SELECTED DETERMINANTS OF ECONOMIC GROWTH:

A CASE OF KENYA

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A research project submitted to the Department of Economics in the School of Business and Economics partial fulfilment of the requirements for the award of degree of Bachelor of Arts, Economics of Maasai Mara University.

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DECLARATION

This research project is my original work and has not been presented for a degree or any other award in any other university.

Denise Kibiwot Silakwa.

BAEC/058/2012.

Signature…….. Date……

This research project has been submitted for examination purpose with my approval as University Supervisor.

Signature…… Date……

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DEDICATION

To my family, friends and lecturers: the parties that contributed to my academic development. May God bless you.

ACKNOWLEDGEMENT

I thank my friends for continued support. I am grateful to my family for their unconditional love, commitment to my success and unwavering support all through. My supervisors, I am grateful for being professionally around anytime I needed you. Above all, I thank God for the favour to accomplish this task.

ABSTRACT

The purpose of this study was to investigate factors that influence economic growth in Kenya. This study was guided by such objectives as to determine how inflation, unemployment and population growth influence growth of the economy of Kenya. The study adopted both quantitative and qualitative research approaches to explain the interplay of both endogenous and exogenous variables to bring about an effect on the economic growth of Kenya. The area of study is the whole of Kenya, a country with the fastest growing economy in East Africa. Kenya is a democratic country with stable political situation characterised by a reasonable democratic space and strong opposition. The country is enjoying the rule of a new constitution that was promulgated in 2010. Devolution has led to the 47 county governments led by governors. The country has enjoyed more than 53 years of independence. The population of this country is projected to be approximately 40 million people with the young population constituting the biggest population. Kenya's economy grew steadily until 2007 when the country experienced a devastating post polls violence which really shook the economy. The economy has fully recovered and experiencing a steady growth. Kenya is rated a lower middle income economy. Vices like corruption, unemployment, tribalism, inequality, poor infrastructure, high illiteracy level, wanting healthcare, inflation and insecurity are pulling the country down, almost to its knees. Secondary data that was used was drawn from statistical abstracts, economic surveys and previously done researches. Analysis was conducted with the help of ordinary least square (OLS) estimator. The findings revealed that the variables under investigation influence growth of the economy in either direction, either in combination or isolation. As such, the government can work towards reducing run-away inflation, reduce unemployment and stabilise the economic situation.

ABBREVIATIONS AND ACRONYMS

GDP - **GROSS DOMESTIC PRODUCT**

OLS - **ORDINARY LEAST ESTIMATOR**

GK - **GOVERNMENT OF KENYA**

CBK - **CENTRAL BANK OF KENYA**

NCPD - **NATIONAL COUNCIL OF PEOPLE LIVING WITH DISABILITIES**

USD - **US DOLLAR**

ADF - **AUGMENTED DICKEY FULLER**

CPI - **CONSUMER PRICE INDEX**

KNBS - **KENYA NATIONAL BUREAU OF STATISTICS**

IMF - **INTERNATIONAL MONETARY FUND**

CHAPTER ONE

INTRODUCTION

1.0 INTRODUCTION

In this chapter, problem under study is stated, study objectives, research questions, significance, scope, limitations and delimitations and assumptions of the study are tackled.

1.1 BACKGROUND.

Economic growth refers to an increase in the capacity of the economy to produce goods and services compared from one period to another. It can be measured in nominal terms, where it is not adjusted for inflation, or in real terms, where it is adjusted for inflation. The growth of an economy is thought of not only as an increase in productive capacity but also as an improvement in the quality of life to the people of that economy and it is associated with technological improvements. Gross Domestic Product (GDP) refers to the monetary value of all the finished goods and services produced within a country's borders in a specific time period. It includes all of private and public consumption, government outlays, investments and exports less imports that occur within a defined territory and is measured annually. GDP is commonly used as an economic indicator of the overall health of an economy, as well as to measure the standards of living in a country (Lipsey & Chrystal, 2007).

Kenya's economic performance has been on the rise as compared to other African countries. The countries economy is fairly diversified and relies relatively little on commodities export, making it more resilient price slump in raw material prices. GDP growth likely tipped to 5.5% in 2015, driven by gains in every sector except tourism, which suffered due to security concerns. While the current account deficit has likely been narrowing of late, Kenya's twin deficit remain a concern.

Against this background, the government's recent calls for moderate fiscal policy consolidation and Kenya's recently secured USD 1.5 billion precautionary deal with the IMF are steps in the right direction to reduce macroeconomic fragility.

This paper attempts to explain how inflation, unemployment and high unplanned births influence economic growth of Kenya to the negative. It should be noted that Kenya's population growth rate has been on the rise owing to improved healthcare, availability of food, high illiteracy levels among other factors.

As a result, unemployment has been on the rise. The fact that a big percentage of the population is made up of youths. There are no job opportunities for employment. This leads to corruption.

Inflation rates have been high too. This is relative to the unstable economic situation of the world. This has caused high exchange rates, increasing prices, reduction in the value for money among other outcomes.

1.3 STATEMENT OF THE PROBLEM

What is the recipe for economic growth?

To begin with, there are a number of successful strategies to self-sustained economic growth. Britain, for example, became the world economic leader in 1800s by pioneering the Industrial Revolution, inventing steam engines and railroads and emphasizing free trade. Japan by contrast, came to the economic-growth race later by first imitating foreign technologies and protecting domestic industries from imports and then developing tremendous expertise in manufacturing and electronics.

Kenya in this context is a developing nation with high rates of unemployment, inflation, huge income disparity, insecurity, high population growth rate and corruption. This has been catalyzed by notable tribalism, internal strife caused by warring communities and rustlers, terror attacks by Al Shabaab which has discouraged tourism and investment. Poor government policies have caused high unemployment. The same fundamental process of economic growth and development that helped shape Britain and Japan is at work today in developing countries like China, India and Angola. Indeed, economists who have studied growth have found that the engine of economic progress must experience such phenomena, no matter how rich or poor the country is.

Economists are however divided on what really are the biggest hurdles on the way of Kenya towards economic growth. Such factors as political instability, insecurity, unemployment, high population growth rate, poor healthcare system, high illiteracy levels, high government debt, corruption and tribalism really affect the economy. But giving consideration to them doesn't explain a number of questions. One, middle east countries have high rates of insecurities, terror attacks and political strife but still have stable economic growth. A country like China for instance has a massive population and yet a very big population growth rate. It is therefore evident that all developing nations have one thing in common that uniformly affects their growth of the economy.

