POPULATION GROWTH AND YOUTH UNEMPLOYMENT IN UGANDA (1991-2014)

BY

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DECLARATION

I **ABDIFATAH SAID AHMED** hereby declare that "This dissertation is my original work and has not been presented for a degree or any other academic award in any university or institution of learning".

Signed ..... Date:.....17-05-2017.....

APPROVAL

"I confirm that the work reported in this research dissertation was carried out by the candidate under my supervision".

Name: Dr. James Wokadala

Signed ..... Date: 17/05/2017

DEDICATION

I dedicate this research dissertation to my dear parents, and my family, and my colleagues. All this would have not been possible if it were not for your undying support and love that has always been forthcoming, thank you.

ACKNOWLEGDEMENTS

I thank Allah who has been on my side throughout the study and who has also enabled me to finish it. This is a great favor from Allah. Allah says: —But if you count the favors of Allah, never will you be able to number them. [*SûrahIbrâhîm*: 34, Quran].

I thank my parents to have sent me to Kampala International University for this glorious Course, my Lectures that have been my mentor and will be till the end of it, my course mates who are very cooperative and supportive where things are not easy, and the entire community mainly the printerly who have ever been good and have also helped in the production of this research dissertation.

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LIST OF ACRONYMS/ ABBREVIATIONS

AAIU	Action Aid International Uganda
ADF	Augmented Dickey-Fuller
AIC	Akaike's Information Criteria
CIA	Central Intelligence Agency
DRT	Development Research and Training
FOA	Food and Agriculture Organization
ILO	International Labor Organization
IMF	International Monitory Fund
LDC	Lower Development Countries
NAADS	National Agricultural Advisory Service
NBER	National Bureau of Economic Research
NEET	Not in Employment, Education or Training
NGO	Non-Government Organization
PGR	Population Growth Rate
PRB	Population Reference Bureau
SACCO	Saving and Credit Cooperatives
SPSS	Statistical Package for Social Science
UBOS	Uganda Bureau of Statistics
UIA	Uganda Investment Authority
USA	United State of America
WB	World Bank

ABSTRACT

This study was motivated by the fact the Uganda has one of the fastest population growth rates in the world accompanied by high unemployment rates thus the study aimed at investigating the relationship between population growth rates and youth unemployment in Uganda (1991 to 2014). The specific objectives of the study were; to find out the long run relationship between the population growth rate and youth unemployment rate in Uganda, to examine the causality between population growth and youth unemployment as well as to determine the effect of population growth rate on youth unemployment rate in Uganda. The hypothesis of the study was; there is no significant relationship between population growth rate and youth unemployment, There is no granger causality between population growth rate and youth unemployment rate in Uganda and there is no significant effect of population growth rate on youth unemployment rate in Uganda. The study was carried out using secondary data collected from 1991 to 2014. Augmented Dickey- Fuller (ADF), tests were carried out on the variables of population growth rate and youth unemployment and were found to non-stationary at level but stationary after first difference. Cointegration results of Trace and Maximum Eigenvalue findings showed that there is no long run relationship between population growth rate and youth unemployment. Granger causality tests also indicated that population growth causes youth unemployment in Uganda. A regression model encompassing all variables under study was developed to help assess how population growth rate in Uganda impacts youth unemployment rate. The results indicate that the independent variables account for 40.3% changes in youth unemployment rate. The overall model was significant on the basis of the F-statistic and the coefficient of determination that was reported by the data. The study concluded that there is appositive significant relationship between population growth rate and youth unemployment as was revealed from the model. Thus having discovered that there is a problem of rampant population growth rate in Uganda; this study recommended that there is need to formulate population control measures like family planning methods that are aimed at reducing that rate at which population of Uganda grows. To encounter the problem of increasing youth unemployment, the study recommended that there should be proper and adequate education system and training facilities that empowers young men and women with skills that make them job creators rather than job seekers.

CHAPTER ONE
INTRODUCTION

1.0 Background

1.1.1 Historical Perspective

Globally, human population has grown very slowly for most of its existence on earth. Scientists currently estimate that modern human beings (Homo sapiens) evolved roughly 130,000 to 160,000 years ago. Many threats, from diseases to climate fluctuations, kept life expectancy short and death rates high in pre-industrial society, so it took until 1804 for the human population to reach one billion. From that point forward, however, population growth accelerated very quickly. Through the early decades of the Industrial Revolution, life expectancies were low in Western Europe and the United States (U.S Census Bureau, 2010).

Like in many developing countries, the employment situation in Pakistan has worsened in recent years (Lee, 2013). The employment generation capacity of the economy (2.5 percent p.a.) has been significantly lower than the increase in the rate of population growth (3.1 percent p.a.). Furthermore, during the last three decades, the real GDP has grown at an average rate of 6.0 percent p.a, while the employment during the same period has grown at an average rate of 2.5 percent p.a. (this gives on employment elasticity of 0.42). The first half of the 1990s (1990-91 to 1994-95) has witnessed a marked slowdown in the economic activities. The real GDP has grown at an average rate of 4.8 percent p.a. but population and labour force continued to grow at an average rate of 3.0 percent p.a. during the first half of the 1990s. Consequently, the economy's capacity to generate employment must have been reduced even further which is clearly evident from the current worsening unemployment situation in the country. In sizing up the implications of high population and labour force growth on the one hand and the level of economic activity on the other, one needs to view the developments in historical perspective (Lee, 2013).

Africa's population which was estimated at 257 million in 1960 had increased to 482 million by 1983. In 1993 the population of the continent was estimated at 682 million (Stren& White, 2011).The average annual growth rate during the decade was 3.2 per- cent - the highest among Third World regions. in 1983, the ECA, using high variant assumptions, projected that total African population will be about 1.1 billion by 2008, taking an annual growth rate of 3.2per cent

during the 25-year period (1 983-2008).The associated numbers of urban dwellers will be 472 million; children (0-14), 479 million; active population (15-64), 546 million; and school age 178 million (primary) 152 million (secondary). And 124 million (tertiary).

In Africa, the last 100 years have seen an incredible increase in the continent's population. The continent of Africa, however, is not following this pattern. Now home to 1.2 billion (up from just 477 million in 1980), Africa is projected by the United Nations Population Division to see a slight acceleration of annual population growth in the immediate future. In the past year the population of the African continent grew by 30 million. By the year 2050, annual increases will exceed 42 million people per year and total population will have doubled to 2.4 billion, according to the UN. This comes to 3.5 million more people per month, or 80 additional people per minute. At that point, African population growth would be able to re-fill an empty London five times a year (Stren& White, 2011).

Within the next few decades, the east African nation of Uganda is likely to have the highest population growth in the world, according to a new report from the Population Reference Bureau (PRB), a Washington, D.C.-based research and advocacy group (World Population Prospects, the 2010 Revision). The country's current population of 37.58 million is projected to explode to 130 million by 2050, a nearly fivefold increase, notes the study. According to Carl Haub, a demographer at PRB, such expansion will entrap the country in poverty and instability.

The global youth unemployment rate has stabilized at 13 percent following a period of rapid increase between 2007 and 2010 but it is still well above the pre-crisis level of 11.7 percent, according to the ILO's Global Employment Trends for Youth 2015 report released today. The report highlights a drop in the number of unemployed youth to 73.3 million in 2014. That is 3.3 million less than the crisis peak of 76.6 million in 2009 (Vance & Paik, 2015).

Compared to 2012, the youth unemployment rate has decreased by 1.4 percentage points in Developed Economies and the European Union and by half a percentage point or less in Central and South-Eastern Europe (non-EU) and CIS, Latin America and the Caribbean and Sub-Saharan Africa. The remaining regions East Asia, South-East Asia and the Pacific, the Middle East and

North Africa saw an increase in the youth unemployment rate between 2012 and 2014, or no change in the case of South Asia (Lee, 2013).

In Africa, the employment distribution of sub-Saharan Africa's youth has changed little over 10 years. In both 1997 and 2007, about half of Africa's youth were either unemployed or "inactive," as defined by the ILO. Defining terminology can give a clearer picture of Africa's employment situation. "Unemployed" refers to those in the work force who does not have a job but are actively seeking work. "Inactive" refers to those who do not have a job and are not seeking work. Inactive youth may be attending secondary or higher education, but they may also be discouraged workers who are not seeking work because they feel they lack qualifications for a job, do not know where or how to look for work, or feel there is no suitable work available (Nolon, 1992).

Unemployment Rate in Uganda decreased to 3.80 percent in 2013 from 4.20 percent in 2012, with an average of 3.63 percent from 2015 until 2013, reaching an all-time high of 4.20 percent in 2010 and a record low of 1.90 percent in 2007 (Clark & Summers, 2014). Unemployment Rate in Uganda is reported by the Uganda Bureau of Statistics. In Uganda every year a total of 400,000 youth are released into the job market after graduating to a market that has only 90,000 jobs. That means that the rest of the youth who have graduated will have no jobs because the job market is small and therefore if the youth are not job creators than we will see many walking the streets looking for jobs that have been taken or are still occupied by people who need to have retired (Vogel, 2013).

1.1.2 Conceptual Perspective

Population growth is the increase in the number of individuals in a population (Curtain, 2004).The "population growth rate" is the rate at which the number of individuals in a population increases in a given time period, expressed as a fraction of the initial population. Specifically, population growth rate refers to the change in population over a unit time period, often expressed as a percentage of the number of individuals in the population at the beginning of that period (UBOS, 2013).

The unemployment rate is a measure of the prevalence of unemployment and it is calculated as a percentage by dividing the number of unemployed individuals by all individuals currently in the labor force (Vogel, 2013). During periods of recession, an economy usually experiences a relatively high unemployment rate. According to International Labour Organization report, more than 200 million people globally or 6% of the world's workforce were without a job in 2012. There remains considerable theoretical debate regarding the causes, consequences and solutions for unemployment. Classical economics, new classical economics, and the Austrian School of economics argue that market mechanisms are reliable means of resolving unemployment(UBOS, 2013).

Globally, high population growth is a root cause of youth unemployment. Unfortunately, as the youth population grows, so does the unemployment rate. In fact, unemployed youth numbered about 11.1 million in 2012. Several factors may be blamed for the prevalence of youth unemployment in the whole world especially in developing countries. There is a high population growth rate 3.5 percent per annum which accompanies an already large national population of over 167 million people. In addition, deficient school curricula and poor teacher training have contributed to the failure of educational institutions to provide their students the appropriate skills to make them employed (Curtain, 2004).

Sub-Saharan Africa is currently experiencing the fastest growth in population as well as the highest population of young people in the whole world. Hence, it is important that governments include this rising "youth bulge" into social and national development planning (Frank, 2014).Youth unemployment challenges in the African continent are usually linked to high population growth rates. However, the correlation is neither that simple nor direct. First of all, the youth swell has not resulted in a balanced unemployment rate across the continent. Secondly, it is actually not the growing numbers of youth that has led to unemployment, but key structural problems specific to each country (Dike, 2009).

In spite of having one of the best economies in Africa, South Africa's youth unemployment rate stands at an astounding 50%. Likewise, even though Nigeria's 14% youth unemployment rate is not really high, because of the huge population size of around 180 million; the number of youth who do not have jobs is high (Lynch, 2014). However, according to World Bank statistics,

Rwanda has the lowest unemployment rates worldwide. Even though having a rising youth population can be considered as a significant challenge, it cannot entirely explain the high unemployment rates in Africa. Instead, the figures are largely results of specific political and economic contexts. For example, lack of adequate investment in the infrastructure and subsidies for areas with the potential for job creation, have created great structural issues.

In Uganda, the unemployment rate for young people ages 15–24 is 83%. This rate is even higher for those who have formal degrees and live in the urban area (UBOS, 2013). This is due to the disconnect between the degree achieved and the vocational skills needed for the jobs that are in demand for workers.

Those without a degree are also not able to obtain jobs because they lack the skills needed for the position or they don't have the resources such as land or capital. Some youth also have negative views on certain jobs so they are unwilling to take them if offered a position. Youth unemployment poses a serious political, economic, and social challenge to the country and its leadership. The cycle is making it increasingly difficult for Uganda to break out of poverty (Okafor, 2011).Young women also more often have to stay at home in a maternal role from a very young age which limits their ability to work. Informal sector work accounts for the majority of young workers in Uganda. 3.2% of youth work for waged employment, 90.9% work for informal employment, and 5.8% of the Ugandan youth are self-employed.

