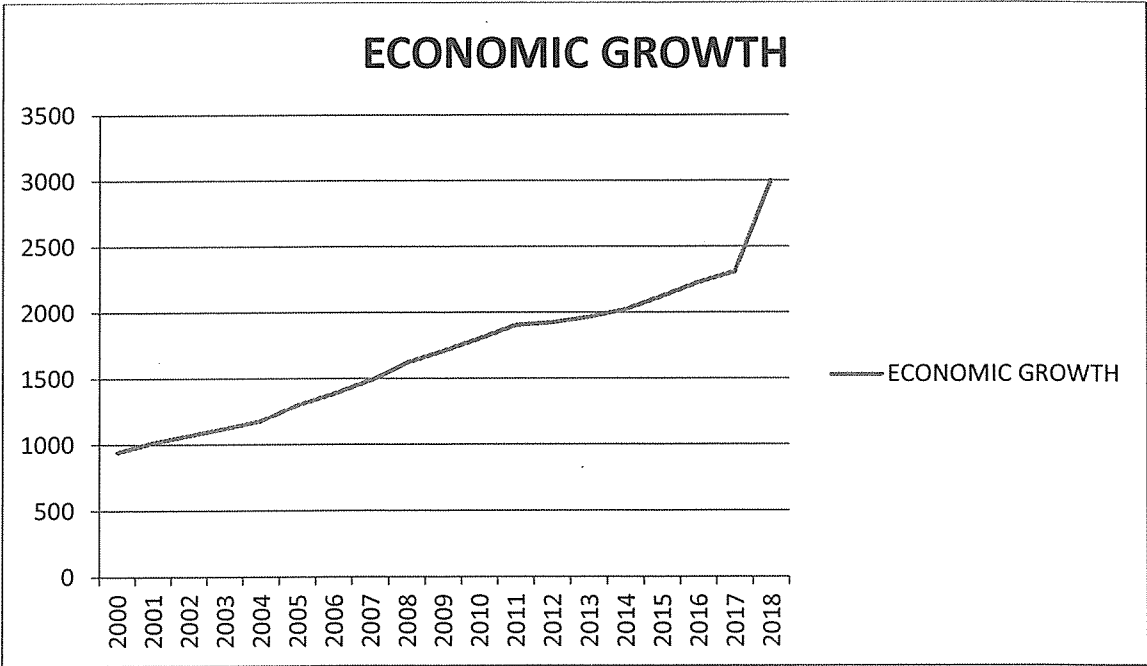
Source: Research 2019

Figure 4.2 shows that inflation in Uganda has an increasing trend but at a slower rate. This is from the fact that from 2000 to 2002, inflation decreased and it increased rapidly between 2002 and 2003, inflation also decreased between 2003 and 2004, it increased between 2005 and 2006, it increased from 2007 to 2009 most especially between 2008 and 2009 , it also decreased from 2009 to 2010 . Between 2010 and 2011 inflation increased, it also increased rapidly between 2011 and 2012 and it decreased to 4.9 in 2013 and to 3.9 in 2014. Since 2015 to date. Inflation has been increasing at a slow rate that is less than 5%.

4.3 Level of Economic Growth in Uganda (2000-2018)

The second study objective was to find out the level of Economic Growth of Uganda (2000-2018).

Figure 4.3: Line Graph Showing the Level Of Economic Growth in Uganda since 2000-2018



Source: Research 2019

Figure 4.3 shows that the economic growth of Uganda has been increasing since 2000 to 2018. This is evidenced from the fact that it increased steadily from 2000-2005, it continued to increase from 2006 to 2010, it also slightly increased between 2011 and

2012. since 2013, the level of economic growth has been increasing as this is attributed to the reduction in the inflation figures and their slow rate of increase.

4.4 Relationship between Inflation and Economic Growth

The third objective of the study was to establish the relationship between Inflation and Economic Growth (2000-2018).

Table 4.4: Pearson Correlation Analysis

		Economic growth	Inflation
Economic growth	Pearson Correlation	1	.178
	Sig. (2-tailed)		.467
	N	19	19
Inflation rate	Pearson Correlation	.178	1
	Sig. (2-tailed)	.467	
	N	19	19

Source: Research 2019

Table 4.4 shows that there is a weak positive correlation between inflation and economic growth in Uganda basing from spearman’s correlation coefficient of 0.178. This means that if inflation increases at a small rate , economic growth increases.