Economists are torn between three theories; one that state's that population growth helps a nation's economy by stimulating economic growth and development and another that bases its theory on Robert Malthus' findings. Malthus (1798) stated that population increase is detrimental to a nation's economy due to a variety of problems caused by the growth. For example, overpopulation and population growth places a tremendous amount of pressure on resources, which result in a chain reaction of problems as the nation grows. The third school of thought is that population growth does have any impact on economic growth. There is continued divergence of opinions regarding the consequences of population growth on economic growth. The debate between positive impact and negative impact of population growth on the economy is thus still ongoing. On the positive side, population growth induces technological advancements and innovations. This is because population growth encourages competition in business activities and, as the country's population grows, the size of its potential market expands as well. The expansion of the market, in its turn, encourages entrepreneurs to set up new businesses (Simon 1992).

1.4 OBJECTIVES OF THE STUDY

The study was guided by the following objectives:

1. To establish how unemployment influence growth of Kenya's economy.
2. To investigate the role of inflation in influencing the economic growth in Kenya.
3. To determine how high unplanned birth rate influences the growth of Kenya's economy.

1.5 RESEARCH QUESTIONS

The paper addresses the following questions:

1. What is the effect of unemployment on economic growth in Kenya?
2. What is the role of inflation in determining economic growth in Kenya?
3. How does high unplanned birth rate growth of Kenya's economy?

1.6 SIGNIFICANCE OF THE STUDY

This study is significant in the sense that it will be a starting point to economists in future who may be of interest on the determinants of economic growth in Kenya. It is also a

significant piece because it will be used for reference in institutions other than Maasai Mara University.

1.7 SCOPE AND LIMITATIONS OF THE STUDY

This study intended to cover the case of Kenya as far as economic growth, unemployment, inflation and demography concerned. By these, secondary sources of data from census, economic surveys, statistical abstracts and related works will be employed. The According to Best and Khan (2008), limitations are conditions beyond the control of the researcher that may place limitations on the conclusion of the study and their application to other situations. Quantifying factors under study was the biggest problem.

This research deals with the unemployment, inflation, population growth and economic development for the period 1963-2009. Given the big scope of the variables, the research is narrowed down only to the specific parts of the variables. Thus there is room for further research on the effect of these other dimensions of population on economic development.

1.8 JUSTIFICATION

This study seeks to find the relationship between inflation, unemployment, population growth rate and economic growth of Kenya as opposed to the cross-country studies that have been done previously. It further seeks to establish any directional causality and correlation between these variables.

1.9 ASSUMPTIONS

In conducting the research, the researcher makes assumptions including that the data sources are valid and reliable. The study also assumed that the factors under study, however dynamic, don't change fast enough.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

This section consists of review of related literature. It contains: introduction, literature on how unemployment, inflation and population growth influence economic growth in Kenya. It also covers theoretical framework, conceptual framework, research gap and summary of literature review.

2.1 THEORETICAL LITERATURE.

2.1.1 UNEMPLOYMENT AND ECONOMIC GROWTH IN KENYA

Unemployment rate refers to the percentage of unemployed workforce in the total labour force. Workers are considered unemployed if they currently don't work, despite the fact that they are able and willing to do so. The total labour force consists of all employed and unemployed workforce in the labour market.

The unemployment rates provide insight into the economy's spare capacity and unused resources. Unemployment tends to be cyclical and decreases when the economy expands as companies contract, more workers to meet the growing demand.

There are different types of unemployment. Frictional unemployment refers to temporary unemployment during the period people are searching for a job. Structural unemployment on the other hand is a mismatch between workers skills or locations and job requirements. Unemployment in Kenya is a growing problem especially among the youth and has been the election agenda for almost every politician in the last few elections and still continues to be. It might not be impossible to look at the solution available to the issue of unemployment without looking at the causes of unemployment as it will give insight into what we are dealing with.

Among the factors mainly cited as causes of unemployment are high population growth rate, use of inappropriate technology, lack cooperand factors, underutilisation of capacities, global economic recessions, seasonal nature of labour demand, and imperfections in the labour markets, inappropriate education system, and regional disparities in development.

2.1.2 INFLATION AND KENYA'S ECONOMIC GROWTH

It refers to the overall increase in the consumer price index which is a weighted average of prices for goods. The set of goods that make up the index depends on which are considered representative of a common consumption basket. Therefore depending on a country and the consumption habits of the majority of the population, the index will comprise different goods. Some goods might record a drop in prices whereas others may rise, thus the overall price of the price index will depend on the weight of each of the commodities relative to the basket. Annual inflation refers to the percentage change in of the CPI compared to the same month of the previous year.

Consumer prices in Kenya rose 5.27 percent year-on-year in April of 2016, from a 6.45 percent increase in March, reaching the lowest figure since June 2013. Month-on-month, consumer prices edged up by 0.69 percent following a 0.76 percent rise in the previous month. Food inflation went up 1.5 percent (+1.39 percent in March). Inflation Rate in Kenya averaged 10.51 percent from 2005 until 2016, reaching an all time high of 31.50 percent in May of 2008 and a record low of 3.18 percent in October of 2010. Inflation Rate in Kenya is reported by the Kenya National Bureau of Statistics.

(Hailstone and Mastrianna 1982) in put it the simplest sense, inflation is merely a persistent rise in price levels. (Baumol et al 1994) defines it as a sustained increase in the average level of prices. Inflation is a long-term, persistent increase in the price level. From the quantity theory identity that money stock times velocity is equal to the price level multiplied by real output, one can specify the rate of inflation as monetary growth rate of change in velocity – output growth. In an open economy, both domestic and foreign structural changes and policy alterations can affect inflation. The problems of poor loan quality faced by the local banks were compounded by macroeconomic instability. Periods of high and very volatile inflation occurred in all four of the countries covered here. During the 1990s, inflation reached in Zambia 191 per cent, in Kenya 46 per cent, in Nigeria 70 per cent, and in Uganda 230 per cent. With interest rates liberalized (except in Nigeria), nominal lending rates were also high, with real rates fluctuating between positive and negative levels, often in an unpredictable manner, because of the volatility of inflation (Collier, 1993, pp. 19-20). Macroeconomic instability would have had two important consequences for the loan quality of the local banks. First, high inflation increases the volatility of business profits because of its unpredictability, and because it normally entails a high degree of variability in the rates of increase of the prices of the particular goods and services which make up the overall price index. The probability that firms will make losses rises, as does the probability that they will

earn windfall profits (Harvey and Jenkins, 1994). This intensifies both adverse selection and adverse incentives for borrowers to take risks, and thus the probabilities of loan default (Rogers and Ping 2009).