1.1.3 Theoretical Perspective

The study is based on the theory of demographic transition and Keynesian Theory of Unemployment. The theory of demographic transition is based on an interpretation of demographic history developed in 2015 by the American demographer Warren Thompson (1887–1973). Adolphe Landry of France made similar observations on demographic patterns and population growth potential around 1934. In the 1940s and 1950s, Notestein developed a more formal theory of demographic transition. By 2009, the existence of a negative correlation between fertility and industrial development had become one of the most widely accepted findings in social science (UBOS, 2013). The transition involves four stages, or possibly five. In stage one, pre-industrial society, death rates and birth rates are high and roughly in balance. In

fact, growth rates were less than 0.05% at least since the Agricultural Revolution over 10,000 years ago. Population growth is typically very slow in this stage, because the society is constrained by the available food supply; therefore, unless the society develops new technologies to increase food production (e.g. discovers new sources of food or achieves higher crop yields), any fluctuations in birth rates are soon matched by death rates. In stage two, that of a developing country, the death rates drop rapidly due to improvements in food supply and sanitation, which increase life spans and reduce disease. The improvements specific to food supply typically include selective breeding and crop rotation and farming techniques (UBOS, 2013). Other improvements generally include access to technology, basic healthcare, and education. In stage three, birth rates fall due to various fertility factors such as access to contraception, increases in wages, urbanization, a reduction in subsistence agriculture, an increase in the status and education of women, a reduction in the value of children's work, an increase in parental investment in the education of children and other social changes. During stage four there are both low birth rates and low death rates. Birth rates may drop to well below replacement level as has happened in countries like Germany, Italy, and Japan, leading to a shrinking population, a threat to many industries that rely on population growth. As the large group born during stage two ages, it creates an economic burden on the shrinking working population. Some scholars break out, from stage four, a "stage five" of below-replacement fertility levels. Others hypothesize a different "stage five" involving an increase in fertility (Adawo&Atan, 2013).

The second theory is Keynesian Theory of Unemployment (1936). As per Keynes theory of employment, effective demand signifies the money spent on the consumption of goods and services and on investment (Hicks, 2015). The total expenditure is equal to the national income, which is equivalent to the national output. Therefore, effective demand is equal to total expenditure as well as national income and national output. The theory of Keynes was against the belief of classical economists that the market forces in capitalist economy adjust themselves to attain equilibrium. He has criticized classical theory of employment in his book. Vie General Theory of Employment, Interest and Money. Keynes not only criticized classical economists, but also advocated his own theory of employment.

His theory was followed by several modern economists. Keynes book was published post-Great Depression period. The Great Depression had proved that market forces cannot attain equilibrium themselves; they need an external support for achieving it. This became a major reason for accepting the Keynes view of employment (Keynes, 2012).

The Keynes theory of employment was based on the view of the short run. In the short run, he assumed that the factors of production, such as capital goods, supply of labor, technology, and efficiency of labor, remain unchanged while determining the level of employment (Leontief, 2015). Therefore, according to Keynes, level of employment is dependent on national income and output. In addition, Keynes advocated that if there is an increase in national income, there would be an increase in level of employment and vice versa. Therefore, Keynes theory of employment is also known as theory of employment determination and theory of income determination.

1.1.4 Contextual Perspective

Youth unemployment remains a serious policy challenge in many sub-Saharan African countries, including Uganda. In 2013, youth (aged 15 to 24) in sub-Saharan Africa were twice likely to be unemployed compared to any other age cohort. For Uganda, in 2012, the Uganda Bureau of Statistics revealed that the share of unemployed youth (national definition, 18-30 years) among the total unemployed persons in the country was 64 percent (Rowley & Feather, 2007). Given the rapid growth of the Ugandan population three-quarters of the population are below the age of 30 years coupled with the fact that the youth are getting better educated through higher access to primary and secondary education, a stronger focus on job creation for this cohort of people cannot be overemphasized. Causes of youth unemployment are believed to be multifaceted, ranging from an inadequate investment/supply side of jobs, insufficient employable skills (i.e., youth possess skills that are not compatible with available jobs) and high rates of labor force growth at 4.7 percent per annum (Mozaffarian et al., 2013).

Youth unemployment remains a serious policy challenge in many sub-Saharan African countries, including Uganda. In 2013, youth (aged 15 to 24) in sub-Saharan Africa were twice likely to be unemployed compared to any other age cohort (ILO, 2012). For Uganda, in 2012, the Uganda Bureau of Statistics revealed that the share of unemployed youth (national definition, 18-30 years) among the total unemployed persons in the country was 64 percent (ILO, 2012). Given the rapid growth of the Ugandan population three-quarters of the population are below the age of 30 years coupled with the fact that the youth are getting better educated through higher access to primary and secondary education, a stronger focus on job creation for this cohort of people cannot be overemphasized.

According to the International Labor Organization (ILO) definition, Uganda's measured unemployment rates are relatively low for the region though they have been increasing over time (from 1.9 percent in 2005/06, to 3.6 percent in 2009/10, and recently to 5.1 percent in 2012). At the same time, the characteristics of the unemployed vary widely. Urban youth are more likely to be unemployed (12 percent) than rural youth (3 percent). In addition, female youth are twice as likely to be unemployed compared to male youth (ILO, 2012). Interestingly, the report notes that unemployment increases with the level of education attained: Unemployment is lower among persons with no education and primary education, and higher among those with secondary education and above. This is not to negate the importance of education as it is widely known that education is a significant factor in securing good employment over time however, the more educated are biased towards wage-paying formal jobs, which are harder to find. Indeed, persons with education above the secondary level are more likely to be in wage employment (59.1 percent) compared to those with primary education (18 percent), and their earnings tend to be higher (ILO, 2012).

These low unemployment statistics may appear counterintuitive given the prevalent concern about youth unemployment in Uganda (ILO, 2012). The low measured unemployment figures do not necessarily signify a healthy labor market. For instance, a large proportion of youth have given up the search for jobs and are more likely to be discouraged than unemployed, and the official measured unemployment does not capture this. A better alternative would be to consider

the NEET (not in employment, education or training) population as a proportion of the youth population.

Nonetheless, with the increasing population rates, these initiatives only will not resolve the challenge of unemployment as well as the difficulties associated with it (ILO, 2012). Young people must have access to genuine skills training and education, but most importantly, their ambitions ought to be matched to the opportunities (Edwards, 2001). The correlation between youth unemployment and population is multifaceted. As populations continue expanding, concerted efforts must be made in order to evade the destabilizing factors that stem from inequitable growth and youth exclusion. To achieve this, Uganda must address the key systemic challenges behind unemployment through innovative economic policies.

Jones (2013) argued that education levels in the continent are also somewhat low, thus creating a significant skills gap amongst youth at employment age. The African Development Bank says that 61% of youth in Uganda are illiterate and in spite of an improvement in school enrollment, the problem of having a less skilled workforce will persist for quite some time. Even though young people in Uganda today have better education compared to their parents, this education has not enhanced their likelihood of getting a job. Actually, youth remain twice as unlikely to be employed as their seniors. This is largely because of an extensive mismatch between what skills youth have and the skills required for available job opportunities (Edwards, 2001).

1.2 Problem Statement

Youth unemployment is defined by the United Nations as 15-24 years old. An unemployed person is defined as someone who does not have a job but is actively seeking work. Youth unemployment rates are historically four to five times more than the adult rates in every country in the world (Andy 2012). In 2012, youth made up to 40% of the world unemployed, with a global youth unemployment rate of 12.6%. (Morsy&Hanan, 2012).Close to 75 million youth were unemployed in the worldwide (ILO, 2012).

Currently, youth unemployment continues to be a serious problem on the African continent, where the share of the population of young people between the ages of 15-24 is rapidly growing, but not in tandem with the job market. Uganda has one of the youngest and most rapidly growing populations in the world and preparing them for productive jobs is social and political priority for the government. About 53% of Uganda's population is younger than 15, well above sub-saharan Africa's averages of 43.2% about 500000 people are expected to enter the labor market every year, hence the number of new entrants into the labor force will be growing and will be younger in the next few decades, currently 64% of the unemployed are aged 24 and under (World Bank, 2015). In Uganda every year a total of 400000 youth are released in to the job market after graduating to a market that has only 90,000 jobs. That means that the rest of the youth who have graduated will have no jobs because the job market is small and therefore if the youth are not job creators then we will see many walking the streets looking for jobs that have been taken or are still occupied by people who need to have retired. And the national unemployment rate is at 3.2 percent and for the youth is at 22.3 percent.

As the Government of Uganda struggles to come up with effective programs geared at supporting the youth, a new report indicates that 62% of Uganda's youth are jobless (Action Aid International Uganda, 2013). The study titled; "Lost Opportunity" notes that the high unemployment rate among the youth poses a serious threat to the well-being of society. The study which was released in Kampala was done by Action Aid International Uganda (AAIU), Uganda National NGO Forum and Development Research and Training (DRT). The report stresses that the unemployed youth are likely to become a source of instability if government does not plan for them early enough. It appeals for urgent intervention to plan for idle youth population who are likely to become problem to the country's security.

1.3 Purpose of the Study

The purpose of this study is to investigate the relationship between the population growth rate and youth unemployment in Uganda.

1.4 Specific Objectives of the Study

i. To find out the long run relationship between the population growth rate and youth unemployment rate in Uganda.
ii. To establish Granger causality between Population growth rate and youth unemployment rate in Uganda.
iii. To determine the effect of population growth rate on youth unemployment rate in Uganda.

1.5 Research Questions

I. Is there long run relationship between population growth rate and youth unemployment rate in Uganda?
II. Does population growth rate granger cause youth unemployment rate in Uganda?
III. Is there significance effect of population growth rate on youth unemployment rate in Uganda?

1.6 Research Hypothesis

H_0There is no significant relationship between population growth rate and youth unemployment rate in Uganda.

H_0There is no granger causality between population growth rate and youth unemployment rate in Uganda.

H_0There is no significant effect of population growth rate on youth unemployment rate in Uganda.

1.7 Scope

This gives the coverage of the study in terms of geographical, theoretical, content and time scope.

1.7.1 Geographical Scope

This study was conducted in Uganda and it took place in whole the country from 1991 to 2014.

1.7.2 Theoretical Scope

The study was based on the theory of demographic transition and Keynesian Theory of Unemployment. The theory of demographic transition is based on an interpretation of demographic history developed in 2015 by the American demographer Warren Thompson (1887–1973). The second theory will be Keynesian Theory of Unemployment. As per Keynes theory of employment, effective demand signifies the money spent on the consumption of goods and services and on investment. The total expenditure is equal to the national income, which is equivalent to the national output. Therefore, effective demand is equal to total expenditure as well as national income and national output.

1.7.3 Content Scope

This study examined population growth in terms of birth rate, immigration rate and mortality rate and also it examined the youth unemployment in terms of unemployment rate from 1991 to 2014.

1.7.4 Time Scope

This study covered a period of 24 years that is from 1991 to 2014. This was because it was during this time period that the population growth of Uganda rapidly grew and fueling youth unemployment in the country.

1.8 Operational Definitions

a) **Youth unemployment**: is unemployment which is derived from labour force minus employed persons. Unemployment occurs when a person is able and willing to work but is currently without work. (Rowley & Feather, 2007).

b) **Gross Domestic Product**: The total market value of all final goods and services produced annually within the boundaries of a country (Adawo&Atan, 2013).

c) **Government Expenditure**: is the amount of government spends in particular period, and its includes all government consumptions investment and transfer payments. Government

expenditure helped to preserve large areas of natural land massive cuts in government expenditure (Nurudeen, A., &Usman, A. (2010).

d) **Population Growth Rate:** An increase in the number of people that reside in a country, state, county, or city. To determine whether there has been population growth, the following formula is used: (birth rate + immigration) – (death rate + emigration). Businesses and governmental bodies use this information to make determinations about investing in certain communities or regions and its measure population growth rate measures how fast the size of population is changing. Usually expressed as a percentage (Charles, 2010).

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The study reviewed literature from various scholars on the major variables of the study which included; theoretical Review, the variation of youth unemployment in Uganda, effect of population growth on youth unemployment, relationship between population growth and youth unemployment, empirical study and the research gap.

2.1 Theoretical Review

The researcher also chosen two theories; theory of demographic transition and Keynesian Theory of Unemployment since they provide a good theoretical framework for this research in relation to population growth and unemployment.

