INFLATION AND ECONOMIC GROWTH IN UGANDA
1980-2010

A Research Thesis

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In Partial Fulfillment of the Requirements for

the degree of Master of Arts in

Economics

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DECLARATION A

"This thesis is my original work and has not been presented for a degree or any other academic award in any university or institution of learning".

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28th/10/2011

Date

DECLARATION B

"We confirm that the work reported in this thesis was carried out by the candidate under our supervision".

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DEDICATION

This work is dedicated to my father, Mr. Abdul Lubwaama, to my mother Mrs. Safina Namutebi, my brothers more so kaziro Muhammad and sisters most especially Nakku Zaituni, my dearest husband Mr. Haruna Nsubuga and my son Lukman Nsubuga. I also dedicate this work to Mr. Lukooya Mukoome Francis; the current chair person Mukono district, Mr. Musoke Steven former councilor Nabbale Sub County, Mr. Ziwa Moses former vice chairman Mukono district, and Mr. Muhumuza Asuman current speaker Mukono district

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ABSTRACT

The study was carried out to determine the relationship between the level of inflation and the level of economic growth (growth rate) in Uganda between 1980-2010. The study used the expostfacto research design and descriptive co relational survey design. The researcher also used annual statistical records about inflation rate as measured by consumer price index (CPI) and growth rate. The researcher used purposive sampling strategy in the process of data collection and used record sheets as research instruments in the process of data collection. The data was analyzed using the Statistical Package STATA. Pearson's correlation coefficient (r) was computed to determine the nature of the relationship between the level of inflation and the level of economic growth in terms of growth rate. Regression analysis was also used to determine the strength of the relationship between inflation and economic growth in terms of Gross Domestic Product. The findings of the study were; there is no significant relationship between the level of inflation and the level economic growth in terms of Gross Domestic Product. The coefficient of determination (r2) was 0.11 which meant that inflation only explains 11% of the variation in economic growth. This signifies that, there are other predictor variables that do explain the remaining 89% 0f the variation in economic growth such as investment level, employment level among others. The researcher concludes that, inflation is not the only factor that influences economic growth but there are other factors. The researcher recommends that the government of Uganda should put up structural reforms to minimize inflation since it was found to have a negative impact on long run economic growth, the government of Uganda should allocate more funds to the agriculture sector, provide favorable investment climate and give more favors to the local investors, find ways of increasing foreign exchange inflow and minimize foreign exchange out flow for example through setting up both export promotion industries and import substitution industries respectively.

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CHAPTER ONE

THE PROBLEM AND ITS SCOPE

Background

The growth rate gap between the developed and under developed countries is wide for example, by 1998, the growth rate between the United States and Africa was 7:1, but it is now 20:1 in the past half century. Asian countries have demonstrated a high degree of improvement however world economic growth has slowed substantially since 1973, and the Asian advance has been offset by stagnation elsewhere. World Bank (2010) Annual report.

Uganda however is not doing well at the global level since it was the position of sixty three in 2010 according to word book report 2010. The Ugandan economy recorded weaker growth of 5.1% in 2010 because of falling aggregate demand, mainly in private consumption, and weak external demand for traditional exports, in particular coffee. In spite of the declines, regional demand for Uganda's exports remained high. Export earnings fell from 2.9 billion US dollars (USD) in the financial year 2008/09 to USD 2.8 billion in 2009/10. Although lower than 2008/09 levels (USD 883 million), remittance receipts in 2009/10 (USD 820 million) surpassed traditional foreign exchange earners coffee and tourism. Earnings from coffee and tourism in 2009/10 were USD 262 million and USD 400 million respectively. (World Bank (2010) Annual report).

Growth in 2010 was primarily driven by the telecommunications, financial services and construction sectors, while the services and agriculture, forestry, fishing and hunting sectors, which account for 54.4% and 24.8% of GDP respectively. The rebound in fishing and food production was offset by falling growth for the cash crops of coffee and cotton, leading to stagnation in the agriculture sector. In the recent past the declining GDP share of the agriculture sector has been the result of low productivity, limited value addition and lack of commercialisation. On the demand side, growth was driven by private consumption and investment growth, at rates lower than in 2009. CIA World facts book (2011).

However, Inflation declined from 13.4% in 2009 to 7.3% in 2010 as a consequence of falling food prices resulting from favourable weather conditions which subsequently improved food production. The monetary policy put up over the medium term remains focused on seeking to restrict inflation at the target of 5%. The fiscal policy will remain expansionary in view of the government's sustained public investment in infrastructure, including roads and energy. Tax receipts are expected to recover in tandem with the improving economic prospects and tax administration efficiency gains, although these gains will not be sufficient to cover the shortfall in grants. (New vision 18th July (2011).

The external position weakened as a result of a decline in export earnings from the traditional export crops, in particular coffee. International reserves, currently covering five months of imports, are expected to remain healthy, in part because of the weekly purchase of foreign exchange by the central bank. The social sector also saw marked improvements with a reduction in the poverty rate from 31% in 2005/06 to 23% in 2009/10 although income inequality worsened. Progress was also recorded in education thanks to the universal primary and secondary education programmes. However, stagnation and reversals were reported for the health-related indicators, Weak infrastructure, inadequate financial services to the private sector, and weaknesses in public sector management and administration are the major constraints to growth. CIA World facts book as of July (2011).

One of the most fundamental objectives of macroeconomic policies is to sustain high economic growth together with low inflation Miller(2003). However, this has not yet been achieved in Uganda where the inflation rate seem to be higher at around 16% and the growth rate seem to be low at around 5.3% as well as unstable. (New vision 30th July).

Persistent inflation which is a threat to economic growth is regarded as a Post World War II phenomenon. Before then, bouts of inflation were followed by bouts of deflation. Having showed no upward or downward trend, inflation was said to behave like a 'lazy dog'. It stays at a particular level unless and until there is a disturbance. Other factors that affect economic growth include; high population, high levels of illiteracy, poor technology, lack of enough capital and the like. Highns(1998).

The relationship between inflation and growth remains a controversial one in both theory and empirical findings. Originating in the Latin American context in the 1950s, the issue has generated an enduring debate between structuralists and monetarists. The structuralists believe that inflation is essential for economic growth, Where as the monetarists see inflation as detrimental to economic progress. Wilcox (1998).

Inflation affects the purchasing power of the population and affects the economy of a country in countless ways. With a rising inflation rate, a currency unit will purchase fewer goods, necessitating a rise in salaries and other economic changes. Miller (2001).

Inflation may seem like a constant issue, but different parts of the world have very different inflation rates. Some countries have double-digit rates of inflation, or even higher rates. Other countries have little to no inflation. Still others have negative inflation rates, with prices getting lower instead of higher. The inflation rates of different countries stands as follows; Canada is 2.1 percent, United States 2.9 percent, Mexico 4 percent, Venezuela has the highest inflation rate in the Americas with 18.7 percent, Norway is 0.8 percent, U.K. is 2.3 percent, Australia 2.3 percent. Iran 17 percent, Afghanistan 13 percent, Burma is 35 percent, Japan is 0.1 percent, Zimbabwe has a 12,563 percent rate, Guinea has an inflation rate of 23.4 percent, Burkina -0.2 percent, Niger 0.1 percent. Uganda is among those countries with high inflation rate since its inflation rate is at 16%. World facts book (2011).