The second consequence of high inflation is that it makes loan appraisal more difficult for the bank, because the viability of potential borrowers depends upon unpredictable developments in the overall rate of inflation, its individual components, exchange rates and interest rates. Moreover, asset prices are also likely to be highly volatile under such conditions. Hence, the future real value of loan security is also very uncertain.

Economists generally accept the view that inflation is ultimately a monetary phenomenon. Nevertheless, there are rather divergent opinions on the short- and long-run interactions between the monetary and the real sectors. So far, there has been no theoretical consensus on the macroeconomic trade-offs, if any, between inflation and output. Moreover, it is difficult to discriminate empirically between alternative views on inflation–output trade-offs

2.1.3 HIGH POPULATION GROWTH RATE AND ECONOMIC GROWTH IN KENYA

The trend in population growth in Kenya has been fluctuating over the years. Statistics shows that the country recorded the highest population decrease between the years 1979 and 1989 recording a growth rate of 3.4 percent. For the period between 1989 and 1999 growth rate was 2.9 percent which again increased to 3.0 percent for the period 1999 to 2009 (Republic of Kenya, 2010). During the same period the rate of growth of GDP was cyclical. The growth rate has also been fluctuating over the years. In 1968 the growth rate declined to only 3.4 percent from an all time high of 14.7 percent in 1966. GDP growth improved in the year 1973 recording a growth rate of 7 percent. In 1974 the economy recorded a negative growth of 0.24 percent. There was a marked performance in the year 1977 when the economy grew by 8.6 percent. One of the worst performances for the economy was recorded in 1984 with the economy recording a growth rate of negative 0.8 percent. This decline was attributed to the famine that occurred in that year. The economy again improved in the following years but in 1993 it went down to 0.2 percent. There was a turnaround in the economic performance during the period 2003-2008 when the economic growth increased from 2.9 percent in 2003 to 7.1 percent in 2007.The growth rate however declined to 1.6 percent in 2008 due to the post elections violence that engulfed the country in December 2007 growth in 1967 at 4.7

percent. In 1979 the growth rate increased to 3.8 percent from a growth rate of 3.3 percent in 1969.

Population growth in Kenya continues to exert pressure on land and other resources. High fertility, combined with declining child mortality, gave Kenya one of the world's fastest population growth rates in the 1970s and 1980s (Ajayi and Kovole, 1998). The total population rose from about 10 million at independence to 15 million by 1978. This rapid growth, combined with an economic slowdown, prompted the government to promote family planning to lower fertility rates. Kenya was one of the first African countries to adopt a policy to slow population growth (Ajayi and Kovole, 1998).

Total fertility rate is the average number of children that would be born to a woman over her productive life. In Kenya total fertility rate has been fluctuating over the years. The total fertility rate was 8.1 children per woman between 1975 and 1978. Fertility rate decreased to 6.7 children for the period 1982 to 1988 and it declined further to 5.4 children between 1990 and 1992. Between the periods of 1995 to 1997 the fertility rate was 4.7 children per woman. There was an increase in fertility rate to 5 children per woman for the period between 1999 and 2000. Fertility rate decreased again to 4.6 children between 2006 and 2008 (NCPD *et al.*, 1999; Republic of Kenya, 2009). There was a disparity in fertility among rural and urban women which could be attributed to the significant role played by education in population growth. When literacy of women improves fertility rates also tend to decrease. Contraceptive use has increased from 39 percent of married women in 2003 to 46 percent in 2009 (Kenya National Bureau of Statistics, 2009).

2.2 RESEARCH GAPS

Earlier literature on determinants of economic growth in developing countries was based on a cross-country analysis. Because of this, what was yielded was some pattern that holds on average. The aim of this study therefore is to identify of determinants of growth in Kenya, in particular if inflation, unemployment and demographic characteristics play a role either in combination or isolation. The study also intends to check whether there is a bi-directional relationship between dependent and independent variables.

The empirical specifications used in cross-country work do not translate easily into individual country study. Most of the variables are never available periodically or tend to change very slowly over time, and it is not feasible to include all potential determinants. In the case of this study, we focus on individual determinants of growth extensively.

2.3 THEORETICAL FRAMEWORK

2.3.1 THEORIES OF ECONOMIC GROWTH

The theoretical framework consists of theories, principles, generalizations and research findings which are closely related to the present study. The researcher's knowledge of the problem and his understanding of the theoretical and research issues related to the research question will be demonstrated. This study focused on the theories that have touched on economic growth as follows:

Classical growth theory

In classical (Ricardian) economics, the theory of production and the theory of growth are based on the theory or law of variable proportions, whereby increasing either of the factors of production (labor or capital), while holding the other constant and assuming no technological change, will increase output, but at a diminishing rate that eventually will approach zero. These concepts have their origins in Thomas Malthus's theorizing about agriculture. Malthus's examples included the number of seeds harvested relative to the number of seeds planted (capital) on a plot of land and the size of the harvest from a plot of land versus the number of workers employed. Criticisms of classical growth theory are that technology, the most important factor in economic growth, is held constant and those economies of scale are ignored.

Solow-Swan model

Robert Solow and Trevor Swan developed what eventually became the main model used in growth economics in the 1950s. This model assumes that there are diminishing returns to capital and labour. Capital accumulates out of saving but its level per worker decreases due to depreciation and population growth. As a result of diminishing returns to capital economies eventually reach a point where, absent technological progress, capital per workers remains constant and economic growth ceases. This point is called a steady state. The model also notes that countries can overcome this steady state and continue growing by using new technology. In the long run, output per capita depends on the rate of saving, but the rate of output growth is independent of the saving rate. The process by which countries continue growing despite the diminishing returns is "exogenous" and represents the creation of new technology that allows production with fewer resources. Technology improves, the steady state level of capital increases, and the country invests and grows. One important prediction of the model, mostly borne out by the data, is that of *"conditional convergence"*; the idea that poor countries will grow faster and catch up with rich countries as long as they have similar

saving rates and technology. A major shortcoming of the approach is that it does not explain the sources of technological change.