The theory of demographic transition is based on the actual population trends of the advanced countries of the world. The theory was developed by Warren Thompson in 2015. According to this theory, every country passes through three different stages of population growth. In the first stage, the birth rate and the death rate are high and the growth rate of population is low. In the second stage, the birth rate remains stable but the death rate falls rapidly (Slama&Tashchian, 2014). As a result, the growth rate of population increases very swiftly. In the last stage, the birth rate starts falling and tends to equal the death rate. The theory of demographic transition is the most acceptable theory of population growth. It neither lays emphasis on food supply like the Malthusian theory, nor does it develop a pessimistic outlook towards population growth. It is also superior to the optimum theory which lays an exclusive emphasis on the increase in per capita income for the growth of population and neglects the other factors which influence it (Coale, 2011). The demographic transition theory is superior to all the theories of population because it is based on the actual population growth trends of the developed countries of Europe. Almost all the European countries of the world have passed through the first two stages of this theory and are now in the final stage. Not only this, this theory is equally applicable to the developing countries of the world. Very backward countries in some of the African states are still

in the first stage whereas all the other developing countries of the world are in the transitional stage two. It is on the basis of this theory that economists have developed economic-demographic models so that underdeveloped countries should enter the final stage and attain the stage of self-sustained growth. Thus this theory has universal applicability (Sayer& Morris, 2007).

If, however, population still goes on increasing, that is, crosses the optimum point, output per capita will start declining. The economy would then become over-populated. Why does the output per capita fall when optimum point is exceeded? This is because there are now more men in the economy than are needed by it. A given amount of capital and natural resources have to be shared among a larger number of workers with the result that each of them has a smaller amount of equipment, materials and natural resources to work with. For this reason, the average productivity declines (Ang&McKibbin, 2007).

It is very likely that many people may not get employment and, therefore, add nothing to production. Pressure of population on land increases. But the additional men, who get employment in agriculture, add nothing to total production (Ang&McKibbin, 2007). In other words, marginal productivity of these extra men in agriculture is zero or nearly zero. This is what is commonly known as the phenomenon of disguised unemployment. Disguised unemployment exist s in over-populated agricultural economics from where even if some workers are withdrawn, total production does not fall.

Thus, low standard of living, open and disguised unemployment, and food problem are all signs of over-population (Adawo&Atan, 2013). It is clear that both under-population and over-population-have disadvan-tages. In both cases, the per capita income is lower than it would be in the case of optimum population. It is the optimum population with the highest per capita output which is the best for a country to aim at.

A fast-growing population aggravation the unemployment problem. Disguised unemployment in rural areas and a large-scale unemployment in urban areas is a common phenomenon in over-populated but under-developed economies. This means that a large number of people have to be

fed and clothed, but who make no addition to the country's output. This leads to the diversion of the country's resources away from economic development (Adawo&Atan, 2013).

The second theory is Keynesian Theory of Unemployment. With his book The Theory of Employment, Interest and Money (2015), Economist John Maynard Keynes (1883-2013) changed the way the world's perception of the workings of the economy. First, Keynes introduced the theory that the equilibrium is determined by aggregate demand. Aggregate Demand is the amount of goods and services all buyers demand at various prices (Sayer& Morris, 2007). According to Keynes, when there is increase demand in the economy, this will encourage companies to make more goods or provide more services.

As this book was published, his home country of Britain was going through the great depression. The inflation was through the roof and a lot of people were unemployed. As stated by Sayer, Classical Theorists saw the economy in terms of reduced prices and wages while Keynes saw it in terms of fall in production. Classical Theorists lived by the principle of "Lassez Faire"; for the government to allow the economy to resolve itself since it goes through a business cycle. As Hubert Humphrey would say, "Prosperity is just around the corner". After two years of living in their cars and not being able to afford a decent meal, the people began to see holes in this theory. Keynes objected to Lassez faire, saying that it will take too long for the economy to resolve itself and "In the long run, we are all dead." The people cannot wait for the economy to solve itself. Something had to be done now (Sauvy et al., 2014).

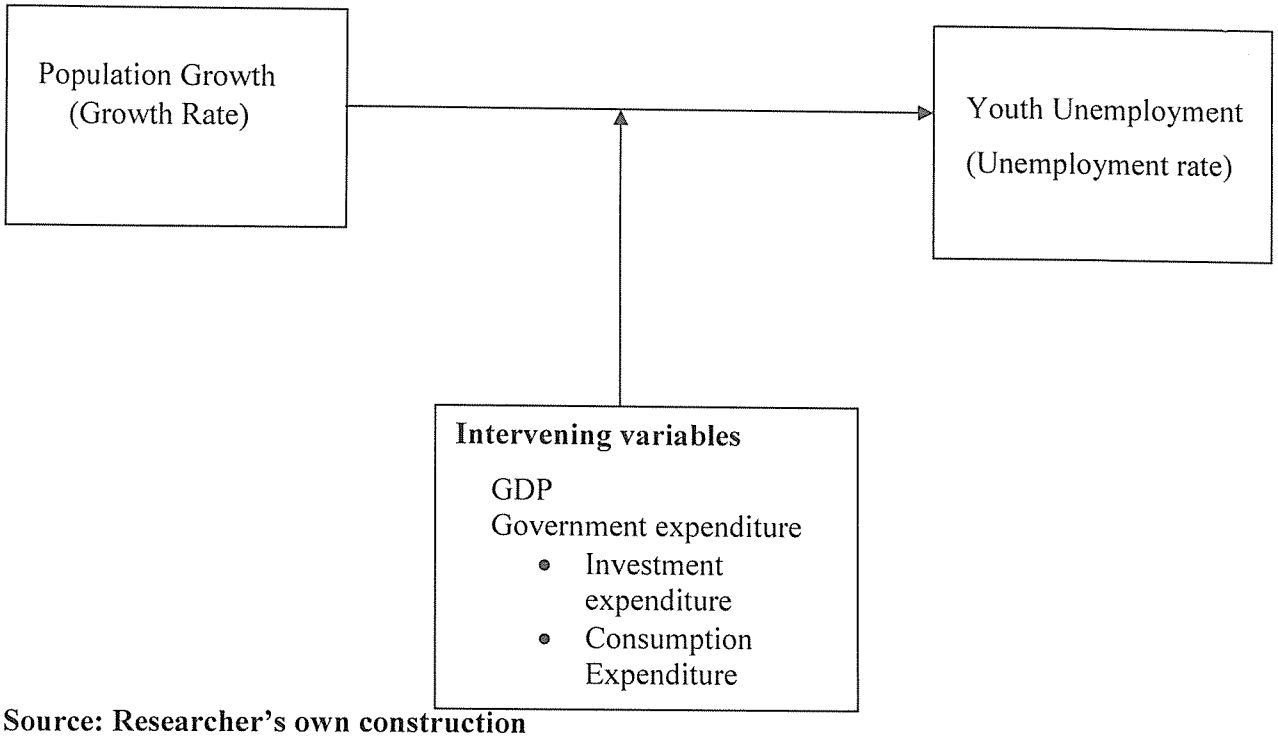
According to theory of competitive market economy, supply of labour and demand for labour are two invisible hands that determine employment in the labour market. Thus when the supply of labour is greater than the demand for labour, there would be excess labour. The excess labour represents unemployment. A number of factors determine the supply of labour in an economy. The chief among them is the rate of population growth. High rate of population growth is expected to increase the supply of labour and put pressure on the labour market (Fanati and Manfredi, 2013). Other factors that some experts describe as relevant determinants of unemployment are Government expenditure and economic growth. The theory above assumes that a high rate of economic growth may reduce unemployment as the entrepreneurs and state become more capable in this period. It was assumed and explained that there is a negative

relationship between economic growth and unemployment (Aqil, &Qadeer, 2014). The theory also assumes that government expenditure affects youth unemployment negatively. This is because as investors are attracted to the economy, more employment opportunities become available to the population. (Kwabena 2011)

A simple model is used to examine the variations in unemployment rate in relation to the above theoretical framework.

2.2 Conceptual Framework

Independent variable **Dependent variable**



Source: Researcher's own construction

The diagram shows the population growth was independent variable and it focused on growth rate whereas the dependent variable was youth unemployment which focused on unemployment rate. However this was intervened by GDP and Government expenditure (Investment expenditure and Consumption Expenditure).

2.3 Effect of population growth on youth unemployment

Rapid population growth increases various forms of unemployment. Although population growth has had a relatively small effect on open unemployment in developing countries, this fact does not demonstrate any demographic stimulus to job creation. It simply indicates that unemployment is not a feasible option for most people (UBOS, 2013).

It is likely to exacerbate income inequalities, particularly if many new young workers have little education. When a large proportion of workers are young and inexperienced, their productivity tends to be lower. Except for those who have more education than older workers, their starting wages will tend to be lower, and they must compete with each other. Relatively few will receive employer training to upgrade their skills (Duvander, 2001).

Several factors may be blamed for the prevalence of youth unemployment in Nigeria. There is a high population growth rate 3.5 percent per annum which accompanies an already large national population of over 167 million people. In addition, deficient school curricula and poor teacher training have contributed to the failure of educational institutions to provide their students the appropriate skills to make them employable (Wenk& Hardesty, 2011). Since schools in rural areas are generally more deficient in infrastructure, teaching facilities and teacher quality than schools in urban areas, this may help account for the high growth in rural unemployed youth. In fact, some experts suggest that the major jump in rural youth unemployment in 2011.

The effects of this twofold trend of rapid population growth and rising youth unemployment are especially visible in the late Maathai's own country, Kenya. Over the past half century, the number of people in Kenya is estimated to have risen from just over 6 million to about 44 million. Much of that growth may be attributed to the period between 1950 and 2014, when every Kenyan woman had an average of about eight children in her lifetime (Bloom & Freeman, 2012).

Kenya's vertiginous population rise has slowed since its mid-80s peak, but the country's total fertility rate remains relatively high, at 3.98 children for every woman. The UN's latest assessment of world population prospects suggests the number of people in Kenya will quadruple by the end of this century, climbing to just over 160 million (UBOS, 2013). Unless

things change, more will inevitably mean less for the east African republic's youth. Youth unemployment estimates vary wildly, but between 1.8 million and 10 million people aged between 15 and 34 are without work. A fourfold population increase is a sobering prospect.

Monteiro and Victora (2005), notes that although a growing youth population is a challenge, it cannot fully explain the unemployment figures in Africa. The figures instead are largely the result of specific economic and political contexts. Lack of investment in infrastructure and subsidy for sectors with potential for creating jobs for example, have created deep structural issues. In many cases, these issues predate the youth bulge (Adawo&Atan, 2013).

2.4 Relationship between population growth and youth unemployment

Sub-Saharan Africa has the fastest population growth projected between now and 2050 and the highest youth population in the world. It is crucial that governments factor this 'youth bulge' into national and social development planning (UBOS, 2013). Youth employment challenges in Africa are often associated with rapid population growth rates. The correlation however is not always direct, nor that simple. First, the youth bulge has not created an even unemployment rate throughout the continent. Second, it is not the numbers of young people that has created unemployment, but structural issues specific to individual countries.

As described by the United Nations Conference on Trade and Development, the LDCs represent the poorest and weakest segment of the international community. Extreme poverty, the structural weaknesses of their economies and the lack of capacities related to growth, often compounded by structural handicaps, hamper efforts of these countries to improve the quality of life of their people (Dollar &Kraay, 2001).

Predictably, between now and 2050, the working-age population of the LDCs will increase by an annual average of about 15 million, and the labour force of the LDCs will increase by about thousand per day over the next forty years, on average. Most of the youth are absorbed in the already occupied informal sectors waiting to get an opportunity in the formal sector, notwithstanding the gender dimension inherent in these countries with unemployment, underemployment and vulnerable employment. This is especially pervasive amongst younger entrants in the labour market and amongst those with lower educational attainment (Berg, 2012).

2.5 Empirical Studies

Afzal (2009), for many years development economists and social scientists have disputed the seriousness of the consequences of rapid population growth. Firstly, Population growth is not a problem but there are other issues. Underdevelopment, and not population growth is the genuine problem. As long as greater parts of the people in the developing countries remain poor, uneducated and physically weak, large family will constitute the only real source of social security. Population control programs are not expected to succeed when there is no incentive for the poor families to limit the family size. Population can only be an economic problem relative to the supply of natural and material resources. Developed countries with less than one-quarter of the world population consume 80% of the world resources. The higher fertility of the developing countries is the result of "over-consumption" of the world scarce resources by the rich countries.