The increasing inflation rate is said to be the major cause of the falling economic growth rate due to its negative consequences such as; Inflation imposes negative externalities on the economy when it interferes with an economy's efficiency, Inflation can lead to uncertainty about the future profitability of investment projects (especially when high inflation is also associated with increased price variability). This leads to more conservative investment strategies than would otherwise be the case, ultimately leading to lower levels of investment and economic growth. Miller (2003

One of the main causes of inflation in any economy is the printing of too many banknotes. Inflation may seem like an easy solution to a problem just to print money, but the problem with that is an economy soon ends up with too much money chasing too few goods. There has been persistent increase in the general price levels of goods and services in Uganda and this is said to have impacted on the living standards of the people as well as economic growth in general. (New vision 30th may2010).

Maintaining underlying inflation at less than 5% is a major target/ macro economic policy for the Government of Uganda. This is because, high and volatile inflation discourages private sector investment and destroys assets of the poor which negatively impact economic growth. However, in order to achieve this inflation target, the Government of Uganda decided to under take the following policies;

The Government operates a cash budget to ensure that it does not resort to printing money, which is inflationary, to finance expenditure. This means that in any given year Government plan to only spend resources available to it from domestic revenue and donor inflows net of debt repayments, with no recourse to excessive borrowing from the banking system. Uganda Bureau of Statistics (2010).

In measuring underlying inflation, food crop prices are excluded from the Consumer Price Index. This is done so as to eliminate volatility in food crop prices caused by the effect of weather changes on harvests. Nonetheless, challenges to inflation control, in terms of high level of government liquidity injections arising from donor funding of domestic expenditure still remain. As Government donor-funded expenditures in the economy increase, its injections of liquidity also increase because every dollar channeled by a donor to the Government as budget support leads to the creation of the equivalent amount in shillings by the Central Bank for Government to spend. Uganda Bureau of Statistics (2010).

Bank of Uganda has therefore had to issue treasury bills and to sell foreign exchange to mop up the additional liquidity generated by increased levels of donor funded expenditures to control inflation. However, this has had two effects; higher interest rates on treasury bills and appreciation pressures on the shilling per dollar exchange rate. Uganda Bureau of Statistics (2010).

The significant challenges in monetary/inflation management which was for example seen in financial year 2003/04, pointed the need for further fiscal consolidation via deficit reduction to ease monetary management and produce a favorable environment (low interest rates, competitive exchange rates) for the private sector, over the medium term. Uganda Bureau of Statistics (2010).

Statement of the Problem

One of the most fundamental objectives of macroeconomic policies is to sustain high economic growth together with low inflation both in the so called developed and the developing countries. There is however a big growth rate gap between the developed and under developed countries for example, by 1998, the growth rate between the United States and Africa was 7:1, but it is now 20:1 in the past half century. World facts book (2011).

Uganda is also not doing well at the global level since it was ranked in the position of sixty three in 2010 according to the world book report 2010. However persistent inflation seem to be a barrier towards achieving economic stability for instance it is stated that; inflation imposes negative externalities on the economy when it interferes with an economy's efficiency, Inflation can lead to uncertainty about the future profitability of investment projects, ultimately leading to lower levels of investment and economic growth Miller (2003). Various studies have been done about inflation and economic growth and these include; Johnson etal (1997) who studied whether inflation is a retarding factor to economic growth in low developing countries, Kalra etal (1999) who studied about the impact of inflation on growth of Asian economies, Malik etal (2001), who studied about inflation and economic growth in South America among others. All these studies concentrated in different areas other than Uganda and there for, the study aimed at establishing whether a significant relationship between inflation and economic growth in Uganda exits in terms of gross domestic product (GDP) for a period of thirty years (1980-2010).

Purpose of the Study

The purpose of this study was to establish the relationship between the level of inflation and the level of economic growth in Uganda from 1980 to 2010 in terms Gross Domestic Product.

Research Objectives

General Objective

The general objective of this study was to determine the relationship between the level of inflation and the level of economic growth in Uganda in terms Gross Domestic Product between 1980-2010.

Specific Objectives

The specific objectives of this study were,

1. To determine the level of inflation in Uganda between 1980-2010 as measured by consumer price index (CPI).

2. To determine the level of economic growth in Uganda in terms Gross Domestic Product between 1980-2010.

3. To establish the relationship between the level of inflation as measured by consumer price index (CPI) and the level of economic growth in terms Gross Domestic Product between 1980-2010.

Research Questions

The research questions were,

1. What has been the level of inflation in Uganda between 1980-2010 as measured by consumer price index (CPI)?
2. What has been the level is economic growth in Uganda in terms Gross Domestic Product between 1980-2010?
3. Is there a significant relationship between the level of inflation as measured by consumer price index (CPI) and the level economic growth in Uganda in terms Gross Domestic Product between 1980-2010?

Hypothesis

There is no significant relationship between the level of inflation measured by consumer price index (CPI) and the level economic growth in Uganda in terms Gross Domestic Product.

Scope of the Study

Geographical Scope

The study was conducted in Uganda. Uganda is a landlocked country found in East Africa, it is also known as the "Pearl of Africa" and is bordered by Tanzania on the south, by Kenya on the east, Sudan on the north, Democratic Republic of the Congo on the west and Rwanda the on the southwest. The southern part of the country includes a substantial portion of Lake Victoria, which is also bordered by Kenya and Tanzania however, despite this factor, Uganda is a landlocked country. The needed secondary data was collected from the ministry of finance, Bank of Uganda, Uganda Bureau of Statistics (UBOS) and internet websites.

Content Scope

The study examined the level of inflation between 1980-2010, the level of economic growth in terms of gross domestic product between 1980-2010 and the relationship between the level of inflation and the level of economic growth in Uganda in terms of Gross Domestic Product between 1980-2010.

Time Scope

The study based on the data covering the period between 1980-2010. It was conducted for a period of nine months, starting from January

2011 to September 2011. In January, the researcher concentrated on proposal writing, February viva defense, March proposal corrections, April piloting, May and June data collection, July data editing and entry, august data analysis, September report writing, thesis defense, making corrections and submission of the final thesis.

Theoretical Scope

Neo-classical theory (Tobin's frame work) was proved in this study. According to **Tobin**, (1965) a higher inflation rate permanently raises the level of output. Quite simply, Tobin suggests that inflation causes individuals to substitute their money for interest earning assets which leads to greater capital intensity and promotes economic growth. Thus Tobin suggests that there is a positive relationship between inflation and economic growth.