Endogenous growth theory

Growth theory advanced again with theories of economist Paul Romer and Robert Lucas Jr in the late 1980s and early 1990s. Unsatisfied with the assumption of exogenous technological progress in the Solow-Swan model, economists worked to "endogenize" technology in the 1980s. They developed the endogenous growth theory that includes a mathematical explanation of technological advancement. This model also incorporated a new concept of human capital, the skills and knowledge that make workers productive. Unlike physical capital, human capital has increasing rates of return. Research done in this area has focused on what increases human capital (e.g. education) or technological change (e.g. innovation).

Unified growth theory

Unified growth theory was developed by Oded Galor and his co-authors to address the inability of endogenous growth theory to explain key empirical regularities in the growth processes of individual economies and the world economy as a whole. Endogenous growth theory was satisfied with accounting for empirical regularities in the growth process of developed economies over the last hundred years. As a consequence, it was not able to explain the qualitatively different empirical regularities that characterized the growth process over longer time horizons in both developed and less developed economies. Unified growth theories are endogenous growth theories that are consistent with the entire process of development, and in particular the transition from the epoch of Malthusian stagnation that had characterized most of the process of development to the contemporary era of sustained economic growth.

The big push theory

One popular theory in the 1940s was the Big Push, which suggested that countries needed to jump from one stage of development to another through a virtuous cycle, in which large investments in infrastructure and education coupled with private investments would move the economy to a more productive stage, breaking free from economic paradigms appropriate to a lower productivity stage. The idea was revived and formulated rigorously, in the late 1980s by Kevin Murphy, Andrei Shleifer and Robert Vishny.

Schumpeterian growth

Schumpeterian growth is an economic theory named after the 20th-century Austrian economist Joseph Schumpeter. The approach explains growth as a consequence of innovation and a process of creative destruction that captures the dual nature of technological progress: in terms of creation, entrepreneurs introduce new products or processes in the hope that they will enjoy temporary monopoly-like profits as they capture markets. In doing so, they make old technologies or products obsolete. This can be seen as an annulment of previous technologies, which makes them obsolete, and "...destroys the rents generated by previous innovations." (Aghion 855) A major model that illustrates Schumpeterian growth is the Aghion- Howitt model.

2.3.2 THEORIES OF INFLATION

Market-Power Theory of Inflation:

In an economy, when a single or a group of sellers together decide a new price that is different from the competitive price, then the price is termed as market-power price. Such groups keep prices at the level at which they can earn maximum profit without any concern for the purchasing power of consumers.

For example, in the past few years, the prices of onion were very- high in India. The soaring price of onions was the result of the group action of onion producers. In such a situation, people in middle and low income groups reduced the consumption of onions. However, onion producers earned high profits from higher income group.

According to the advanced version of market power theory of inflation, oligopolists can increase the price to any level even if the demand does not rise. This hike in price levels occurs due to increase in wages (because of trade unions) in the oligopolistic industry.

The increase in wages is compensated with the hike in prices of products. With increase in the income of individuals, their purchasing power also increases, which further results in inflation.

Apart from this, some economists concluded that fiscal and monetary policies are not applicable in practical situations as these policies are not able to control rise in prices levels. These policies would work only when prices rise due to an increase in demand.

Moreover, these policies cannot be applied to oligopolistic rise in prices, which is due to increase in the cost of production. Monetary policy can reduce the rate of inflation by raising the interest rate and regulating the credit flow in the market. However, it would have no effect on the oligopolistic price as the cost is transferred to the prices of goods and services.

Conventional Demand-Pull Inflation

The market power theory of inflation represents one extreme end of inflation. According to this theory inflation exists even when there is no excess in demand. On the other end, the conventional demand-pull theorists believed that the only cause of inflation is the excess of aggregate demand over aggregate supply.

In full employment equilibrium condition, when demand increases, inflation becomes unavoidable. In addition in full employment condition, the economy reaches to its maximum production capacity. At this point, the supply of goods and services cannot be increased further while the demand of products and services increases rapidly. Due to this imbalance between demand and supply, inflation takes place in the economy.

Mark-up Theory:

Mark-up theory of inflation was proposed by Prof Gardner Ackley. According to him, inflation cannot occur alone by demand and cost factors, but it is the cumulative effect of demand-pull and cost-push activities. Demand-pull inflation refers to the inflation that occurs due to excess of aggregate demand, which further results in the increases in price level. The increase in prices levels stimulates production, but increases demand for factors of production. Consequently, the cost and price both increases. In some cases, wages also increase without rise in the excess demand of products. This results in fall in supply at increased level of prices as to compensate the increase in wages with the prices of products. The shortage of products in the market would result in the further increase of prices.

Therefore, Prof. Gardner has provided a model of mark-up inflation in which both the factors, demand cost, are determined. Increase in demand results in the increase of prices of products as the customers spend more on products. On the other the goods are sold to businesses instead of customers, then the cost of production increases. As a result, the prices of products also increase. Similarly, a rise in wages results in increase in cost of production, which would further increase the prices of products. So according to Prof Gardner, inflation occurs due to excess of demand or increases in wage rates; therefore, both monetary and fiscal policies should be used to control inflation. Though, these two policies are not adequate to control inflation.

Bottle-Neck Inflation:

Bottle-neck inflation was introduced by Prof Otto Eckstein. According to him, the direct relationship between wages and prices of products is the main cause of inflation. In other words, inflation takes place when there is a simultaneous increase in wages and prices of products. However, he believed that wage push or market-power theories alone are not able to provide a clear explanation of inflation. After analysis of inflationary situation, Prof Eckstein says that the inflation occurs due to the boom in capital goods and wage-price spiral. In addition, he also advocated that during inflation prices in every industry is higher, but few industries show a very high price hike than rest of the industries. These industries are termed as bottle-neck industries, which are responsible for increase in prices of goods and services. In addition, Prof. Eckstein advocated that concentration of demand for products of bottle industries results in inflation.