Empirical evidence divides the negative consequences of population growth into seven categories. Rapid population growth lowers per capita income growth in most LDCs. The poor bears the brunt of the negative effects of population growth. They become landless, face loss in jobs, and the government reduction of expenditure on education and health. It is generally agreed that large family size and low incomes limit the opportunities of parents to educate all their children. High fertility harms the health of mothers and children. Rapid population growth generates food security problem and contributes to environmental degradation in the form of deforestation, soil erosion, unsafe water, air pollution and urban congestion. Rapid population growth is the major factor causing increasing international migration both legal and illegal.

The arguments which stated by Afzal (2009) carry some weight but this need to be weighed against the counter arguments of those who believe that rapid population growth is a real problem for LDCs (less developed countries). Coale A. et al (1958), one view is that all of the world's economic and social problems result from excessive population growth. The advocates maintain that population control or even decline is the most urgent task of the LDCs even if it requires severe and coercive measures like compulsory sterilization in South Asian Countries. Economists argue based on population-poverty cycle theory that rapid

population growth gives way to negative economic consequences and this should be a real concern for the developing countries because population growth retards prospects of a better life for the already born by reducing savings rate at the household and national levels.

The empirical literature has attempted to measure the contributions of several theoretical factors which can be grouped as demographic (related to labor supply), macroeconomic (related to aggregate demand) and institutional (rigidity) factors including also in their analyses, the interaction of these factors with one another (Blanchflower& Freeman, 2000; O'Higgins, 2001 & 2003; Muller &Gangl, 2003; Freeman & Wise, 1982; Blanchard &Wolfers, 2000; Biagi&Lucifora, 2007; Korenman and Neumark, 1997 & 2000, Baccaro&Rei, 2005; Neumark and Wascher, 2007; Jimeno& Rodriguez-Palenzuela, 2002; Scarpetta, 1996). Evidence with regard to the role of institutional factors, such as the presence of unions, is not consistent and recent studies argued that altogether they may not have a significant role in determining youth employment and unemployment (Bell &Blanchflower, 2009; Baccaro&Rei, 2005).

Testing the role of the changes in population age structure, controlling for macroeconomic conditions, had been particularly relevant for advanced countries which experienced sharp declines in the size of the youth populations in the 1980s and 1990s (Korenman and Neumark, 1997 & 2000). These changes were supposed to be favorable toward labor market outcomes of youth (Korenman and Neumark, 1997 & 2000). Korenman and Neumark (1997, 2000), having observed deteriorating outcomes for youth during these two decades and early in the 1990s, tested the impact of these variables on youth labor market outcomes in a set of advanced countries to explicate whether in reality the decline in size of the youth population had played a role in the variation of youth labor market outcomes controlling for macroeconomic conditions. Their results suggested that these factors still played a role in determining youth unemployment outcomes, but that aggregate demand factors played a more important role (Korenman&Neumark, 1997, 2000). Korenman and Neumark (1997, 2000) argued further that the impact of yet another set of factors, such as structural changes taking place within advanced economies, may have dominated other factors throughout this period; and if it weren't for positive demographic changes, the youth labor market outcomes could have been worse. Many developing countries went through similar demographic trends in their population age structures

(declines in the relative size of the youth cohorts) in the 1990s and 2000s; these declines are expected to continue in the next few decades (Lam, 2006). Evidence with regard to the role of the changes in population age structures on youth labor market outcomes in developing countries is weak both due to the limitations of data and the appropriateness of the methods used

This study builds on the work of Korenman and Neumark (1997, 2000) and tests the impact of changes in the population age structure (defined by the relative size of the youth population to adult population) on youth employment and unemployment, controlling for changes in the aggregate economy (defined by changes in adult labor market outcomes). The study uses data from the Key Indicators of the Labor Market, published by the ILO, and the World Bank Development Indicators as well as panel regressions covering a span of 22 years and two sets of countries which are grouped as 18 economically advanced countries, and 23 developing and transition countries.

Very few studies examine youth unemployment or issues related to the employment of youth in Turkey considering the size of the problem (Yenturk&Baslevent, 2007). Most existing studies are descriptive in that they lay out statistics on youth employment or unemployment. The unavailability of micro data until recent years and the challenging nature of the structure of the data that are available have hindered comprehensive studies of the factors which impact the distribution of employment and unemployment among youth. United Nations Development Program (2008, p. 8) stated that Turkey needs an articulate youth employment strategy. This would involve: "identifying the specific features, constraints and opportunities which matter most in terms of employment creation," and "new and more specific employment policies, geared towards the needs of the young" (UNDP, 2008, p. 8). The study of Turkey as part of this dissertation is an attempt to first identify these specificities in order to contribute to the definition of the issues around youth employment and unemployment, and thereby contribute to the construction of employment policies for youth in Turkey, taking into account international and local dynamics.

The empirical literature identifies several demographic and background factors which primarily derive from human and social capital theories, as well as spatial factors, that affect the probability of individual employment and unemployment at youth. Studies conducted in different countries show that one's own educational background, gender,family factors (such as parent education or sibling employment status) are among those which are worth examining (Osterman, 1980; Freeman & Wise, 1982; McDermott, 1995; Ianelli& Smyth, 2008). Using the Turkish Household Labor Force Survey for 2008 and hierarchical logistic regressions, this study tests whether these demographic and family background factors have a significant role in explaining youth labor market outcomes of Turkish youth controlling for structural characteristics of the regions in Turkey.

A major aggregate determinant of youth unemployment is related to the size of the youth labor force (Macunovich, 1999; Shimer, 2012; Korenman&Neumark, 1997, 2000; O'Higgins, 2001 & 2003; Jimeno& Rodriguez-Palenzuela, 2002; Yenturk&Baslevent, 2007). Holding other factors constant, a greater number of people in the labor market mean a greater number of jobs required to accommodate them. Studies have shown that the relative size of the youth cohort to the adult population has a significant impact on youth unemployment; however, the aggregate labor market conditions have more impact (O'Higgins, 2001 & 2003, p. 45; Blanch flower& Freeman, 2000; Muller &Gangl, 2003, p. 271; Korenman&Neumark, 1997 & 2000; Yenturk&Baslevent, 2007).

Differences were detected when the impact of youth labor cohort were analyzed separately for the two genders (O'Higgins, 2001; Yenturk&Baslevent, 2007). The elasticity of female youth unemployment with respect to the relative cohort size is greater than that of males (O'Higgins, 2001). Although the actual size of the youth labor force is expected to increase in many of the developing countries, the relative size of the youth cohort is expected to decrease in the coming decades (O'Higgins, 2001). O'Higgins (2001) argued that the real challenge then is augmenting the employment content of economic growth.

The relevance of demographic changes at explaining youth unemployment is somewhat controversial. Korenman and Neumark (2000), using pooled cross- country data for some OECD countries, estimate the elasticity of the youth un- employment rate with respect to the youth cohort size to be around 0.5. Shimer (2001) challenges this result showing that across US states a higher share of the youth population decreases unemployment. Ahn, Izquierdo, and Jimeno (2000) argued that, across Spanish regions, there seems to be a close positive relation- ship between the relative size of the youth population and youth unemployment. Bertola, Blau, and Kahn (2002) show that demographic shocks (i.e., changes in the youth population share) interacted with labour market institutions contribute to explaining the di□erence in the aggregate unemployment rate and in the relative employment rates of young and female workers between the US and some EU countries.

Ang&McKibbin (2007) noted that Sub-Saharan Africa has the fastest population growth projected between now and 2050 and the highest youth population in the world. It is crucial that governments factor this 'youth bulge' into national and social development planning.

Youth employment challenges in Africa are often associated with rapid population growth rates. The correlation however is not always direct, nor that simple (Asteriou& Stephen, 2007). First, the youth bulge has not created an even unemployment rate throughout the continent. Second, it is not the numbers of young people that has created unemployment, but structural issues specific to individual countries.

At a flat rate of 11.9% in 2012 and 2013 as reported by the International Labour Organisation, compared to the current global average of 13.1%, Africa does not have high levels of youth unemployment (Berg, 2012). However due to the size of the continent, and different degrees of urbanization and shifts in economic activities, it is very difficult to generalize.

Bloom & Freeman (2012) noted that despite being a leading economy in sub-Saharan Africa, with almost 50% of unemployed youth, South Africa has one of the highest levels of youth unemployment in the region. Similarly, although Nigeria's 13% youth unemployment is not well above the regional average, due to the large size of its population (around 170 million), the actual number of unemployed young people is high. On the other hand, small and land-locked Rwanda

has one of the lowest youth unemployment rates globally, according to statistics from the World Bank (Bollerslev, 2012).

Although a growing youth population is a challenge, it cannot fully explain the unemployment figures in Africa (Burnham & Anderson, 2004). The figures instead are largely the result of specific economic and political contexts. Lack of investment in infrastructure and subsidy for sectors with potential for creating jobs for example, have created deep structural issues. In many cases, these issues predate the youth bulge.

In South Africa, for example, the mining sector employs roughly 400 thousand people with many more indirectly depending on the sector (Byerlee, 2013). However a series of retrenchments have caused the loss of thousands of jobs. Meanwhile, the agricultural sector, employing millions of people, is not subsidised by government and is struggling to meet wage expectations.

Levels of education in Africa are comparatively low creating a considerable skills gap among youth at working age (Census Bureau, 2010). According to the African Development Bank, 25% of African youths are still illiterate and despite a rise in primary school enrolment from 60% in 2000 to 77% in 2011, the issue of low skills levels in the workforce will continue to be a problem.

Although young people today are better educated than their parents, this has not lifted their prospects of finding a job (Chauvel, 2010). Youth remain almost twice as likely to be unemployed than their elders. This is partly because of a mismatch between their skills and what is required for available employment opportunities.

Some countries are introducing initiatives to help address some of the issues resulting from the skills gap (Cheung & Lai, 2011). In Senegal, through the Agenced' Exécution des Travauxd'Intéret Public, unemployed youth are trained through temporary work on public infrastructure before getting permanent jobs. Similarly in Burkina Faso, through a modernized apprenticeship system, students both attend school and work as apprentices to learn industry specific skills.

Nevertheless, with rising numbers of people, these initiatives alone will not solve the unemployment challenge and the difficulties that come with it (Clark & Summers, 2014).Young people need genuine education and skills training but crucially their ambitions need to be matched with opportunities. In Tanzania, for example, due to the small size of the country's formal sector, there is a higher unemployment rate amongst individuals who have received secondary education than amongst those with lower education. By 2050, Tanzania's population is projected to reach 138 million, making it the 13th most populous country in the world.

(Coale, 2011). Currently, half of Tanzania's population is under 15 years of age. This presents a structural challenge as the formal sector will need to expand at a much faster rate to accommodate the rising demand for jobs.

The relationship between population and youth unemployment is complex (Curtain, 2004). As populations expand, a concerted effort needs to be made to avoid the destabilizing factors that result from youth exclusion and lack of equitable growth. To do this, African countries need to address the systemic issues behind the problem through transformative economic policies and social sector spending.

2.6 Research gap

Research has showed evidence that in low-income countries youth will continue to be absorbed in agriculture, non-farm informal jobs, or self-employment. But analytic work tends to focus on formal employment in the urban areas, where political interest and the data can be found. We therefore know very little about the functioning of informal and agricultural labour markets, and even less about the youth- specifics of these labour markets. As discussed at the start of this section, investing in youth labour market data is an important first step in aiding policy and program design. Improving data infrastructure in LICs, in cooperation with their local statistical offices, is furthermore likely to increase attention to the labour market situation of vulnerable youth. Even where policies can be and have been evaluated, impacts of interventions on non-targeted groups, spillover effects, and other general equilibrium effects are extremely hard to assess. One example comes from a job placement assistance program for young graduates in France. Evidence from a randomized implementation showed that the increased employment of

program participants was transitory, and partly came at the expense of eligible youth who did not participate (Crepon et al., 2012). This illustrates how the direct impact of an intervention on its beneficiaries can be very different from the overall net impact. Finally, a number of youth employment determinants and relatively new policy areas and programmes remain particularly understudied. Examples are the role of urbanization and the location of jobs, new technologies in production and in job search, micro franchising for stimulating entrepreneurship, and green growth strategies.

Research shows that in most developing countries there is also increased population growth rate which destabilizes the level of youth's unemployment (Chauvel, 2010). This is mostly contributed by uncontrolled rapid population growth especially in developing countries and thus leading huge numbers of youths though with quite good qualifications but cannot find appropriate jobs in the economy. In addition, the theory of demographic transition and Keynesian Theory of Unemployment fails to disclose that it is sometimes not realistic especially in African context due to ever increasing population.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter dealt with practical procedures which were used in carrying out this study. It gives details of the research design adopted, data sources, research techniques, model of specification, regression model, unit of measurements, ethical consideration, ascriptions of authorships, limitation of the study and diagnostic tests.