Tobin's frame work was chosen because Tobin (1965), disagrees with the findings of most researchers who found a negative relationship between inflation and economic growth such as Kormend (1995), stockman (1981), Phillips (1998), Bernanke (1997) among others.

Significance of the Study

Since the study presented the trend of inflation rates and growth trends in Uganda for a period of thirty years in quantitative terms, the findings of the study will benefit the government of Uganda through its departments such as the ministry of finance, ministry of economic planning and development, development planners, policy makers and implementers, watch dog institutions such as Uganda Bureau of Statistics, development economists and researchers among others.

The government will base on the findings of the study so as to make necessary adjustments to foster economic development, Policy makers will base on the findings of the study to make developmental decisions for the betterment of the country, and future researchers will utilize the findings of the study to embark on the related study as well as to find the gaps hence the study will be a basis for solving different problems that are retarding Uganda's economic growth. As a result, the study may be a platform to foster economic growth in Uganda.

Operational Definitions of Key Terms

Inflation

Means a continuous increase in the average level of prices of all goods and services in an economy that leads to a decrease in the value of money.

Inflation rate

Is the percentage rate of change of a price index over time which is usually a year.

Price index

Price index is the cost of today's market basket of goods expressed as a percentage of the cost of the same market basket during the year when prices were stable.

Base year

Is that year in which prices were stable and chosen as the point of reference for comparison of prices in other years.

Consumer Price Index

This measures prices of a selection of goods and services purchased by a "typical consumer".

Economic growth

Refers to increases in per capita real GDP measured by its rate of change per year.

Growth Domestic Product (GDP),

Is the monetary value of the currently produced goods and services sold on the market during a particular time interval usually a year.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Concepts, Opinions, Ideas from Authors/ Experts

Inflation

Inflation refers to a sustained increase in the average level of prices of all goods and services. Miller(2003).

One of the main causes of inflation in any economy is the printing of too many banknotes. It may seem like an easy solution to a problem just to print money, but the problem with that is an economy soon ends up with too much money chasing too few goods. Schiller (2003).

Common measures of inflation include; Consumer price indices (CPIs) which measures the price of a selection of goods purchased by a "typical consumer, Cost-of-living indices (COLI) which often adjust fixed incomes and contractual incomes based on measures of goods and services price changes, GDP deflator which measures price increases in all assets rather than some particular subset. However, in this study, the researcher will use Consumer price index to measure inflation. Price index is the cost of today's market basket of goods expressed as a percentage of the cost of the same market basket during the base year. Miller (2003)

Mainstream economics further stress that Inflation, as the old saying goes, is caused by too much money "chasing" too few goods. Just as more money means higher prices, fewer goods also mean higher prices. The connection between the level of production and the level of prices also holds for the rate of change of production (that is, the rate of economic growth) and the rate of change of prices (that is, the inflation rate. Barro (1997).'

Inflation rate

Is the percentage rate of change of a price index over time which is usually a year. Miller (2004).

Inflation rate measures how quickly prices are rising. Mankiw (1997)

Price index

Is the cost of today's market basket of goods expressed as a percentage of the cost of the same market basket during the base year. Miller (2001). It measures the average price of a given class of goods and services relative to the price of the same goods and services in the base year. Bernanke (2001).

Consumer Price Index

This measures prices of a selection of goods and services purchased by a "typical consumer". Schiller (2003).

Consumer price index for any period measures the cost of the same basket of goods and services in a particular period relative to the cost of the same basket of goods and services in a fixed year called the base year. Bernanke (2001).

Economic growth

Economic growth refers to increases in per capita real GDP measured by its rate of change per year. Miller (2001).

It occurs when there is increases in per capita real GDP and it is measured by the rate of change in percapita real GDP per year. It is primarily driven by improvements in productivity, which involves producing more goods and services with the same inputs of labour, capital, energy and materials. Miller (2003).

Economic growth usually measured in terms of gross domestic product (GDP) or related indicators, such as gross national product (GNP) which are derived from the GDP calculation. GDP is calculated from a country's national accounts which report annual data on incomes, expenditure and investment for each sector of the economy. Using these data it is possible to estimate the total income earned in the country in any given year (GDP). Wilcox (1997).

To measure economic growth, economists use data on gross domestic product which measures the total income of every one in the economy. Mankiw (1997).

Economic growth rate

Is a measure of economic growth from one period to another in percentage terms and does not adjust for inflationthus, it is expressed in nominal terms. Miller (2003).

The economic growth rate provides insight into the general direction and magnitude of growth for the overall economy. The economic growth rate provides insight into the general direction and magnitude of growth for the overall economy. Uganda however is not doing well at the global level since it was the position of sixty three in 2010 according to word book report 2010. In practice, it is a measure of the rate of change that a nation's gross domestic product goes through from one year to another. Miller (2001).

Growth Domestic Product (GDP)

It is the value of the currently produced goods and services sold on the market during a particular time interval usually a year. Miller (2004)

GDP is calculated from a country's national accounts which report annual data on incomes, expenditure and investment for each sector of the economy. Using these data it is possible to estimate the total income earned in the country in any given year (GDP). Wilcox (1997).

Theoretical Perspectives

The study was based on the Neo-classical Theory specifically **(Tobin's frame work 1965).** This is because; this theory connected the research dependent variable (economic growth) and independent variable (inflation).

According to Tobin (1965), a higher inflation rate permanently raises the level of output. The impact of inflation can be classed as having a "lazy dog effect" where it induces greater capital accumulation and higher growth, only until the return to capital falls. Thereafter higher investment will cease and only steady state growth will result. Indeed, a growth in the neoclassical economy is ultimately driven by changes in the inflation rate. Quite simply, the Tobin effect suggests that; inflation causes individuals to substitute their money into interest earning assets, which leads to greater capital intensity and promotes economic growth. Therefore, in terms of effect, inflation exhibits a positive relationship to economic growth.

Tobin's frame work was chosen because Tobin (1965), disagrees with the findings of most researchers who found a negative relationship between inflation and economic growth such as Barron(2006),Mandrel(1991),Kormend(1995),stockman(1981),Phillips (1998),Bernanke(1997) among others.

Related Studies

A study done by Haret (1991) in Namibia, proved that, an increase in the inflation rate does not affect the level of output nor economic growth, thus Haret based on the fact that firms put up some cash in financing their investment projects but since inflation erodes the purchasing power of money balances, people reduce their purchases of both cash goods and capital goods when the inflation rate rises and as a result the level of output falls in response to an increase in the inflation rate. Haret there fore found a negative relationship between the level of output and the inflation rate. Miller (2003).

Another study done by' Mandrel (1999) in Malaysia indicates that, an increase in inflation or inflation expectations immediately reduces people's wealth. This works on the premise that the rate of return on individual's real money balances falls. To accumulate the desired wealth, people save more by switching to assets, increasing their price, thus driving down the real interest rate. Greater savings means greater capital accumulation and thus faster output growth. Todaro (2000).