2.3.3 THEORIES OF UNEMPLOYMENT

Classical unemployment

Classical or real-wage unemployment occurs when real wages for a job are set above the market-clearing level, causing the number of job-seekers to exceed the number of vacancies. On the other hand, other economists argue that as wages fall below a livable wage many choose to drop out of the labor market and no longer seek employment. This is especially true in countries where low-income families are supported through public welfare systems. In such cases wages would have to be high enough to motivate people to choose employment over what they receive through public welfare. Wages below a livable wage are likely to result in lower labor market participation in above stated scenario. In addition it must be noted that consumption of goods and services is the primary driver of increased need for labor. Higher wages leads to workers having more income available to consume goods and services. Therefore, higher wages increase general consumption and as a result need for labor increases and unemployment decreases in the economy.

Cyclical, deficient-demand, or Keynesian unemployment, occurs when there is not enough aggregate supply in the economy to provide jobs for everyone who wants to work. Demand for most goods and services falls, less production is needed and consequently fewer workers are needed, wages are sticky and do not fall to meet the equilibrium level, and mass unemployment results. Its name is derived from the frequent shifts in the business

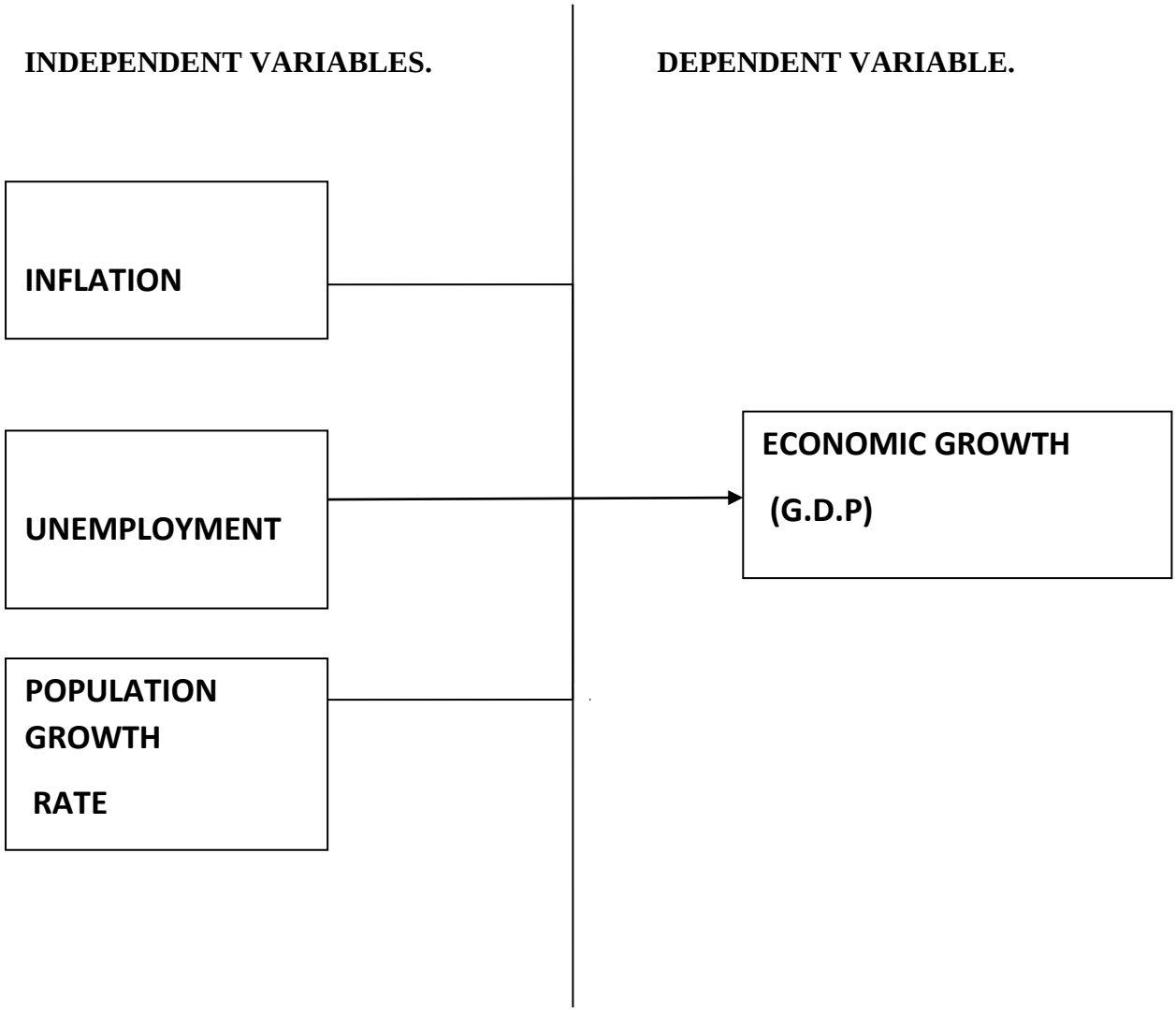
cycle although unemployment can also be persistent as occurred during the Great Depression of the 1930s.

Marxian theory of unemployment

Marxists also share the Keynesian viewpoint of the relationship between economic demand and employment, but with the caveat that the market system's propensity to slash wages and reduce labor participation on an enterprise level causes a requisite decrease in aggregate demand in the economy as a whole, causing crises of unemployment and periods of low economic activity before the capital accumulation (investment) phase of economic growth can continue.

According to Karl Marx, unemployment is inherent within the unstable capitalist system and periodic crises of mass unemployment are to be expected. The function of the proletariat within the capitalist system is to provide a “reserve my army of labour " that creates downward pressure on wages. This is accomplished by dividing the proletariat into surplus labour (employees) and under-employment (unemployed). This reserve army of labour fight among themselves for scarce jobs at lower and lower wages.

2.4 CONCEPTUAL FRAMEWORK



Economic growth is the dependent variable while inflation, population growth and population growth are independent variable.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 INTRODUCTION

This section will discuss the methodology that is to be used in acquiring and synthesizing the data relevant for the study. The elements that are considered include; research design, estimation models, research instruments, validity, reliability, data collection procedures and techniques.

3.1 RESEARCH DESIGN

Research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in the procedure, (Kathuri & Pals 1993, Cooper & Emory, 1995, Orodho, 2009). This study is both a qualitative and a quantitative study. Qualitative studies are tools that help in understanding and describing the world of human experience. The study is to be a descriptive survey utilizing qualitative approach. A descriptive study is concerned with finding out the what, where and how of a phenomenon. Mugenda and Mugenda (1999) noted that a survey research attempts to collect data from members of a population and describes the existing phenomenon by asking individuals about their perception, attitudes, behaviour or values. Surveys enable collection of data from sizeable population in an economical way. The selection of research design will be governed by field of interest, selection of research methods and techniques of data collection (Peter, 2007). The data to be obtained should be standardized, to all comparison; it should also explore the existing status of two or more variables at a given point in time. The descriptive research enhances a systematic description that is as accurate, valid and reliable as possible regarding the influence of unemployment, inflation and population growth on economic growth.