3.1 Research Design

The study used descriptive, correlation and longitudinal design. This study employed the Quantitative research approach. This was because on the nature of the research problem, objective and the type of research hypotheses. Thus it was an appropriate research design type to collect, analyze interpret and present all the necessary Data for the mentioned problem statement.

3.2 Model Specification

According to theory of competitive market economy, supply of labour and demand for labour are two invisible hands that determine employment in the labour market. Population growth and youth unemployment refers how to correlate the population growth and youth unemployment in Uganda, the factors that influence growth domestic product (GDP growth rate) and government expenditure.

From the above theoretical frame work, the functional form of the model linking the dependent variable of youth unemployment to the dependent variables is specified as:

$$Yenmpt_t = f(pop_t,\ GDPgrowth,\ GEX) \quad \text{.....(3.1)}$$

The above compressed equation can also be expanded to come up with the following regression equation for instance;

$$Yenmpt_t = \alpha + \beta_0 pop_t + \beta_1 GDPgrowth + \beta_2 GEP \quad \text{.....(3.2)}$$

Where:

$yunept_t$ = Youth Unemployment in millions

$Popn_t$ = Population rate in millions

GDP growth = Real Gross domestic product growth rate in US dollars (millions)

GEX = Government expenditure in US dollars (millions)

α_o = constant

t = The subscript used to represent the time component in the model summarizing the year when the data was collected. α, β =These regression coefficients representing the causal relationships between the dependent variables and each of the independent variables in the model.

ε =The error term also called the stochastic error term is used to represent all the other variables that may not be directly represented in the model due to the scope but could have an inference on the model.

3.3 Data Sources

Youth unemployment is the dependent variable used and the data was obtained from world development indicator by World Bank. The data of population growth was obtained from Uganda Bureau of Statistics. The data for GDP and foreign direct investment was obtained from the world development indicator by World Bank.

3.4 Research Techniques

The study follows Johansen (2012) and Johansen and Juselius (2012) Cointegration technique. The technique establishes the long run relationship between variables. The first task is to make sure that the data is integrated of the same order. This is done by using unit root tests to examine the stationary of data sets. Thus, the variables are subjected to the Dickey Fuller (DF) and the Augmented Dickey-Fuller (ADF) unit root tests.

3.4.1 Time Series Analysis

In this study, time series data were used to analyze the relationship between population growth and youth unemployment in Uganda for the period 1991-2014. In econometric analysis, when time series data are used, the preliminary statistical step is to determine the order of integration of each time series used. A time series Y_t is stationary if its probability distribution does not change over time, that is, if the joint distribution of (Y_{s+1}, $Y_{s+2...}$, Y_{s+T}) does not depend on s; otherwise, Y_t is said to be non-stationary. If the series is not stationary, then inference procedures are invalid. Results derived from the regression models would produce spurious results if non-

stationary data is used. Therefore, the first task is to check for the existence of stationary property in the series of population growth and youth unemployment. To check the stationary of the data the Augmented Dickey-Fuller (ADF) test is applied.

3.4.2 Testing for Stationarity

The assumptions of the Classical regression model necessitate that both the dependent and independent variables be stationary and the errors have a zero mean and finite variance. Non stationary variables results in spurious regression and as Granger and Newbold (2013), argued they are characterized by a high R^2 and a low Durbin-Watson (*dw*) statistic, t-and F-statistics that appear to be significant, but the results derive no any economic sense (Verbeek,2012). The results "looks good" because the least-squares estimates are not consistent and the customary test of statistical inference do not hold (Enders, 2011).

In addition, a series is said to be integrated and is denoted as I (d), where d is the order of integration. The order of integration refers to the number of unit roots in the series, or the number of differencing operations it takes to make a variable stationary (Takaendesa, 2004). In particular, as shown in Phillips (2012), the ordinary least squares estimator does not converge in probability as the sample size increases, the t-and F- statistics do not have well-defined.

3.4.3 The Augmented Dickey-Fuller (ADF) Test

The Augmented Dickey-Fuller (ADF) test for autoregressive unit root tests the null hypothesis

H_0: $\mu=0$ against the one sided alternative H_1: $\mu< 0$ in the regression

$$\Delta Y_t = \beta_0 + \mu Y_{t-1} + \delta_1 \Delta Y_{t-1} + \delta_2 \Delta Y_{t-2} + \cdots + \delta_p \Delta Y_{t-p} + u_t \qquad (1)$$

Under the null hypothesis $\mu=0$, Y_t has a unit root; under the alternate hypothesis, Y_t is stationary. The ADF statistic is the OLS t-statistic testing $\mu=0$ in the equation above. If instead the alternate hypothesis is that Y_t is stationary around a deterministic linear time trend, then this trend t (the period number), must be added as an additional regress or in which case the Dickey-Fuller regression becomes

$$\Delta Y_t = \beta_0 + \alpha t + \mu Y_{t-1} + \delta_1 \Delta Y_{t-1} + \delta_2 \Delta Y_{t-2} + \cdots + \delta_p \Delta Y_{t-p} + u_t \qquad (2)$$

Where

t is the time index,

α is an intercept constant called a *drift*,

β is the coefficient on a time trend,

γ is the coefficient presenting process root, i.e. the focus of testing,

p is the lag order of the first-differences autoregressive process,

u_t is an independent identically distributes residual term.

The ADF statistic is the OLS statistic testing $\mu=0$ in the above equation. The lag length p can be chosen using the Akaike's Information Criteria (AIC) because it is known as the best information criteria to use. Burnham and Anderson (2004), argue that AIC has a theoretical as well as practical advantage because it is derived from principles of information criteria. Yang (2005), also argues that the rate at which AIC converges to the optimum is the best possible. The general form for calculating AIC is

$$\text{AIC} = \frac{2p}{T} - \frac{2lnL}{T}$$

Where L is likelihood value, p is the number of parameters and T is number of observation. Given a set of candidate values for the data, the preferred value is the one with the minimum AIC value.

3.4.4 Cointegration

Regression of one non-stationary variable on another is very likely to yield impressive-seemingly results which are wholly spurious (Mukherjee et al., 2015). In general, if two time series variables are both non-stationary in levels but stationary in first-differences, they are integrated of order 1, I (1), then there could be a linear relationship between them which is stationary, I(1) and as such all the series of interest should be integrated of the same order, preferably I(1).The two time series variables that satisfy this requirement are considered to be co integrated. Variables are co integrated with one another if the residuals from the levels regression are stationary. These co integrated variables must have an error correction representation in which an error correction term (ECT) must be incorporated into the model.

3.4.5 Granger Causality Test

Granger Causality test examines whether lagged values of one variable helps to predict another variable. Granger causality means that if one variable for example in our study, population growth granger causes, youth unemployment, then population growthis a useful predictor of youth unemployment whereas past values of youth unemployment do not help to predict population growth when controlling for past values of youth unemployment. Therefore, in the VAR model we can identify whether population growth predicts youth unemployment using Granger Causality test. As it is hard to interpret parameters of VAR model directly, it is common to use the Impulse Response Function and Forecast Error Decomposition of the variables.

3.4.6.0 Diagnostic Tests

3.4.6.1 Normality Test

In the literature, there are several tests for normality such as histogram of residuals normal probability plot (NPP), Anderson–Darling and Jarque–Bera tests. The Jarque–Bera test for normality is employed in this research. The Jarque - Bera test is a test based on OLS residuals mainly used in a large sample test. First, it requires calculating the Skewness and Kurtosis and then measures the OLS residuals. In this case, we used the *JB* test to determine whether the residuals are normally distributed or not. The null hypothesis and the alternative hypothesis are given as

H_0: Residuals are normally distributed

H_1: Residuals are not normally distributed

Under the null hypotheses where the residuals are normally distributed, if the *p*-value of the statistics is sufficiently low or lower or equal to the level of significance, then it will be rejected. But if the *p*-value is found to be reasonably higher, then the normality assumption will not be rejected. In other words, the normality assumption is not rejected mostly when the value of the statistic is close to zero. The Jarque–Bera test statistic follows the chi square distribution with two degrees of freedom (Jarque&Bera, 2013).

3.4.6.2 Serial Correlation Test

Serial Correlation is a correlation among members of the series of error terms ordered in time. It is mainly caused by incorrect functional forms, auto regressions, manipulation of data, data transformation and non-stationarity of the data (Wooldridge, 2009).

The problem of serial correlation can be detected using the graphical method, Geary test, Durbin - Watson *d* test and Breusch–Godfrey (BG) test. In this study, the BG test that is based on the Lagrange Multiplier principle is chosen since other tests have drawbacks that made the BG test to be favored. Though the graphical method is powerful and suggestive, its detection power is more of a qualitative nature than others making it less preferred. The drawback of the Geary test is that it has no assumptions about the probability distribution from which the observations are drawn. The Durbin-Watson test on the other hand, is not applicable when a lagged dependent variable is used as one of the explanatory variables. For the reason that the lagged value of Population growth may be used as one of the explanatory variables in the model, the Durbin –Watson test cannot be applied (Gujarati, 2015). Due to these reasons the Breusch–Godfrey (BG) test of serial correlation is the best option at hand.

3.4.6.3 Heteroscedasticity Test

As mentioned in Asteriou and Stephen (2007), heteroscedasticity is a Greek word, hetero means different and scedasticity means variance to sense the word different variance. One of the Classical Linear Regression Model (CLRM) assumptions is that the variance of disturbance terms is constant. As pointed out by Engle (2014), in this time series analysis, the problem of heteroscedasticity can be captured using Autoregressive Conditional Heteroscedasticity (ARCH) test. The null hypothesis is that there is no heteroscedasticity. The null hypothesis is rejected if the *p*-value is less than or equal to this level of significance (Bera& Higgins, 2011).

3.4.6.4 Multicollinearity Test

Multicollinearity is said to exist in a situation where the independent variables are highly and strongly related to each other in a given model. Given the fact that this research involves the use of more than one independent variable, there need to test and detect if there is problem of Multicollinearity.

All these tests we conducted at 5% level of significance apart from regression which we conducted at 10% level of significance.

3.5 Ethical Consideration

The following strategies were adopted to ensure the moral justification of the investigation.

3.6 Ascriptions of authorships:

The researcher accurately attributed to the sources of information in an effort to celebrate the works of past scholars or researchers. This ensured that no plagiarism occurred.

3.6.1 Scientific Adjudication

The researcher works according to generally acceptable norms of research.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION OF RESULTS

4.0 Introduction

In the preceding chapter, methods of analyzing the population growth rates, as well as the long-run relationships between population growth rate and youth unemployment rates have been discussed. In addition, the Ordinary least square (OLS) technique is discussed to in an attempt to find out the impact of population growth rate on youth unemployment rate. Furthermore, econometric techniques that are discussed in the previous chapter are employed in this chapter and the results are discussed in detail.

The initial part of this chapter deals with descriptive summary of the data. This can be used to evaluate the scores of each variable for more advanced statistical analysis and the data can easily be understood in the form of tables and graphs.

In the next sub-sections of the chapter unit root tests are performed using the Augmented Dickey Fuller (ADF) test and the Phillips (2012) test. The results of these stationarity tests will then lead to the testing of long-run relationships between the variables understudy. The long-run relationship is captured using Johansen co-integration tests.

4.1.0 Descriptive Summary

Table 4.1.1: The summary statistics for the series of the data set

Statistic	POP RATE	YUEMPT RATE	GEX	GDPgrowth
Mean	3.204167	5.450000	12.00458	6.733333
Median	3.201200	5.150000	12.18000	6.450000
Maximum	3.300000	7.201200	16.79000	11.50000
Minimum	3.201200	3.400000	7.870000	3.100000
Std. Dev.	0.075096	1.171027	2.576351	2.344961
Skewness	-0.065274	0.202453	-0.025642	0.263933
Kurtosis	1.853548	1.863656	2.025166	2.186551
Jarque-Bera	1.331396	1.455226	0.952931	0.940341
Probability	0.513915	0.483061	0.620974	0.624896
Observations	24	24	24	24

Source: Author (2016)

Where;

POP rate is the population growth rate

YUEMPT RATE is the Youth unemployment rate

GEX is the Government expenditure

GDP growth is the Gross Domestic product growth rate

Descriptive statistics were used to compare the means, standard deviation, skewness, kurtosis and normality of population growth rate, youth unemployment rate government expenditure (GEX) and Gross Domestic product (GDP). Table 1 shows that the average of population growth rate is 3.204167 and its median value is 3.2. These two values are close to each other indicating minor symmetry with the variable.