Barron (2006) found that, the level of output permanently falls as the inflation rate increases. This was after the recent cross-country studies which found inflation affecting economic growth negatively he was supported by Fischer (1993) who found a very small negative impact of inflation on growth. However, Fischer stated that inflation is not good for longer-term growth". Saunders etal (2001).

Kormendi (1995) also analyzed inflation-growth relationship and helped to shift the conventional empirical wisdom about the effects of inflation on economic growth from a positive one as some interpret the Tobin (1965) effect, to a negative one, as Stockman's (1981) cash-in-advance economy with capital, has been interpreted. They found a significant negative effect of inflation on growth. Todaro (2000).

Phillips (1998) and Hernando (1997) found a significant negative effect of inflation on economic growth. They also found that there exists a nonlinear relationship. Their main policy message stated that reducing inflation by 1 percent could raise output by between 0.5 and 2.5 percent. Saunders etal (2001).

Bernanke (1997) all other things being equal, an increase in economic growth must cause inflation to drop, and a reduction in growth must cause inflation to rise. In his congressional testimony, Federal Reserve chairman Ben Bernanke thankfully did not state that the higher economic growth he expects will lead to higher inflation. Although he didn't connect growth and inflation at all, Mr. Bernanke has long understood that higher growth leads to lower inflation. Saunders and Cornett (2001).

Stockman (1981) developed a model in which an increase in the inflation rate results in a lower steady state level of output and people's welfare declines. In Stockman's model, money is a compliment to capital, accounting for a negative relationship between the steady-state level of output and the inflation rate. Stockman's insight is prompted by the fact that firms put up some cash in financing their investment projects. Miller (2003).

The structuralists believe that inflation is essential for economic growth, Where as the monetarists see inflation as detrimental to economic progress. Friedman (1973: 41) summarized the inconclusive nature of the relationship between inflation and economic growth as follows: "historically, all possible combinations have occurred: inflation with and without development, no inflation with and without development". A more recent work by Paul, Kearney (1997) involving 70 countries (of which 48 are developing economies) for the period 1960-1989 was after finding out whether there is causal relationship between inflation and economic development and the study found no causal relationship between inflation and economic development. Miller (2001).

Milton Friedman linked inflation and economic growth by simply equating the total amount of spending in the economy to the total amount of money in existence. Friedman proposed that inflation was the product of an increase in the supply or velocity of money at a rate greater than the rate of growth in the economy. Friedman in his argument was based on the premise of an economy where the cost of everything doubles. Individuals have to pay twice as much for goods and services, but they don't mind, because their wages are also twice as large. Individuals anticipate the rate of future inflation and incorporate its effects into their behavior. As such, employment and output is not affected. In summary, Friedman suggests that in the long-run, prices are mainly affected by the growth rate in money, while having no real effect on growth. Saunders etal (2001).

CHAPTER THREE

METHODOLOGY

Research Design

The study used the following research designs; expostfacto design and descriptive co relational survey design. Expostfacto design was used because the study was based on the facts that exist about inflation rates and economic growth trends in Uganda since 1980 up to 2010. Descriptive co relational survey design was used to enable the researcher systematically describes the relationship between inflation and economic growth. Descriptive method is used when the researcher is concerned with describing the who, how, when and where of the situation at a given time but does not go into finding what caused it. Thus, the design aims at providing a systematic description that is as factual and as accurate as possible. Amin (2005).

Research population

The researcher used annual records or reports that were got from various ministries such the ministry of finance, the ministry of economic planning and policy, bank of Uganda and the Uganda Bureau of Statistics (UBOS).

Sample Size

The researcher used annual records or reports a bout annual inflation rate as measured by consumer price index (GPI) and economic growth (growth rate) for a period of thirty years that is from 1980-2010.

Sampling Strategies

The researcher used purposive sampling strategy in the process of data collection. Purposive sampling allows the researcher to use cases that have the required information with respect to the objectives of the study. There fore, cases of the subjects are just picked because they posses the required characteristics. Mugenda and Mugenda (2003).

Research Instrument

The researcher used record sheets as research instruments in the process of data collection. These record sheets were structured by the researcher. The researcher presented these record sheets to respondents from the ministry of finance, Bank of Uganda, and the Uganda Bureau of Statistics (UBOS) who will then provide the required secondary data to the researcher to enable the researcher meet the objectives of the study.

Data Gathering Procedures.

Before the administration of the research instrument (record sheets).

1. An introduction letter was obtained from the school of post graduate studies and research to help the researcher solicit approval to conduct the study from the respective authorities.

2. When accepted, the researcher provided a copy of the record sheet to the respective respondents.

3. The respondents were explained about the study and were requested to sign the informed consent form

4. T he researcher then selected assistants who helped her in the process of data collection, they were briefed and oriented in order to be consistent in administering the record sheets.

During the administration of the research instrument (record sheets).

1- The respondents were requested to provide the required information in written.

2- The researcher made sure that she got back the information with in five days from the date of distribution of the record sheets.

3- On retrieval, the researcher cross checked to find out whether the information given was in line with the research objectives.

4-

After the administration of the research instrument (record sheets)

The data at hand was entered into the computer and statistically analyzed using the Statistical Package of STATA.

Data Analysis

Annual time series data from secondary sources was collected in form of statistics and analyzed using STATA. The researcher used percentage descriptions to present the data about the level of inflation as measured by consumer price index (CPI) and the level of economic growth in terms of Gross Domestic Product.

Regression analysis was used to determine the relationship between inflation and economic growth in terms of Gross Domestic Product. The data was regressed using a simple linear regression model below;

$$Y = B_0 + B_1X_1 + U_i$$

Where, Y is the dependent variable and X is the independent variable, B_0 and B_1 are the regression parameters also known as un known constants. B_0 is the Y-intercept and B_1 is the slope co efficient that explains how the independent variable influences the dependent variable and U_i is the random error term that captures other variable that may have an influence on the dependent variable.

Pearson's correlation coefficient (r) was computed to determine the nature of the relationship between inflation and economic growth in terms of Gross Domestic Product.

Ethical Considerations

To ensure confidentiality of the information provided by the respondents and generally to ascertain the practice of ethics in the study, the researcher did the following;

1. Seek permission to conduct research from the selected ministries through presenting the transmittal letters to the respective respondents while ensuring them confidentiality.
2. Requested the respondents to sign in the informed consent form.
3. Acknowledged the authors quoted in the study through citations and referencing.
4. Presented findings in the generalized manner.

Limitations of the Study

The following were the anticipated threats to the validity of the findings in the proposed study.

1. Since the study time scope is wide, the required data was scattered and there fore the researcher had to rely on different sources and make compulsions.