3.2.1 DATA COLLECTION METHODS

The researcher will use secondary data, both qualitatively and quantitatively. Qualitative seeks to describe the characteristics of the subjects of the study. The selection of these tools has been based on the nature of the data required, the objectives of the study, time available and the cost of data collection. The data is derived from statistical abstracts, economic surveys and previously researched works that are related to this.

3.3 MODEL SPECIFICATION

The model states that economic growth, Y is directly influenced by unemployment X_1, inflation X_2 and population growth X_3.The model adopts linear from given below.

$$Y = f(X_1, X_2, X_3),$$

$$Y = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 X_3 + \varepsilon$$

Where: Y is Economic Growth

X_1 is Unemployment

X_2 is Inflation

X_3 is Population Growth Rate

ε is the error term.

The model intends to test:

1. **Stationarity (independence of data to time).**
   The study used time series data and therefore, there was need to determine whether the variables in question were stationary or non-stationary. Augmented Dickey Fuller (ADF) test was used to test for stationarity of the series. When time series data is non stationary and used for analysis it may give spurious results because estimates obtained from such data will possess non constant mean and variance.
2. Multicollinearity (linear relationship between variables)
3. Heteroscedasticity (test of constant variance)
4. **Causality**.
   Granger causality was used to determine whether one time series is useful in forecasting another (Enders, 1995). Granger causality tested the direction of causation between population and economic growth. The causality might be bi-directional and thus there was a need to establish which direction of causality was dominant. In this case failure to account for the reverse causation or feedback between variables is likely to either overstate or understate the contribution of a particular variable. The VAR equations were used to perform Granger causality tests. The F-statistic tested the null hypothesis that the coefficients on lagged values of a variable are zero in the equation of the other variable against the alternative hypothesis that the coefficient on lagged values of a variable are

not zero in the equation of the other variable. The null hypothesis is rejected when F-statistic is greater than the P-value.

Heteroskedasticity test

OLS assumes that variance is constant across all observations and failure of which is heteroskedasticity. Estimating heterogeneous time series data would lead to biased standard errors and therefore inference will be adversely affected. To test for heteroskedasticity we will use Breusch-Pagan / Cook-Weisberg test.

Correlation test

There should not be any relationship or correlation between the independent variables. To test for this relationship we use Breusch-Godfrey LM test to test for serial correlation. The null hypothesis of the Breusch-Godfrey LM test is that there is no serial correlation. If the null hypothesis is rejected this would mean that the variable is stationary while accepting the null hypothesis would mean that the variable has unit root hence non-stationary.

Multicollinearity test

This test is done to determine whether there exists any relationship between the explanatory variables. This study will use the correlation matrix to test for the implied relationship between the independent variables.

3.4 VALIDITY OF THE STUDY AND RELIABILITY OF DATA SOURCE

Validity is the degree to which a test or scale measures what it purports to measure (Gay, 1992; Orodho, 2009). Best& Kahn (2004) point out that content validity of the study is ensured through expert judgment. Validity determines whether the research truly measures that which it will be intended to measure or how truthful the research results are. It is the relationship between data and variable being measured. The researcher will then make modifications of the study based on analysis in order to improve the level of the confidence.

This study made use of published data for the period ranging from 1963 to 2009. The main sources of these data were: Kenya National Bureau of Statistics publications, Government of Kenya Statistical Abstracts and Economic Surveys. Such data sources are credible and of international standards and recognition.

3.5 RELIABILITY OF THE RESEARCH FINDINGS

Reliability is the level of internal consistency or stability over the time of the study (Gay 1992, Orodho 2009). Reliability is the extent to which results are consistent over time and an accurate representation of the area under study. It is concerned with internal properties of measure. The Test-retest method will be used to measure consistency from one time to the next. This is to determine outcomes from the two separate groups and analyze results to check their consistency. According to De vellis (1991), reliability is the proportion of variance attributable to true measure of a variable and estimates consistency of such measurement over time.

3.6 DATA PROCESSING AND ANALYSIS

This is the process of organizing, interpreting and presentation of data. The study will utilize both quantitative and qualitative method of data analysis. Data will be analyzed using univariate analysis; this involved the examination across cases of one variable at a time. In univariate analysis there are three major characteristics of a single variable that are looked at, these are; the distribution, the central tendency and the dispersion. The measures of distribution will be largely utilized in this study. This will include frequency and percentages. Descriptive statistics including measures of central tendency such as mean, mode, median and measures of dispersion; and inferential statistics to be applied will include factorial analyses (Nachmias, 1996). Since the research is a descriptive survey in nature descriptive data is collected therefore descriptive design will be consequently employed. Information will be coded using the Statistical Package for Social Scientists. The analysis will be carried out under different heading grouped according to the dependent variable of study for descriptive statistics.

The data will first be tallied in tables. This will provide a general pattern of the expected answers such as most respondent are agreeing or disagreeing with the statements on the questionnaire. This will also show the frequency of the results. Qualitative analysis will be done, which will be organized into themes.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.0 INTRODUCTION

This chapter provides an analysis, presentation, interpretation and discussion of the results for the study on selected factors influencing economic growth in Kenya.

4.1 TEST OF STATIONARITY

TEST	PP TEST	T STATISTIC
GDP	**-3.917971**	**- 3.574244**
INFLATION	**-2.845247**	**-3.574244**
UNEMPLOYMENT	**-5.883330**	**-3.574244**
POP. GR.	**-5.358558**	**-5.215562**

TABLE 1.1: TEST OF STATIONARITY. (SOURCE: AUTHOR-GENERATED)

Inflation was not stationary at level but was stationary after first differencing. GDP was stationary at level. Unemployment was stationary at level. Population growth rate on the other hand was not stationary at level, first and differencing. It was therefore used at its state.