A closer look at the remaining variables in the above table shows that all the means of the variables are very closer to their median values. This can show that there is minor symmetry in each of the variables above.

The maximum and minimum values of the series are also given for each series under the row maximum and minimum, respectively. Looking standard deviation, it measures of dispersion around the mean in the series. Interpreting standard deviation of the series in absolute terms, the distribution with smaller standard deviation exhibits less dispersion and larger standard deviation shows higher dispersion. Accordingly, in Table 1, population growth rate is a less dispersed series with the value of 0.075096 while GEXhas the highest dispersion with a value of 2.576351.

Symmetry of the distribution of the series around the mean is measured by skewness. For a distribution to be considered Symmetric it should have a zero skewness value. Thus, by observing the row of skewness from the above table only GEX is negatively skewed with a value of -0.025642, otherwise the rest of the variables seem to have symmetric distribution because their values are not far from zero.

The row under kurtosis in the above table, measures flatness and peakedness of the distribution is measured by kurtosis of a series. For a distribution to be considered normal it should have a kurtosis value of 3 and hence all our variable under study have digits that are no kurtosies.

The null hypothesis of JarqueBera (JB) test for normality normal distribution cannot be rejected for all variables.

4.1.2 Unit Root Test Results Using the ADF test

This section involves testing for the stationarity of the individual variables using Augmented Dickey-Fuller test. Table 4.1.2 indicates the unit root test results performed in this study-following both the ADF test. A maximum number of 5lags were used for the ADF tests (as determined automatically by E-views statistical package).

Table 4.1.2.1: ADF Test Results at level for Intercept, then Trend and Intercept

ADF TEST RESULTS AT LEVEL							
Variable	**Intercept**	**Critical value at 5% level of significance**	**P-value**	**Trend and intercept**	**critical value at 5% critical value**	**P-value**	**Decision**
POP	-3.06245	-2.998064	0.0439	-5.54230	-622033	0.0009	reject the null
Yunempt	1.964949	-2.998064	0.2990	3.44681	-3.6220	0.069	Do not reject the null
GEX	-1.37756	-2.998064	0.5751	-1.68205	-4.41635	0.7263	Do not Reject the null
GDPgrowth	4.075034	-2.998064	0.0048	4.000194	-3.622033	0.0237	Reject the null

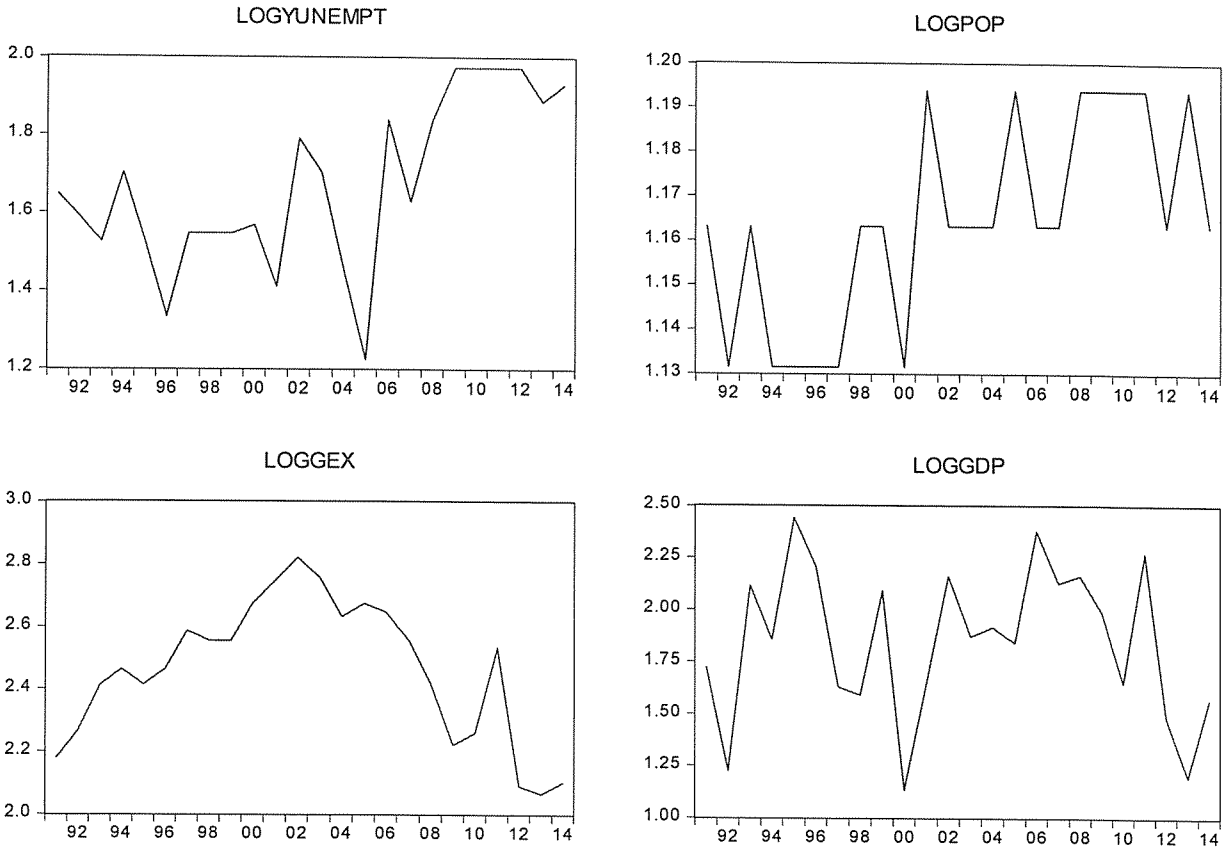
Source: Author (2016)

The dependent variable youth unemployment rate (yunept) and independent variable of government expenditure were found to be the non-stationary in their level form. This can be seen by observing the values of the Augmented Dickey-Fuller (ADF) test with the critical values of the test statistics at all 0.05 level of significance. Therefore, the Null-Hypothesis is not rejected

and thus it is sufficient to conclude that there is unit root in the variable youth unemployment in their level form. As a result, these variables was differenced once and both the ADF test was performed on them as indicated in table 4.1.2.2

On the other hand, the independent variables of Gross Domestic Product growth (GDP) and population growth rate were found be stationary in their level forms as indicated in Table 2. Comparing the observed values of both the Augmented Dick-Fuller test (ADF) with the critical values of the test statistics revealed that all these two independent variables were stationary at level, and thus the Null-Hypothesis of non-stationarity is rejected followed by the conclusion that all these variables are stationary at level.

Figure 4.1.2.1: Showing non-stationarity in variables at level



Source: Author (2016)

Table 4.1.2.2: ADF Test Results at First difference for Intercept, then Trend and Intercept

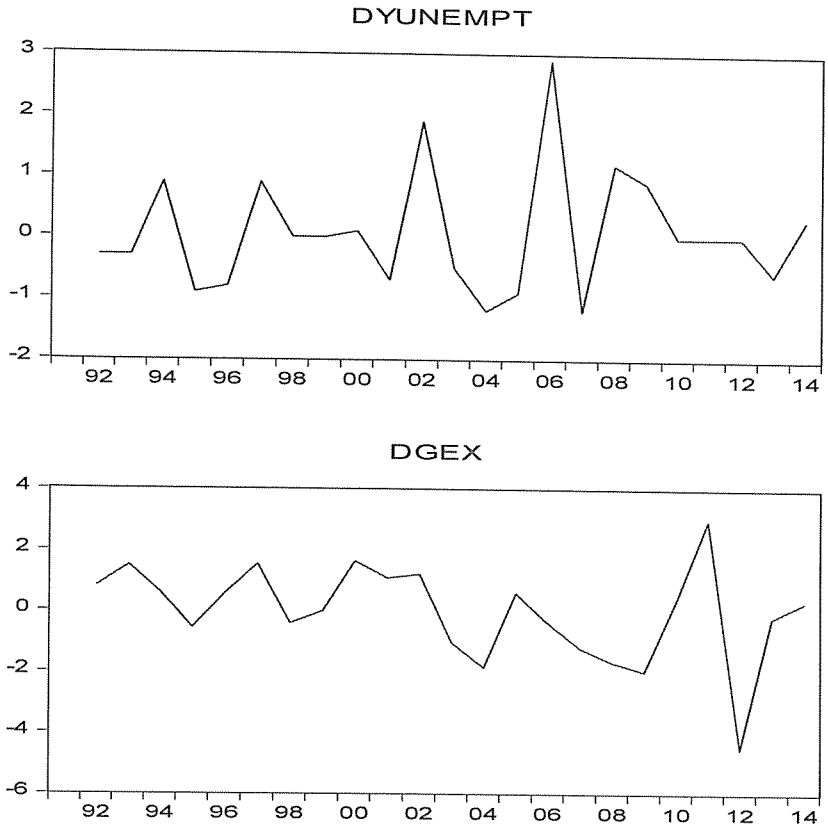
ADF TEST RESULTS AT FIRST DIFFERENCE							
Variable	**Intercept**	**Critical value 5%**	**P-value**	**Trend and intercept**	**critical value 5%**	**P-value**	**Decision**
Pop rate	-5.665836	-3.012363	0.0002	-5.5423	-622033	0.0000	Reject the null
YUENPT	-6.677644	-3.004861	0.0000	-6.56884	-3.632896	0.0001	Reject the null
GEX	-4.709509	-3.004861	0.0012	-5.11696	-3.644963	0.0027	Reject the null
GDP rate	-5.19289	-3.012363	0.0005	-5.20063	-3.644963	0.0023	Reject the null

Source: Author (2016)

All the variables that were found to be non-stationary at level become stationary when they were differentiated once, and thus the Null-Hypothesis of non-stationarity was rejected followed by the conclusion that all these variables became stationary or have no unit root.

Having known that our even the variable that was non-stationary at level but become stationary at first difference, it implies that they qualify for Cointegration. For Cointegration to be applied at least one variable should be non-stationary at level but become stationary at first difference and thus Cointegration was applied.

Figure 4.1.2.2: Showing Stationarity in variables after first difference



source: Author (2016)

4.2 Results of the long run relationship between population growth rate and youth unemployment rate in Uganda.

In the Johansen's co-integration approach, similar to the Engle-Granger approach of co-integration the first step is to check for stationarity of the concerned variables in the study. As discussed in subsection earlier, variables that are relevant for this study are found to be integrated in different orders, i.e., some are I(0) and others I(1). Given that all variables become stationary at their first order, it became the most desirable case in order to continue with the Johansen's approach of co-integration test.

The test is performed in order to determine the existence of co-integration between youth unemployment rate (Y) and the independent variable of population growth rate.

Table 4.2.1: Showing Cointegration results of the variables under study

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.292783	9.103546	15.49471	0.3559
At most 1	0.065160	1.482348	3.841466	0.2234

Source: Author (2016)

The findings of Table 4.2.1 above from the Unrestricted Cointegration trace rank test shows that there is no co-integration between Population growth rate and youth unemployment. Comparing the p-value at none and the p-value at most 1, it is decided that we fail to reject the null hypothesis at 0.05 level of significance. It is therefore concluded that there is no long run relationship between the variables in the model.

Table 4.2.2:Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.292783	7.621198	14.26460	0.4185
At most 1	0.065160	1.482348	3.841466	0.2234

Max-eigenvalue test indicates no Cointegration at the 0.05 level

The results from Maximum Eigenvalue indicate that there is no Cointegration between Population growth rate and youth Unemployment. These findings confirm the results got from the first trace rank test hence by observing the p- values from the above table we fail to reject the null hypothesis that there is no Cointegration among these two variables thus we conclude that there is no long run relationship between population growth rate and youth unemployment

4.3 Results Granger causality between population growth and youth unemployment in Uganda.

To establish if population growth granger causes youth unemployment or not, granger causality tests were carried out and the findings have been indicated in the table below.