2. The study was based on secondary data which data has got its own short comings such as; problems of retrieval, access, display of the author subjectivity, Problems of estimation all of which may lead to wrong conclusions of the study. However, the researcher tried to minimize all these through relying on different publications and sources.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

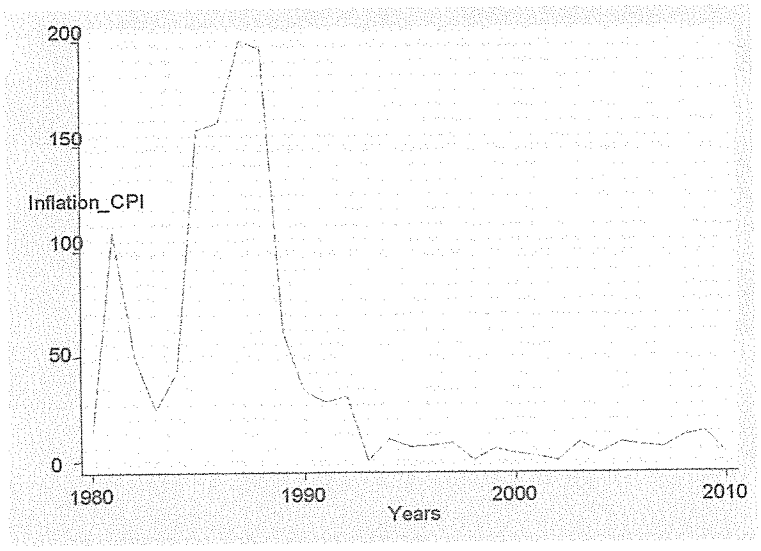
This chapter presents analysis and interpretation of the data in line with the research objectives. There fore it will present data about the level of inflation in Uganda as measured by consumer price index (CPI) between 1980-2010, the level of economic growth in Uganda from 1980-2010 and data about the relationship between the level of inflation in Uganda and the level of economic growth from 1980 to 2010.

4.1 The level of inflation in Uganda as measured by consumer price index (CPI) between 1980-2010.

Uganda has experienced higher inflation levels in 1980's for example, in 1987 Uganda experienced the highest inflation rate of 200% however, starting from early 1990's, inflation rate started declining drastically up to 0.2 in 1993, in 1994, there was a drastic rise to 10%, in 1995 it happened to fall to 6.6%. In late 90's it continued to fall for instance, in 2000 inflation rate was 3.4% and by 2002 it lowered to 0.3%. From 2003 on words, inflation rose again to 13.4% in 2009 and in 2010, it lowered to 3.1%. However, considering the three decades, inflation was highest in the first decade and lowest in the last decade and this can clearly be shown by the line graph below.

The rise in inflation between 2008 and 2009 was due to the significant increase in commodity prices, international food prices which was due to increased costs of production, and to a lesser extent depreciation of local currencies.

The line graph showing the trend of Uganda's annual inflation as measured by consumer price index (CPI) from 1980-2010



Inflation was regressed with time and the trend results were as below;

Y= 7335.5 + -3.6573X

This implies that, on average inflation has been falling by 3.7 annually.

4.2 The level of economic growth in Uganda from 1980-2010.

Looking at the three decades, Uganda attained the highest growth rate in the first decade particularly in 1981 when growth rate was at 7.5% and on contrary, the lowest growth rate was also experienced in the same decade that was in 1984 where the growth rate was -7.9%. This weaker growth recorded by the was basically because of falling aggregate demand, mainly in private consumption, and weak external demand for traditional exports, in particular coffee. However on average, the general growth rate was poor in the first decade compared with growth rate in the second and third decades as can be clearly shown by the data in the appendices and the graph below.

In 1981, the high growth rate was largely due to higher agricultural output brought about by timely and adequate rains that prolonged the food crop planting season. The weaker growth rate that was recorded between 1989-1991 was because of declining aggregate demand, mainly in private consumption, and weak external demand for traditional exports, in particular coffee.

Between 1992-1993, the economy grew because of the continued investment in the rehabilitation of infrastructures, improved incentives for production and exports. In 2000, there was a decline in growth rate and this was because Uganda was heavily indebted.
In 2003 the economy registered a fall in growth rate of -2.5% which was accounted to the decline in cash crop output, mining and quarrying, general government services and health services and this driven by better performance of the agriculture sector. The growth in the agricultural sector is attributed to the recovery in food crop output. On the contrary, non-monetary GDP has expanded faster than the previous year on account of higher non-monetary food crop output.

In 2004, the increase in growth rate was as result of high technology in production of both exports and imports, increasing number of firms that export and diversification in agriculture with in and out of agriculture (World Bank 2007).

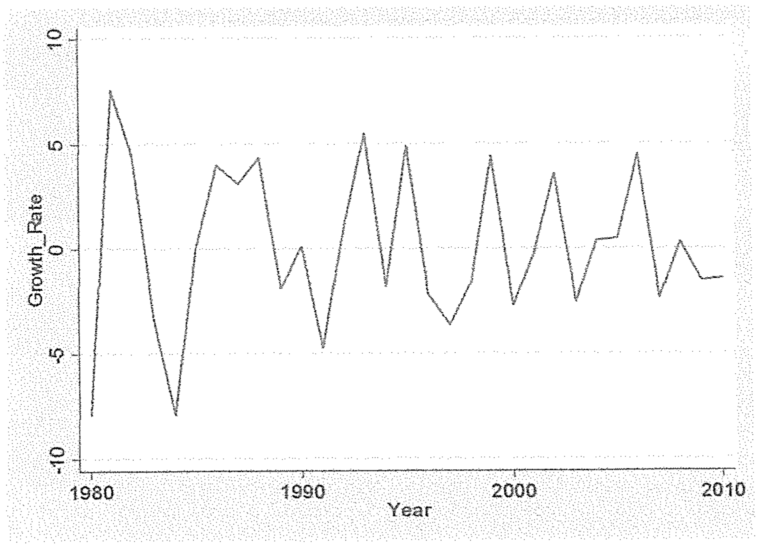
By 2006 growth rate rose to 4.5% and this was because the Ugandan government had successfully paid all their debts to Paris club and there fore it increased on its investment.

The weaker growth recorded in 2007 was basically because of falling aggregate demand, mainly in private consumption, and weak external demand for traditional exports, in particular coffee which is the Uganda's principle export.

In 2008 and2009, the reduction in growth rate was due to the fall in exports. Export earnings fell from 2.9 billion US dollars (USD) in the financial year 2008/09 to USD 2.8 billion in 2009/10.

The Ugandan economy recorded weaker growth rate of -1.4% in 2010 because of falling aggregate demand, mainly in private consumption, and weak external demand for traditional exports, in particular coffee. Export earnings fell from 2.9 billion US dollars (USD) in the financial year 2008/09 to USD 2.8 billion in 2009/10 (World Bank 2007).

The line graph showing the trend of annual growth rate in Uganda from 1980-2010.