4.2 TEST OF AUTOCORRELATION

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.134194	Prob. F(2,24)	0.3383
Obs*R-squared	2.590630	Prob. Chi-Square(2)	0.2738

TABLE 1.2: TEST OF AUTOCORRELATION. (SOURCE: AUTHOR-GENERATED)

Breusch-Godfrey LM test for autocorrelation with one lag show a chi2 of 1.134194 and a P value of 0.3383 implying we acceptance of the alternative hypothesis of the presence of first

order serial autocorrelation. This implies that one of the OLS assumptions of no autocorrelation is violated and therefore this will be accounted for in the regression results.

4.3 TEST OF HETEROSKEDASTICITY

Heteroskedasticity Test: White

F-statistic	0.239395	Prob. F(9,20)	0.9838
Obs*R-squared	2.917535	Prob. Chi-Square(9)	0.9675
Scaled explained SS	1.459288	Prob. Chi-Square(9)	0.9974

TABLE 1.3: TEST OF HETEROSKEDASTICITY. (SOURCE: AUTHOR-GENERATED)

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity results had a P value of 0.9838 and a chi2 (1) of 2.917535 implying that we reject the null hypothesis of constant variance. This indicated that the variance of the error term is varies across observations. To avoid this problem we conduct Newey West regression which also serves as a remedy.

4.4 RELATIONSHIP BETWEEN VARIABLES

Dependent Variable: GDP

Method: Least Squares

Date: 05/05/16 Time: 12:24

Sample: 1985 2014

Included observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	29.78000	11.57023	2.573847	0.0161
INFLATION	-0.138750	0.042628	-3.254898	0.0031
POPULATION	4.289336	1.600766	2.679553	0.0126
UNEMPLOYMENT	-4.058801	1.541025	-2.633833	0.0140

R-squared	0.442356	Mean dependent var	0.913333
Adjusted R-squared	0.378013	S.D. dependent var	2.417712
S.E. of regression	1.906757	Akaike info criterion	4.252251

Sum squared resid	94.52881	Schwarz criterion	4.439077
Log likelihood	-59.78377	Hannan-Quinn criter.	4.312018
F-statistic	6.874913	Durbin-Watson stat	2.167932
Prob(F-statistic)	0.001464		

TABLE 1.4: REGRESSION ANALYSIS. (SOURCE: AUTHOR-GENERATED)

The theoretical expectations are that economic growth is determined by other factors besides population growth, inflation and unemployment which are not included in the model and interpreting the coefficients of the independent variables in the model will however be misleading. Basing our analysis on the goodness of fit (adjusted r- squared) from the model, the results indicate that goodness of fit improves with the short run dynamics as compared to the long run effects of the independent variable. This indicates the existence of a short run relationship between economic growth, inflation, unemployment and population growth.

Having conducted the diagnostic tests to verify whether OLS assumptions are met, we regressed the empirical model.

Table 1.4 presents the OLS regression results, where the F statistic is 6.874913with a p value of 0.0021. This implies independent variables that is, population growth, unemployment and inflation determine GDP growth.
The measure of goodness of fit, the R squared is 0.442356 and the Adjusted R squared is 0.378013 implying that 85 percent of the variations in GDP growth rate are explained by the independent variables in the model.

4.5 CAUSALITY TEST

Pairwise Granger Causality Tests

Date: 05/05/16 Time: 12:27

Sample: 1985 2014

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
INFLATION does not Granger Cause GDP	28	0.23801	0.7901
GDP does not Granger Cause INFLATION		0.21731	0.8063

UNEMPLOYMENTS does not Granger Cause GDP	28	1.90957	0.1709
GDP does not Granger Cause UNEMPLOYMENT		1.36055	0.2764
POPULATION does not Granger Cause GDP	28	0.49650	0.6150
GDP does not Granger Cause POPULATION		0.20182	0.8187

TABLE 1.5: CAUSALITY TEST. (SOURCE: AUTHOR-GENERATED)

From the above, inflation doesn't cause economic growth; neither does economic growth cause inflation. Unemployment does not cause economic growth, neither does economic growth cause unemployment. Population doesn't cause economic growth; neither does economic growth cause population growth.

4.6 DISCUSSION OF RESULTS

The results in Table 1.4 indicate a positive relationship between population growth and GDP in Kenya. This confirms economic growth theories which argue that population growth is a key factor of production which leads to increased output hence it is positively related to economic growth. Unemployment showed a positive effect on economic growth. This confirms theoretical arguments that labour as a factor of production is a key determinant of economic growth. Labour force in Kenya has been increasing as the population grows and as people attain more.

The impact of one standard deviation shock to population growth on economic growth. The response to one standard deviation to population growth resulted in a stable time path which declined to zero with respect to economic growth. This effect lasted for nine years on the positive territory before fizzling out.

This phenomenon could be attributed to increased expenditure on health care by the government in improvement of child survival through various government programmes. For example, the substantial increases in childhood immunization and vaccination coverage levels at the national level and which has mostly contributed to the overall drop in childhood mortality in Kenya. Another important initiative is the improvement in key malaria indicators such as ownership and use of treated mosquito nets being provided for by the government for preventive treatment of malaria during and after pregnancy, and treatment of childhood fever. The phenomenon could be further contributed by the increased expenditure by the government on education within the country and also the expansion of educational facilities

mostly from private entrepreneurs. A comparison from various economic surveys reveals that the education sector has been getting the highest allocation of the national income from the government. Due to the increase in population the demand of education services is high leading to the government high allocation to the sector and the subsequent expansion of the sector.

The evidence on the relationship between population growth and economic growth confirms that the relationship between population growth and economic growth vary among countries. Furuoka (2005) found a long-run equilibrium relationship between the population growth and per capita Gross Domestic Product (GDP) growth in Malaysia. Klasen and Lawson (2007) examined the relationship between population growth and economic development in Uganda. The empirical findings indicated a negative impact of population growth on economic development. Dawson and Tiffin (1998) used time-series data to analyze a long-run relationship between population growth and economic development in India. No long-run equilibrium relationship between the population growth and economic development in India could be established. Thornton (2001) conducted a similar research on the long-run relationship between population growth and economic development in seven Latin American countries, such as Argentina, Peru, Brazil, Chile, Colombia, Venezuela and Mexico. The findings were that a long-run relation between population and real per capita GDP does not appear to exist hence.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 INTRODUCTION

This chapter summarizes the study and makes conclusion based on the results. The policy implications from the findings are also presented.