4.5 Research Hypothesis

The study hypothesis was that there is no significant relationship between Inflation and Economic Growth versus the alternative that there is a significant relationship between Inflation and Economic growth.

Table 4.5.1 :Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.178	.032	-.025	542.555

a. Predictors: (Constant), Inflation

Source: Research 2019

Table 4.5 shows that R square is equal to 0.32 meaning that variations in inflation explain variations in economic growth by 32%; adjusted R is equal to -0.25 meaning that variations in the additional variables explain the variations in economic growth with a value of -0.25.

Table 4.5.2: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	163082.974	1	163082.974	.554	.001
	Residual	5004217.825	17	294365.754		
	Total	5167300.798	18			

a. Dependent Variable: Economic_growth

b. Predictors: (Constant), Inflation_rate

Source: Research 2019

Table 4.5.2 shows that the p value (0.001) is less than 0.05 .This means that the model is significant thus it gives valid results for this study.

Table 4.5.3 : Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1530.674	245.554		6.234	.000
Inflation_rate	23.814	31.995	.178	.744	.467

a. Dependent Variable: Economic_growth

Table 4.5.3 shows that the model is $\text{Economic growth} = 1530.674 + 23.816 \text{ Inflation}$.

For 1530.674 it means that without the effect of inflation, economic growth increases by 1530.674 and for 23.814 it means that a unit change in inflation rate increases economic growth by 23.814. This gives evidence for correlation results that a small increase in inflation increases economic growth and vice versa.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS, CONCLUSIONS AND RECOMENTATION

5.1 DISCUSSION OF THE FINDINGS

5.1.1 Determining the trend of inflation in Uganda (2000-2018)

From the findings of the study, it is evident that inflation in Uganda has an increasing trend but at a slower rate. This is from the fact that from 2000 to 2002, inflation decreased and it increased rapidly between 2002 and 2003, inflation also decreased between 2003 and 2004, it increased between 2005 and 2006, it increased from 2007 to 2009 most especially between 2008 and 2009, it also decreased from 2009 to 2010. Between 2010 and 2011 inflation increased, it also increased rapidly between 2011 and 2012 and it decreased to 4.9 in 2013 and to 3.9 in 2014. Since 2015 to date, inflation has been increasing at a slow rate that is less than 5%.

5.1.2 The level of economic growth in Uganda since 2000-2018

From the figure above, it is evident that the economic growth of Uganda has been increasing since 2000 to 2018. This evidenced from the fact that it increased steadily from 2000-2005, it continued to increase from 2006 to 2010, it also slightly increased between 2011 and 2012. Since 2013, the level of economic growth has been increasing as this is attributed to the reduction in the inflation figures and their slow rate of increase.

5.1.3 Relationship inflation and Economic Growth 2000-2008

The findings show that there is a weak positive correlation between inflation and economic growth in Uganda basing from spearman's correlation coefficient of 0.178. This means that if inflation increases at a small rate economic growth increases. For R square equal to 0.32 it means that variations in inflation explain variations in economic growth by 32%.

For adjusted R equal to -0.25, it means that variations in the additional variables explain the variations in economic growth with a value of -0.25. From the ANOVA table, since the p-value value (0.001) is less than 0.05 it means that the model is significant thus it gives valid results for this study.

For 1530.674 it means that without the effect of inflation, economic growth increases by 1530.674 and for 23.814 it means that a unit change in inflation rate increases economic

growth by 23.814. This gives evidence for correlation results that a small increase in inflation increases economic growth and if it increases rapidly, economic growth decreases.

5.2 Conclusion

The findings of the study revealed that currently the inflation of Uganda is increasing but at slow rate and due to the reduction in inflation, economic growth is improving highly as Uganda registered a great improvement in Economic growth in 2018 since 2000.

The study also found out that there is a weak positive linear relationship between inflation and economic growth meaning that as inflation increases at a low rate economic growth increases by 23.814. This means that to increase economic growth highly, inflation should be curbed down.

5.3 Recommendations

- i) The government should implement policies that can curb down inflation to improve economic growth.
- ii) The government should curb down inflation in the short run since it affects economic growth in the long run.