When growth rate was regressed with time, the trend results were as below;

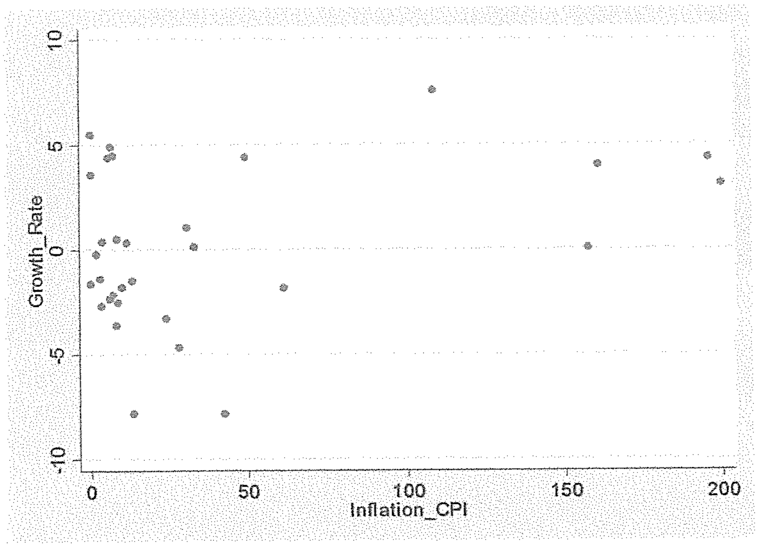
$$Y= 6.2681 + 0.0031X$$

This implies that, on average growth rate has been slightly increasing by 0.0031 per year.

4.3: The relationship between Uganda's inflation rate and growth rate from 1980-2010.

There is a positive relationship between Uganda's annual growth rate and annual inflation rate as measured by consumer price index from 1980 to 2010. This can be clearly shown by the scatter diagram, correlation and regression results below.

4.3.3 The scatter diagram showing the relationship between Uganda's annual inflation rate and growth rate from 1980-2010.



The scatter diagram indicates a weak positive relationship between inflation and growth rate. This is in line with the theory on which the study was based, that is Tobin's frame work (1965) that stated that, "there is a positive relationship between inflation and economic growth".

Table 4.3.1: Correlation results for growth rate and inflation rate.

correlated variables	R-Value	P-Value	interpretation
Growth rate and Inflation rate	0.333	0.067	There is a week positive correlation between the Growth rate and Inflation rate

Basing on the correlation results above, the correlation coefficient (r) is a positive value which is 0.33 which shows that, there is a week positive correlation between the Growth rate and Inflation rate and this is in agreement with the study theory. However, since the correlation coefficient (r) is weak, that means that, inflation is not the only factor that influences economic growth in Uganda but there are other variables which are represented by the random error term.

Table4.3.2: Regression results for growth rate and inflation rate at 95% confidence interval.

Variables regressed	F-value	t-value	P-Value	R^2	interpretation	Decision on H_o
Growth rate and Inflation rate	3.62	1.90	0.067	0.11	There is no significant relationship between inflation and economic growth.	We accept the H_o

The critical f-value is 4.18, and the critical t-value is 2.05

$H_{O:}$ states that, "there is no significant relationship between inflation and economic growth".

From the table results above;

F (1 29) is **3.62** < **4.18** (the critical f- value) thus H_O is accepted.

t - Value was **1.90** < **2.05** (the critical) and therefore the H_O is accepted. P-Value was **0.067** > **0.05** there fore it is not significant. Thus the null hypothesis/$H_{O:}$ which states that, "there is no significant relationship between inflation and economic growth" is accepted.

R^2 was 0.11 which means that inflation explains 11% of the variation in growth rate.

The study based on the model below;

$$Y = B_0 + B_1X_1 + u_i$$

Where, Y is the dependent variable (economic growth) and X is the independent variable (inflation), B_0 and B_1 are the regression parameters also known as unknown constants. B_0 is the Y-intercept and B_1 is the slope co efficient that explains how the independent variable influences the dependent variable and u_i is the random error term that captures other variable that may have an influence on the dependent variable.

After data analysis the model specification was as follows;

Growth rate =**-0.7614** + **0.0213**(inflation)

This means that, a unit change in inflation influences growth rate by 0.02 but when inflation in zero, growth rate will change by -0.76. There fore, since the coefficient B_1 is positive, this indicates that there is a positive relationship between inflation and economic growth.

This means that the findings of the study are in line with Tobin's frame work (1965) on which the study is based. Tobin suggests that inflation causes individuals to substitute their money for interest earning assets which leads to greater capital intensity and promotes economic growth.

On the other hand, the findings of the study disagree with the findings of other researchers such as; Haret (1991) who found a negative relationship between the level of output and the inflation rate, Mandrel (1999) who stated that, an increase in inflation or inflation expectations immediately reduces people's wealth thus lowering economic growth, Kormendi (1995), Stockman's (1981) who found a negative effect of inflation on growth among others.

CHAPTER FIVE

FINDINGS, CONCLUSIONS, RECOMMENDATIONS

5.0 Introduction

This chapter presents a summary of the entire study specifically the findings of the study in line with the research objectives, conclusions, policy recommendations as well as areas for further research.

5.1 FINDINGS

It was found out that, inflation rate was high in 1980's and in 1990's but it has been falling such that by 2000 on wards it was lower compared to the past. For example, in 2000 inflation rate was 3.4% and in 2010, it lowered to 3.1%. This means that inflation has been falling since 1980 TO 2010.

Concerning the level of economic growth, the growth rate was low in the past (in 1980's) but it has been steadily improving from 1990's to 2010.

The study also found out that, there is a positive relationship between the level of inflation and the level of economic growth. For example the correlation coefficient r was 0.3 and R^2 was 0.11 which meant that inflation explains 11% of the variation in economic growth. This implies that there are other predictors of economic growth which explain the remaining percentage of 89% and according to the model specification of the study these variables are represented by the error term.

5.2 CONCLUSIONS

The general objective of the study was to determine the relationship between the level of inflation and the level of economic growth in Uganda in terms of growth domestic product between 1980-2010. From the findings of the study, the researcher concludes that, there is a week positive relationship between Uganda's annual growth rate and annual inflation rate as measured by consumer price index from 1980 to 2010. For instance the correlation coefficient r was found to be 0.33 and this signifies a week positive relationship between Uganda's annual growth rate and annual inflation rate. There fore, the null hypothesis which states that," there is no significant relationship between the level of inflation as measured by consumer price index (CPI) and the level economic growth in Uganda in terms Gross Domestic Product" is accepted.

Also the findings show that, inflation can explain 11% of the variation in Uganda's growth rate. This signifies the view that inflation explains a small percentage of the variation in economic growth, and there fore, the researcher concludes that, there are other predictor variables of economic growth apart from inflation which explain the remaining percentage of 89% and according to the model specification of the study, these variables are represented by the error term.

It is also concluded that, the theory on which the study was based has been proved. That is to say, the study found out that inflation and economic growth are positively related as Tobin (1965) states.

5.3 RECOMMENDATIONS

The researcher recommends that the government of Uganda should adopt liberalization policy in line with the necessary macro economic structural reforms such as raising Bank rates, selling government securities to the public in order to control inflation. This is because it was found out that inflation can be harmful to long run growth. Fisher (1993).