5.1 SUMMARY

The relationship between inflation, unemployment, population growth and economic growth has therefore been fundamental to the policy makers in different countries. However, there has been no consensus whether population growth is beneficial or detrimental to the economic growth in the developing countries. Given this scenario, there was thus a need to establish the relationship between unemployment, inflation, population growth and economic growth in Kenya. The study conducted a granger causality test and the results indicated that there was bi- directional causality between population growth and economic growth in the country but not for the other two variables. The study further indicated that the relationship between population growth, unemployment, inflation and economic growth was a long-run relationship. The results indicated that population growth and economic growth are both positively correlated and an increase in population will impact positively to the economic growth in the country both in the short run and also in the long run. It also showed that inflation and unemployment are negatively correlated with economic growth. As such, an increase in either or both variables will cause a negative effect on economic growth.

5.2 CONCLUSION

The finding of the study support the existence of a long-run relationship between inflation, unemployment, population and economic growth in Kenya and provide strong support for the hypothesis that population is driving economic growth in the country. The results of causality tests suggest that there appears to be bi-directional causality between population growth rate and economic growth but not in the case of unemployment and inflation. Overall, the relationship between population and economic growth is strong and positive in Kenya over the period of the analysis. This suggests that Kenya seem to be in the second stage of the demographic transition, called post-Malthusian regime, in which the relationship between economic growth and population growth remains highly strong and positive. These findings give support to the population-driven economic growth hypothesis that states that the

population growth in a country's promotes its economic growth development. It also advocates for reduction in unemployment and stemming up efforts to reduce inflation.

5.3 POLICY RECOMMENDATIONS

With the results indicating a positive correlation between population and economic growth in Kenya and a negative one between inflation, unemployment and economic growth, then a carefully planned population growth strategy coupled with institutional and policy changes, controlled inflation and reduced unemployment could be beneficial to this country. A well managed population expansion will ensure that both the population and the economy are complementing each other without concerns that population expansion will lead countries to famines and lack of other socio-economic facilities since it's the inadequate government policies, rather than population growth which are responsible for the woes including, famines that besiege most developing nations.

Population growth can influence economic growth through two essential channels including technical progress and economies of scale. An increase in population leads to innovations. Technological advances in turn promote productivity and economies of scale, hence the national output. There is need for the government to change the education system to ensure that new training methods, which develop existing skills and create skills where they do not exist are implemented. There is also a need to put in place training policies that will strengthen the competitive capacities of the work force and increase the competitiveness. Education is the principal supplier of highly skilled and effective human resources. The most important thing is to take action to amend and reform mostly the higher education and makes it a useful tool in the service of the development process, and to link it to the global market so as to meet the demands of the labour market and create new job opportunities for the population.

The government should step up its efforts to control inflation by checking monetary and fiscal policies of this country with keenness. The government should also improve education system, reduce its intervention to business and invest more on the people to reduce unemployment.

The government should also put measures to ensure that the economy grows at a higher rate than the population growth. This will ensure that the increasing demand of services arising from the population growth is met. Having a larger, healthier, and better-educated workforce will only bear economic fruit if the extra workers can find jobs. Open economies, flexible

labour forces, and modern institutions that can gain the confidence of the population and markets alike may help countries reap the potential benefit created by their demographic transition. Openness to trade can be a key driver of economic growth, helping to significantly boost the benefits a country receives from the demographic transition.

The purpose of sustainable development is to create and improve an environment in which all people can expand their capabilities and requires good governance. That concept is distinguished by its transparency and accountability as well as its effectiveness and justice. The provision of employment opportunities is the peak of any economic and social reform plan that aims to improve quality of life by achieving sustainable human development. In that respect, the role of good governance in providing job opportunities need not to be emphasized. A better political environment would also encourage private investment since its contribution to economic growth cannot be under estimated.

APPENDICES

YEAR	ANNUAL WEIGHTED AVERAGE INDEX	ANNUAL INFLATION DATA
1985	6.43	10.8
1986	7.11	10.5
1987	7.73	8.7
1988	8.68	12.3
1989	9.84	13.5
1990	11.4	15.8
1991	13.64	19.6
1992	17.36	27.3
1993	25.35	46.0
1994	32.65	28.8
1995	33.17	1.6
1996	36.15	9.0
1997	40.21	11.2
1998	42.85	6.6
1999	45.37	5.8
2000	49.89	10
2001	52.75	5.8
2002	53.79	2.0
2003	59.06	9.8
2004	66.03	11.8
2005	72.57	9.9
2006	76.95	6.0
2007	80.24	4.3
2008	92.36	15.1
2009	102.09	10.5
2010	106.26	4.1
2011	121.17	14.0
2012	132.53	9.4
2013	140.11	5.7

TABLE 1.5: TIME- SERIES CONSUMER PRICE INDEX DATA. (SOURCE: WORLD BANK).

YEAR	GDP PER CAPITA (US$)	GDP GROWTH (%)
1985	467.4	0.6
1986	536.8	3.5
1987	569.0	2.3
1988	570.5	2.6
1989	547.0	1.1
1990	552.7	1.1
1991	506.8	-1.6
1992	484.7	-3.9
1993	327.0	-3.0
1994	380.2	-0.4
1995	468.2	1.3
1996	516.2	1.1
1997	507.8	-2.5
1998	564.7	0.0
1999	500.1	-0.8
2000	479.3	-2.4
2001	479.6	1.2
2002	474.0	-2.2
2003	524.7	0.2
2004	549.2	1.8
2005	621.3	2.8
2006	743.4	3.0
2007	895.2	4.0
2008	978.5	-2.5
2009	982.0	0.5
2010	1039.0	6.1
2011	1062.1	3.4
2012	1238.6	1.5
2013	1314.1	2.9
2014	1417.1	2.4

TABLE 1.6: TIME SERIES DATA ON CONSUMER PRICE INDEX. (SOURCE: IMF)

YEAR	POPULATION GROWTH RATE
1985	3.79
1986	3.70
1987	3.66
1988	3.58
1989	3.54
1990	3.52
1991	3.49
1992	3.28
1993	3.30
1994	3.20
1995	3.10
1996	3.50
1997	3.40
1998	2.57
1999	2.53
2000	2.53
2001	2.53
2002	2.54
2003	2.56
2004	2.57
2005	2.58
2006	2.59
2007	2.60
2008	2.58
2009	2.62
2010	2.64
2011	2.63
2012	2.65
2013	2.64
2014	2.65

TABLE 1.7: POPULATION GROWTHRATE. (SOURCE: KNBS)

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