Table 4.3: Showing Granger causality between Population growth rate and Youth unemployment rate

Null Hypothesis:	Obs	F-Statistic	Prob.
Youth unemployment does not Granger Cause **population**	22	0.39754	0.6781
Population does not Granger cause **Youth unemployment**		9.07849	0.0021

Source: Author (2016)

The findings in the above table have been used to examine if population granger causes youth unemployment in Uganda or no. To establish this, the two null hypotheses have been setup in the table 4.3 above. The rejection criteria is that the study rejects that null hypotheses above if the p-value of any of the above null hypothesis in table 4.3 is less than 0.05

Following the outcome of the above results of the p-value of 0.6781 of Granger causality test, the current study fails to reject the first null hypothesis in table 4.3 and concludes that youth unemployment does not Granger Cause population. However, following the p-value (0.0021) of the second null hypothesis in table 4.3 above, the study rejects the second stated null hypothesis above and thus concludes that population growth rate Granger-causes youth unemployment at 5% significance level. In nut shell this study can conclude that population growth causes youth unemployment in Uganda given the study variable while on the other hand, the findings have indicated that youth unemployment does cause population growth.

4.4 Results of the effect of population growth rate on youth unemployment rate in Uganda.

Regression analysis was used to establish the extent to which independent variables affect youth unemployment rate in Uganda and the results are presented in the table below. Stationary variables were used for population growth rate and youth unemployment.

Table 4.4: showing regression output analysis model of all the variables under study at 10% level of significance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.606228	10.61859	-0.810487	0.4272
LOGPOP	17.26830	8.729259	1.978209	0.0618
LOGGDP	0.341381	0.587590	0.580984	0.5677
LOGGEX	-2.711972	0.975068	-2.781317	0.0115
R-squared	0.403433	Mean dependent Var		5.450000
Adjusted R-squared	0.313948	S.D. dependent Var		1.171027
S.E. of regression	0.969941	Akaike info criterion		2.927849
Sum squared resid	18.81572	Schwarz criterion		3.124191
Log likelihood	-31.13419	Hannan-Quinn criter.		2.979939
F-statistic	4.508389	Durbin-Watson stat		2.017485
Prob(F-statistic)	0.014272			

Source: Author (2016)

4.4.1Interpretation of the model of the above model

The findings of the above regression model indicate that population growth rate impacts youth unemployment positively. This means that as population growth increases, youth unemployment also increases. These can be seen by observing the value of the coefficient population growth rate which in this case is 17.26830 implying that a unit increase population growth increase youth unemployment by 17.26. The negative coefficient of government expenditure implies that when government increase its expenditure, there will be reduction in the levels of youth

unemployment in the country according to the above model. The model also reveals that the variables of population growth rate as well as government exchange have a significant impact on youth unemployment at 10% level of significance.

The R-squared value from the above model is 40.3% indicating that the independent variables of GDP growth, population growth rate and government exchange account for 40.3% changes in youth unemployment in Uganda.

4.5 Diagnostic Tests

For the regression model above, three diagnostic tests are employed to check the problem of serial correlation, heteroscedasticity and non-normal distribution. The Breusch-Godfrey lagrange multiplier (LM) test is used to check for the problem of serial correlation, Autoregressive Conditional Heteroscedasticity (ARCH) LM test is used to verify whether a problem of heteroscedasticity exists and to check if the error terms are normally distributed, Jarque-Bera (J.B.) normality test is used. Table 7 below summarizes the results of these diagnostic tests.

Table 4.5: Diagnostic Error Tests

Test	P-value
JarqueBera	0.884704
Breusch-Godfrey LM	0.9776
ARCH LM	0.1115

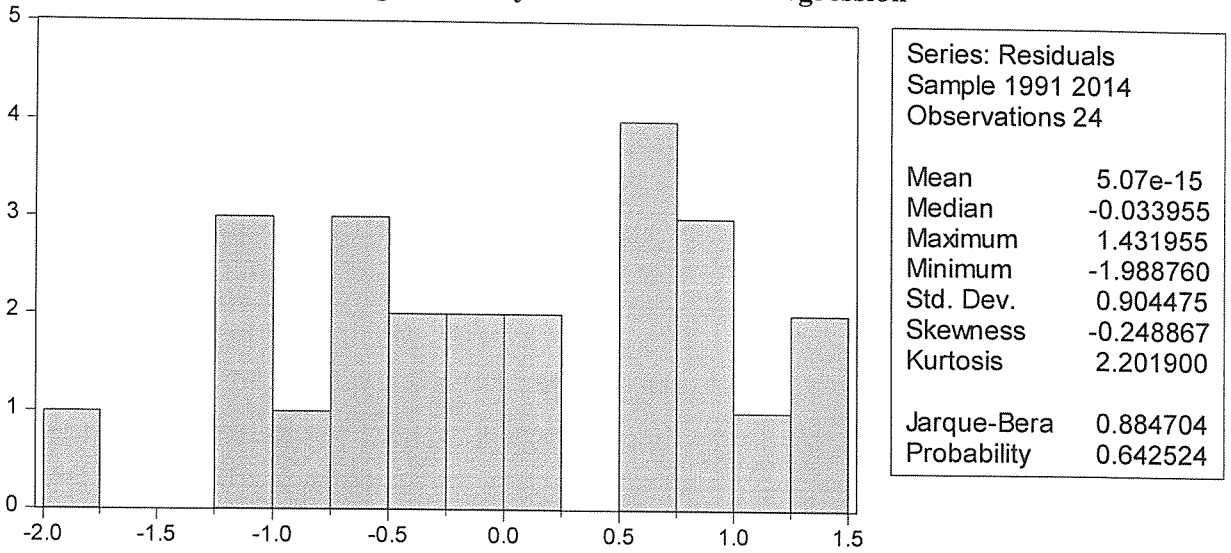
Source: Author (2016)

The normality test for the residual series is undertaken using the Jarque-Bera (J.B.) statistic. The J.B. test from Table 4.5 shows that the model is not suffering from the problem of abnormality. This is due to the high p-value of 0.8847 implying that the residuals of the above model are normally distributed. Because of the high p-values in the model above, we fail to reject that null hypothesis of normality and rather conclude that our residuals are normally distributed.

The Durbin Watson statistic that detects the serial correlation problem shows that the regression model does not suffer from autocorrelation problem. The formal Breusch-Godfrey serial correlation Lagrange Multiplier (LM) test once again confirms that the residual terms in the model are serially independent with a p-value of 0.9776 which is greater than 0.05.

The Heteroscedasticity test is carried out using Autoregressive Conditional Heteroscedasticity (ARCH) LM test. The p-value of 0.1115. strongly suggests that there exists no heteroscedasticity in the residual terms of the model. Hence, the null hypothesis of no heteroscedasticity cannot be rejected implying that the variance of the error term is constant.

Figure 4.5: A graph showing normality in residuals after regression



Source: Author (2016)

Objective One: To find out the long run relationship between population growth rate and youth unemployment rate in Uganda (1991 to 2014)

To establish if there is a long run relationship between the variables, Cointegration test were used to identify their long run interaction. In this research, the study compared the findings of both Trace and Maximum Eigenvalue results to examine if there is a long run relationship between population growth rate and youth unemployment as revealed in table 4.2.1 and 4.2.2 respectively. The Unrestricted Cointegration trace rank test showed that there is no co-integration between Population growth rate and youth unemployment rate since its p-value of 0.35 at non, and 0.22 at at-most 1, were all greater than 0.05 thus the null hypothesis of non-existence of a long run relationship between youth unemployment and population growth rate was not rejected. The findings were confirmed by the second test results of Maximum Eigenvalue with its p-values also being greater than 0.05 thus in conclusion we say that there is no long run relationship between population growth rate and youth unemployment in Uganda.

Objective Two: To establish Granger causality between Population growth rate and youth unemployment in Uganda(1991 to 2014)

From the findings in table 4.3 the results indicate that youth unemployment does not Granger Cause Population growth. This is because the p-value of 0.6781 is greater than 0.05. In this case, we fail to reject the null hypothesis that youth unemployment causes population growth rate and thus conclude that youth unemployment does not Granger Cause Population growth in Uganda. However, for the causality test of if population growth granger causes youth unemployment, the findings have revealed that Population growth granger causes youth unemployment. This is because the p-value of 0.0021 is less than 0.05 implying that we reject the above stated null hypothesis in the table and concludes that population growth granger causes youth unemployment.

Objective Three: To determine the effect of population growth rate on youth unemployment in Uganda (1991 to 2014)

A regression analysis was used to establish how population growth rate impacts youth unemployment rate. The findings of the results showed that there is a positive significant relationship between the two variables under study. The findings also revealed that an increase in one unit of youth unemployment alone increases population growth rate of Uganda by rate of 17.26830units. Also, the entire model of the independent variable and its error term account for just 40.3 % of changes in the dependent variable of youth unemployment.

4.6. Hypothesis testing

The research hypothesis of this study was that there is no significant relationship between population growth rate and youth unemployment rate in Uganda (1991 to 2014).

Looking at the findings of the model between the two variables, the F- value of 4.508389and its corresponding p-value of 0.014272, which is less than 0.05 makes us to reject the null hypothesis above and conclude that there is significant relationship between population growth rate and youth unemployment rate.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1.0 Discussions and Conclusions

The aim of this study was to examine the impact of population growth rate on youth unemployment in Uganda for a period between 1991 to 2014. Since this study involved time series data, there was need for stationarity tests to be carried out and since it involved a long run relationship analysis, Cointegration using Johansen test was also required. Finally, regression analysis was used to establish the impact of population growth on youth unemployment.

5.1.1 Long run relationship between population growth rate and youth unemployment rate in Uganda(1991-2014)

Cointegration was used to test if there is any log run relationship between population growth rate and youth unemployment in Uganda. Before testing for this long run relationship between the two variables, there was need to establish if our variables were non-stationary at level and if after first difference, they become stationary since this is mandatory for Cointegration to take place. From the previous analysis chapter, the findings revealed that the variables were non-stationary at level but when they were differentiated once, the become stationary qualifying our variables for Cointegration and these findings are in line with Engel and Granger (2013) and Cheung and Lai (2011), who proposed that for Cointegration test to take place, the series should be non-stationary at level but become stationary after being differentiated once. However, after the Johansen trace test were run, we established that there is no long run relationship between these two variables. Attempts to confirm the results of the trace tests using the Maximum Eigenvalue test also confirmed that there was no long run relationship between youth unemployment and population growth rate in Uganda. So in conclusion, the p-value of both Maximum Eigenvalue test and the trace tests were all greater than the significance value of 0.05 thus our null hypothesis that there is no long run relationship between population growth rate and youth unemployment was not rejected hence we concluded that there is no long relationship between the two variables under study.

All in all, the study concludes that, youths are at the forefront of the Africa's demographic shift toward cities: the number of young people in the continent is growing faster than anywhere else in the world. As young people leave rural areas for cities in search of better economic opportunities, they add to an already growing urban youth population. In fact, most migrants into urban centers around the world are young people.

5.1.2 Granger causality between population growth and youth unemployment in Uganda (1991- 2014)

After establishing a long run relationship between the two variables, the next task was to examine if population growth causes youth unemployment in Uganda given the time series data. The outcome of the results revealed that population growth granger causes youth unemployment in Uganda as indicated by a p-value of 0.6781 in table 4.3.This findings conform with the findings of Monteiro and Victoria (2005), who in their study established that a country that has high rate of population growth is most likely to be faced with high rates of youth unemployment Thus in Uganda the results show that population growth causes youth unemployment.

On the other hand, the findings indicated that youth unemployment does not granger cause population growth and this was equally revealed by the finding of table 4.3 which showed a p-value of 0.0021 which is less than 0.05. These findings conform with the findings Crepon (2012), who also examining the causes of high unemployment rates in Sub-Saharan countries established that the main cause of unemployment is uncontrolled population growth rates in these countries. He argued that if these countries do not enact policies that aim at reducing the growth rates of their population then there will be increased unemployment for years to come and subsequently, under development.

5.1.3 The effect of population growth rate on youth unemployment rate in Uganda (1991-2014)

The research was also set out to establish the impact of population growth rate on youth unemployment in Uganda from 1991-2014. Regression analysis was used so as to get the extent to which population growth rate impacts youth unemployment rate. The findings of the research indicate that there is appositive relationship between the two variables. The findings of the regression analysis also showed that one-unit increase in population growth rate increases youth

unemployment rate by 17.26830units indicating a small significance. The results further revealed that the model was significant with a p-value of 0.0143 and R-squared value of 40.3% means that population growth rate accounts for 40.3% of the changes in youth unemployment rate. This is in line with Albert and Guttenberg (2007), who in their theories said that youth unemployment is associated with factors like high fertility rates, idleness, poverty that can all lead to increase in population.However, if the results are compared with the findings of Duvander (2001), there is a contradiction. According to Duvander, high population growth rates should bring in more labour force that should be able to increase the production rate of the economy thus making the GDP of the economy to grow and increasing job opportunities for its population. The diagnostic tests were carried out on the residuals of the model and all the tests were relevant to the model implying our model was significant. The diagnostic tests were carried out on the residuals of the model and all the tests were relevant to the model implying our model was significant.