The government of Uganda should also try as much as possible to improve investment climate since it was found out that increased investment is a key determinant towards economic growth as was supported scholars like Tobin (1965).

The researcher also recommends that the government of Uganda should find ways of increasing foreign exchange inflow for instance through increasing on export so as to foster economic growth. More so, the government should also try as much as possible to minimize foreign exchange outflow as well as minimizing profit repatriation which is a common practice done by foreign investors. For this reason there for, the government of Uganda should favor local investors and invest more in export promotion industries as well as import substitution industries.

The government of Uganda should also try to avoid external debts since this in one way or the other this also limits economic growth as the case was in 2000 where Uganda was among those poor countries which were heavily indebted and this account for a low rate of growth that was realized that year.

The researcher also recommends that the government of Uganda through the ministry of agriculture should allocate a big share of the budget (more funds) into the agriculture sector since it was found out that during periods when there was high agriculture out put, there was high level of economic growth.

5.3.2: Areas for further research

A study should be conducted concerning other determinants of economic growth such as the level of investment, level of expenditure among others.

A study should be conducted to investigate the causal relationship between inflation and economic growth.

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APPENDIX 1

TRANSMITTAL LETTER

KAMPALA INTERNATIONAL UNIVERSITY

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P.O. Box 20000, Kampala, Uganda
Tel: +256- 41- 266813 / +256- 41-267634
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E- mail: admin@kiu.ac.ug,
Website: www.kiu.ac.ug

OFFICE OF THE COORDINATOR ECONOMICS
SCHOOL OF POSTGRADUATE STUDIES AND RESEARCH (SPGSR)

August10, 2011

Dear Sir/Madam,

RE: REQUEST FOR NAKIBUULE SAUDA MAE/43099/92/DU TO CONDUCT RESEARCH IN YOUR ORGANIZATION

The above mentioned is a bonafide student of Kampala International University pursuing a Master of Arts in Economics.

She is currently conducting a field research of which the title is **"Inflation and Economic Growth.**

Your organization has been identified as a valuable source of information pertaining to her research project. The purpose of this letter is to request you to avail her with the pertinent information she may need.

Any information shared with her from your organization shall be treated with utmost confidentiality.

Any assistance rendered to her will be highly appreciated.

Yours truly,

Mr. Kibuuka Muhammad
Coordinator Economics, (SPGSR)

"Exploring the Heights"

APPENDIX II

CLEARANCE FROM ETHICS COMMITTEE

Date_______________

Candidate's Data

Name: **NAKIBUULE SAUDA**

Reg NO: **MAE/43099/92/DU**

Course: Master of Arts in Economics.

Title of the study: **"Inflation and Economic Growth in Uganda"**

Ethical Review Checklist

The study reviewed considered the following:

___ Physical Safety of Human Subjects

___ Psychological Safety

___ Emotional Security

___ Privacy

___ Written Request for Author of Standardized Instrument

___ Coding of Questionnaires/Anonymity/Confidentiality

___ Permission to Conduct the Study

___ Informed Consent

___ Citations/Authors Recognized

Results of Ethical Review

___ Approved

___ Conditional (to provide the Ethics Committee with corrections)

___ Disapproved/ Resubmit Proposal

Ethics Committee (Name and Signature)

Chairperson ______________________________

Members ________________________________

APPENDIX 1I1

TRANSMITTAL LETTER FOR THE RESPONDENTS

____

Dear Sir/ Madam,

Greetings!

I am a master student perusing Master of Arts in Economics, a candidate of Kampala International University. Part of the requirements for the award is a dissertation. My study is entitled, **"Inflation and Economic Growth in Uganda between 1980-2010"**. Within this context, may I request you to participate in this study by kindly helping to fill this record sheet with the information required. Any data you will provide shall be for academic purposes only and no information of such kind shall be disclosed to others.

May I retrieve the record sheet within five to seven days ?

Thank you very much in advance.

Yours faithfully,

....

Ms. Nakibuule

APPENDIX IV

RESERCH INSTRUMENT (RECORD SHHEET)

Table 1: The table showing Uganda's annual inflation rate as measured by consumer price index (CPI) and annual growth rate from 1980- 2010

Years	inflation rate as measured by consumer price index(CPI)	Annual Growth rate
1980		
1981		
1982		
1983		
1984		
1985		
1986		
1987		
1988		
1989		
1990		
1991		

1992		
1993		
1994		
1995		
1996		
1997		
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2000		
2001		
2002		
2003		
2004		
2005		
2006		
2007		
2008		
2009		
2010		

APPENDIX V

PROPOSED DATA PRESENTATION TROUGH TABLES

Table 3: Correlation Results

correlated variables	R-Value	p-value	interpretation
Growth rate Inflation rate			

Table 4: Regression Results

Variables correlated	Computed F-value	t-value	p-value	R^2	Interpretation of correlation	Decision on H_0
Inflation						
GDP						

APPENDIX VI

PROPOSED BUDGET

Particular	Quantity	Amount
Stationary	4 Reams of papers Ink 1 Cartridge Binding materials 10	40,000/= 35,000/= 250,000/=
Research Assistants	3 @ 100,000	300,000/=
Transport costs		500,000/=
Data Analysis		400,000/=
Up keep		300,000/=
Miscellaneous		300,000/=
	Total	**2,125,000/=**

APPENDIX VII

TIME FRAME

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Proposal writing	XX								
Viva defense		XX							
Proposal corrections			XX						
Piloting				XX					
Data collection					XX	XX			
Data editing and entry							XX		
Data analysis								XX	
Report writing									XX
Thesis defense									XX
corrections and Submissions									XX

RESEARCHER'S CURRICULUM VITAE

BIO DATA

Sir name:	Nakibuule
Other name:	Sauda
Gender:	female
Date of birth :	20th/04/1986
Nationality:	Ugandan
Home District:	Mukono
Contact:	o752196485
Email :	nakibuule2010@yahoo.com

EDUCATION BACK GROUND:

YEAR	INSTITUTION	QUALIFICATION	AWARD
2006-2009	Kampala International University	BAE - Education	Bachelor's Degree of Arts in Education (BAE). -Economics -History
2004-2005	Nakifuma High School	Uganda Advanced Certificate of Education	U.A.C.E. Certificate
2000-2003	Nakifuma High School	Uganda Certificate of Education	U.C.E. Certificate

1993-1999	St. Mulumba Primary school	Primary Leaving Examination	P.L.E. Certificate

LANGUAGES KNOWN

Language	spoken	written
ENGLISH	Excellent	Excellent
LUGANDA.	Excellent	Excellent
ARABIC	Good	Excellent

Personal objectives:

- To work actively with other people regarded at sex, religion and nationality.
- To work with any organization /company so as to deliver services to my country.
- To remain good and hard working to my bosses work mates under all circumstances.
- To provide a good customer care service to my bosses

Career Objectives

Acquire more education to add on my academic qualifications and contribute to your company's mission and vision through working hard.