5.4 Areas for further research

- i) Cause and effect relationship between inflation in Uganda.
- ii) Long run and short run effect of inflation on the economic growth of Uganda.

REFERENCES

- A. Saaed, (2007), "Inflation AND Economic Growth in Kuwait" *Applied Economics and international Development*, vol. 7, No. 1,
- A.C. Tockman, (1981), "Anticipate Inflation and the Capital Stock in Cash in Advanced Economy," *journal of monetary Economy*, vol.8, no. 3,
- D. A. Dickey and Fuller,(1981), "likelihood Ratio Statistics for Autoregressive Time Series with a Unit Root," *Econometrica*, Vol. 49,
- E. Erbaykal and H. A. Okuyan, "Does Inflation Dress Economic Growth: evidence from Turkey"
- Erriscsson ,Iron and Tryon, (2001), " Relationship between economic growth and inflation"
- F. R. Engle and W. J. C. Granger,(1981), "Cointegration and Error Correction: Represtation, Estimation and Testing," *Econometrica*, Vol. 55, No. 2,
- G. Mallik and A. Chowdhury, (2001), "Inflation and Economic Growth: Evidence from South Asian Countries," *asia- pacific development journal*, *OECD journal on budgeting* volume 6, (2006).
- Gujarati, "Basic Econometrics 4th Edition"
- Hojat Allah Joudaki1, Dr.Mohammad Hossein Hassani Sadrabadi 2, Dr.Ahmad Sarlak3 (volume 2014) "causal relationship between inflation and economic growth in iran during theyears 1978-2011"
- J. Bullard and J. Keatry, (1995), "The long Run Relationship between inflation and Output in post War Economics" *journal of monetary Economy*, Vol. 36, No. 3,
- J. De Gregorio, (1993),"Inflation, Taxation and Long Run Growth," *journal of monetary Economics*, Vol.31, No.3,
- Mankiw, Gregory N. (2000), "Macroeconomics", 4th Edition, New York, Worth.
- P.C.B. Phillips and P. Perron, (1998), "Testing for A Unit Root in Times Series Regression," Vol. 75, No. 2.

- R. J. Barro, (1995), "Inflation and Economic Growth," NBER working paper No.5326.
- R.C. Kormandi and P. E. Meguire, "Macro Economic Determinants of Growth. Cross Country Evidence,"journal of monetary Economics,Vol. 16, No. 2,
- S. Ahmed and G. Mortaza,(2005) "Inflation and Economic Growth in Bangladesh," Policy analysis unit,
- S. Paul, C. Kearney and K. Chowdhury, (1960-1997), Inflation and economic growth (1997) inloving 70 countries of which 48 are developing economies
- Sarel, M. 1996, "Nonlinear Effects of Inflation on Economic Growth", IMF Staff Papers, PP 199-215.
- Shahzad Hussain (2011), "Inflation and Economic Growth": Evidence from Pakistan.

Appendices

Appendix 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.178 ^a	.032	-.025	542.555

a. Predictors: (Constant), Inflation_rate

Appendix 2: ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	163082.974	1	163082.974	.554	.001 ^b
	Residual	5004217.825	17	294365.754		
	Total	5167300.798	18			

a. Dependent Variable: Economic_growth

b. Predictors: (Constant), Inflation_rate

Appendix 3: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1530.674	245.554		6.234	.000
	Inflation rate	23.814	31.995	.178	.744	.467

a. Dependent Variable: Economic_growth

Appendix 4: Normality Test For Economic Growth

```
. swilk Economic_Growth
```

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
Economic_G~h	19	0.95171	1.103	0.196	0.42229

Appendix 9: Data for Inflation and Economic Growth.

YEAR	ECONOMIC GROWTH	INFLATION RATE
2000	940.488	3.4
2001	1013.95	2.0
2002	1067.548	0.3
2003	1119.136	8.7
2004	1177.743	3.5
2005	1294.505	8.6
2006	1382.672	7.2
2007	1484.904	6.1
2008	1618.594	12.0
2009	1706.475	13.0
2010	1800.947	3.7
2011	1901.789	15.0
2012	1923.339	12.0
2013	1963.148	4.9
2014	2022.571	3.1
2015	2121.802	5.4
2016	2226.691	5.5
2017	2307.942	5.6
2018	3001.999	5.7

Source: mundi (2018) IMF accessed on 20th March 2019.