HOBIES:

- Reading academic related literature.
- Surfing the internet.
- Discover new things concerning academics.

Working Experience

Period	Place of work	Specific work
2007-2009	Mandela college school	Economics teacher.
2010 to date	Kampala International University	Teaching Assistant

Additional skills

- Flexible and ready to adopt new changes.
- Good communication skills.
- Able to maintain good working relationship.
- Eager to learn and explore new ideas.
- Computer skills specifically; typing and printing, Data analysis using SPSS and STATA Packages.

REFEREES

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Mr. Tindyebwa Wilberforce, Associate dean school of economics and applied statistics KIU.

Contact: 0772383465

Mr. Ssempebwa Godwin, Head of department of statistics Kampala International University.

Contact: 0772444628

Appendix V111 (Raw Data)

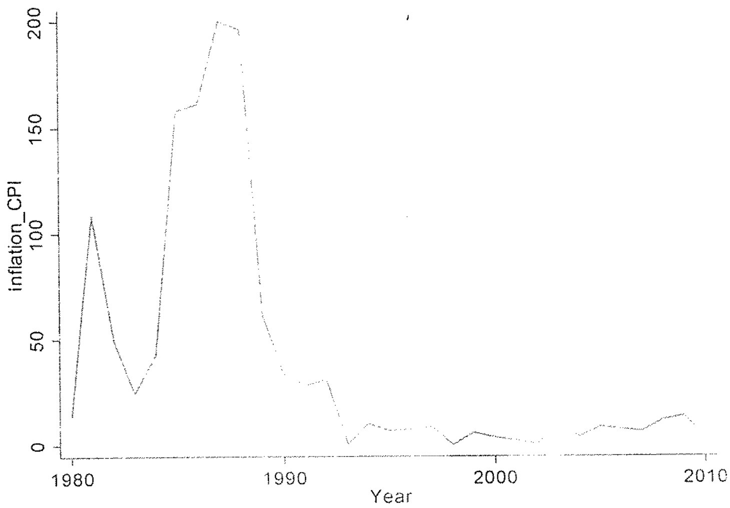
Table The table showing Uganda's annual growth rate and annual inflation rate as measured by consumer price index (CPI) from 1980- 2010 in %.

YEARS	Annual growth rate	Annual Inflation rate
1980	-7.872	13.58.
1981	7.521	108.7
1982	4.346	49.3
1983	-3.306	24.1
1984	-7.899	42.7
1985	0	157.7
1986	3.946	161
1987	3.054	200
1988	4.294	196.1
1989	-1.891	61.4
1990	0.094	33.1
1991	-4.719	28.1
1992	1.002	30.8
1993	5.462	0.2
1994	-1.815	10
1995	4.866	6.6
1996	-2.191	7.2
1997	-3.63	8.2
1998	-1.664	0.1
1999	4.351	5.8
2000	-2.722	3.4
2001	-0.253	1.9
2002	3.549	0.3
2003	-2.549	8.7
2004	0.334	3.7
2005	0.474	8.4
2006	4.452	7.3
2007	-2.373	6.1
2008	0.297	11.6
2009	-1.528	13.4
2010	-1.412	3.1

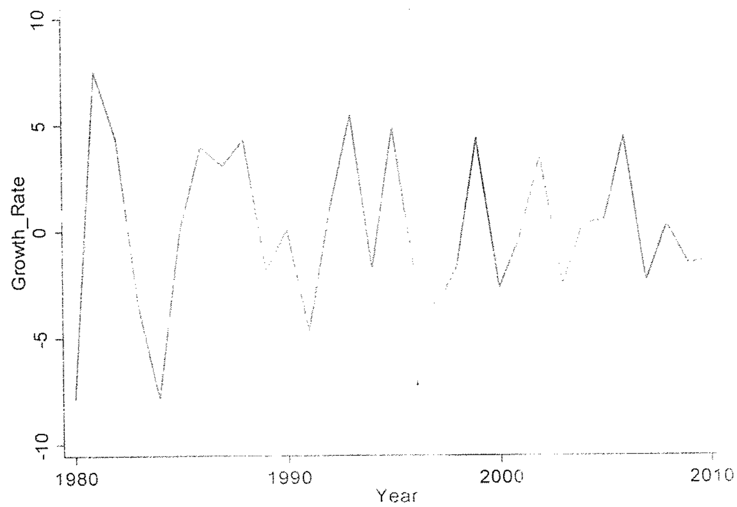
Sources: *Internet abstracts from; World Bank, Uganda Bureau of Statistics (UBOS), IMF, CIA World Facts Book and Bank of Uganda.*

ANALYZED DATA BEFORE IT WAS SUMMARIZED.

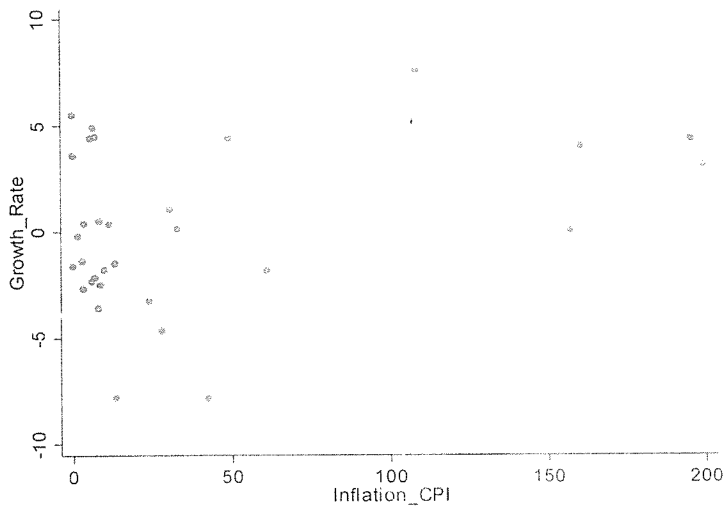
The trend of inflation in Uganda from 1980-2010



The trend of growth rate in Uganda from 1980-2010



The scater diagram showing the relationship between inflation rate and The trend of growth rate in Uganda from 1980-2010



. corr Growth_Rate Inflation_CPI

(obs=31)

| Growth~e Inflat~l

-------------+------------------

Growth_Rate | 1.0000

Inflation_~l | 0.3330 1.0000

. reg Growth_Rate Inflation_CPI

Source | SS df MS Number of obs = 31

-------------+------------------------------ F(1, 29) = 3.62

Model | 48.1287052 1 48.1287052 Prob > F = 0.0672

Residual | 385.905535 29 13.3070874 R-squared = 0.1109

-------------+------------------------------ Adj R-squared = 0.0802

Total | 434.034241 30 14.467808 Root MSE = 3.6479

Growth_Rate	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
Inflation_~l	.0212943	.0111971	1.90	0.067	-.0016062	.0441949
_cons	-.7613903	.7880899	-0.97	0.342	-2.373215	.8504346