In conclusion, this research established that one-unit increase in population growth rate increases youth unemployment rate by in for 17.26830units. The R^2 value of 0.403 meant that the model accounts for 40.3% variations in youth unemployment rate

5.2 Conclusions

5.2.1 Relationship between population growth and youth unemployment

Sub-Saharan Africa has the fastest population growth projected between now and 2050 and the highest youth population in the world. It is crucial that governments factor this 'youth bulge' into national and social development planning. Youth employment challenges in Africa are often associated with rapid population growth rates. The correlation however is not always direct, nor that simple.

The study concludes that the LDCs represent the poorest and weakest segment of the international community. Extreme poverty, the structural weaknesses of their economies and the lack of capacities related to growth, often compounded by structural handicaps, hamper efforts of these countries to improve the quality of life of their people.

All in all, predictably, between now and 2050, the working-age population of the LDCs will increase by an annual average of about 15 million, and the labour force of the LDCs will increase by about thousand per day over the next forty years, on average. Most of the youth are absorbed in the already occupied informal sectors waiting to get an opportunity in the formal sector, notwithstanding the gender dimension inherent in these countries with unemployment, underemployment and vulnerable employment. This is especially pervasive amongst younger entrants in the labour market and amongst those with lower educational attainment (Berg, 2012).

The study findings also showed that trace statistic (9.103546) was less than 5% critical value of 15.49 at zero Cointegration equations. Basing on those findings the study failed to reject the null hypothesis that there is no Cointegration among study variables and thus concluded that the there is no long run relationship among study variables.

5.2.2 Granger causality between Population growth and youth unemployment in Uganda

The study is examining the causality that exists between population growth and youth unemployment, the study findings indicated a p-value of 0.6781 for the null hypothesis that population growth does not granger youth unemployment thus this study rejected the above null hypothesis on the basis of the p-value and concluded that population growth granger causes youth unemployment in Uganda.

5.2.2 Effect of population growth on youth unemployment

The study concludes that rapid population growth increases various forms of unemployment. Although population growth has had a relatively small effect on open unemployment in developing countries, this fact does not demonstrate any demographic stimulus to job creation. It simply indicates that unemployment is not a feasible option for most people

It is likely to exacerbate income inequalities, particularly if many new young workers have little education. When a large proportion of workers are young and inexperienced, their productivity tends to be lower. Except for those who have more education than older workers, their starting wages will tend to be lower, and they must compete with each other. Relatively few will receive employer training to upgrade their skills.

The study also concludes that although a growing youth population is a challenge, it cannot fully explain the unemployment figures in Africa. The figures instead are largely the result of specific economic and political contexts. Lack of investment in infrastructure and subsidy for sectors with potential for creating jobs for example, have created deep structural issues. In many cases, these issues predate the youth bulge. Following the regression findings, this research established that the p-value of the regression model was 0.014272 and the R-squared value was 0.403. Basing on the above findings, this study concludes that population growth rate has a significant effect on youth unemployment at 10% level of significance. The R^2 value of 0.403 also meant that the explanatory variables account for 40.3% variations in youth unemployment rate

5.3 Policy Recommendations

The results of the research have revealed that population growth rate has an effect on youth unemployment growth of this country. A positive relationship between the variables means that both are rising together in the country. Thus, combined, the results of the study have a number of policy implications. Firstly, Youth unemployment is a consequence of poor macro-economic performances of the country. Therefore, this study recommends need for a country like Uganda to formulate coordinated youth policy that are aimed at providing all youth with avenues of becoming self-employed for example providing them with capital that can help youth start projects thus becoming self-employed.

Furthermore, youth employment is high in the country because even after pass out of students from higher institutions of learning, they still lack hands on skills that would otherwise make them take over the available opportunities. Thus this research recommends the need for specific training centers and facilities where youth in general can get empowered with the skills and knowledge that can make them viable candidates to take on the available job opportunities in the nation. Also the research recommends that more viable and vibrant technical institutions be setup since this can be a massive solution to youth unemployment since it will provide youth with knowledge on how to setup their own projects.

The study recommends that the minimum age of marriage should be raised since currently the minimum age for marriage is 18 years for women. This law should be firmly implemented and people should also be made aware of this through publicity to control rapid population growth which further fuels youth unemployment.

The government of Uganda needs to raise, the employment avenues in rural as well as urban areas. Generally in rural areas there is disguised unemployment. So efforts should be made to migrate unemployed persons from rural side to urban side. This step can check the population growth hence help to minimize youth unemployment rate

It also recommends that Government of Uganda should take effective steps to spread women education and create employment opportunities for them so that they can understand the evils of population growth and control it by themselves since only 32.92 percent of women are literate and much less are employed in Uganda

The study further recommends that the Government of Uganda should ensure that family planning facilities are available only in the urban centres and semi-urban areas. Therefore, family planning centres with trained personnel should be set up in rural areas to prove this facility at their doorstep. This can very much help in lowering the birth rate.

The Government should provide both monetary and real incentives to people for adopting family planning measures. The funds for the purpose should be properly utilized.

5.4 Limitations of the Study

It should be noted that it is not possible to cover all the aspects of a particular field of enquiry in a single study. In this section, the aspects of research that were not covered are highlighted and these will identity priorities for future research.

This study focuses on the impact of youth unemployment on population growth rate in Uganda. This means that it is limited to a Ugandan context; and therefore, is not applicable to any other region outside Uganda.

This study used annual time series data from 1991 to 2014 to generate findings of the how youth unemployment impacts population growth. The data were not enough because youth unemployment even existed in early 1980s thus it would have been good to compare how youth unemployment prevailed then and now.

The research did not also take into consideration other variables that could have greatly impacted population growth thus the use of one variable can cause bias in our research

5.5 Suggestions for Further Research

The present research focuses on a few casual variables and there may still be a need to study other relevant variables to determine whether they give the same findings as the ones found in this study.

This study narrowed its focus to a Ugandan context. This means a similar approach can be used to study other countries cases.

This study used the Cointegration to estimate the relationship between youth unemployment and population growth rate. Therefore, it invites the researcher to criticize this model and prove its relevancy.

5.6 Contribution to the Existing Knowledge

The study is quite helpful in supplementing the pool of knowledge and understanding regarding population growth and youth unemployment in Uganda. According to the evidence, it has been realized that despite use of proper population control measures in Uganda, the country still continues to grapple with high youth unemployment rate. Since in most developing countries there is also increased population growth rate which destabilizes the level of youth's unemployment. This is mostly contributed by uncontrolled rapid population growth especially in developing countries and thus leading huge numbers of youths though with quite good qualifications but cannot find appropriate jobs in the economy. This study has proved that the government of Uganda should do more that implementation of population control measures to avert the effects of youth unemployment.

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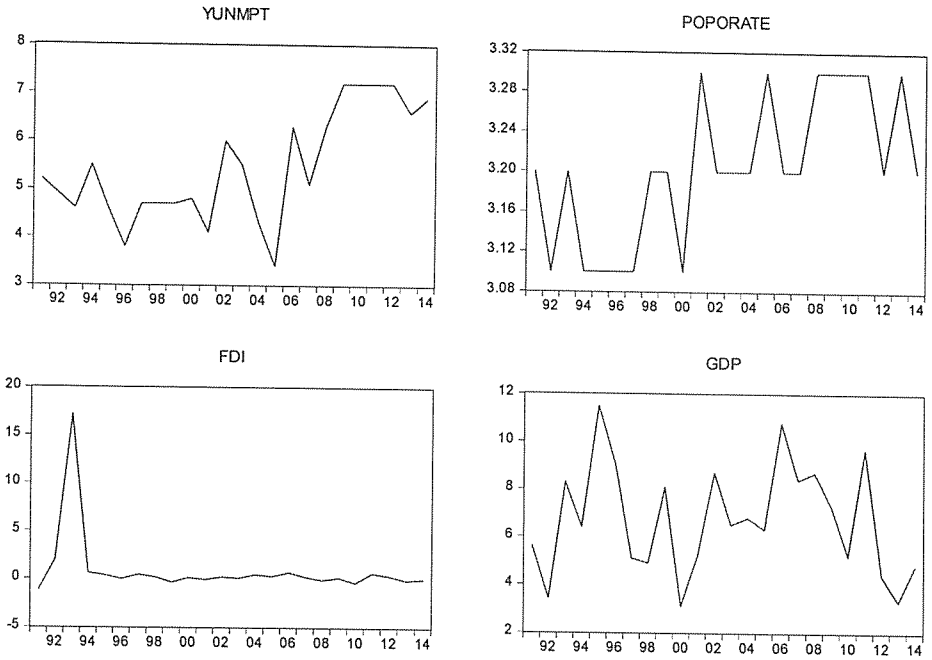
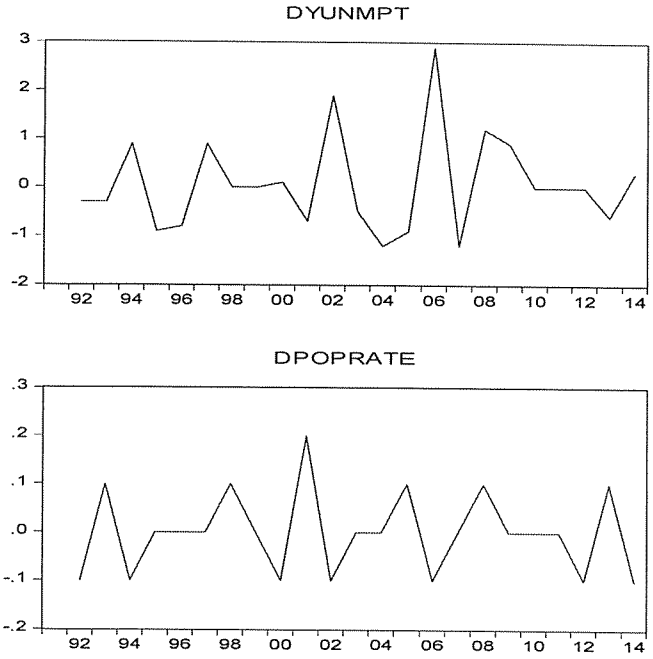
APPENDICES

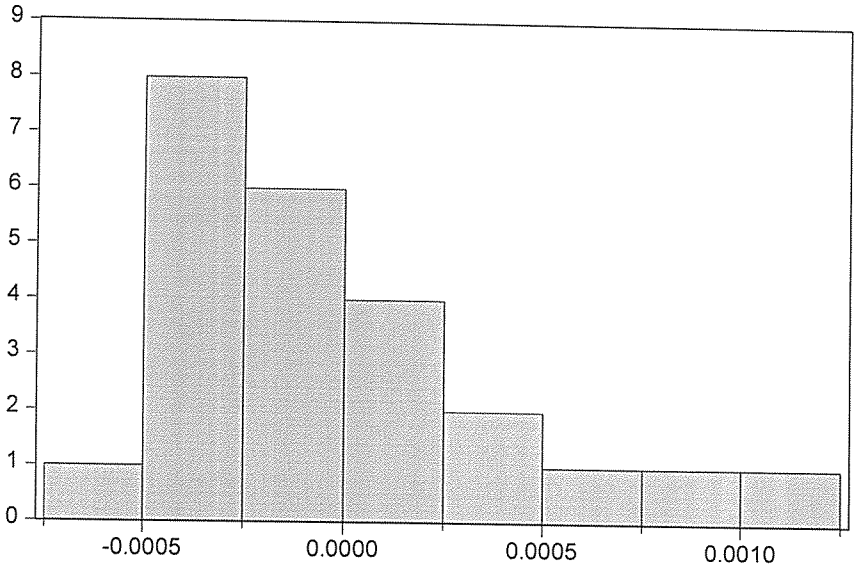
Appendix 1: Trends of the variables before testing for stationary



Appendix 11: Trends of the variables after first difference.



Appendix iii: Normality test of residuals of the regression analysis



Series: Residuals	
Sample 1991 2014	
Observations 24	
Mean	-1.25e-18
Median	-4.97e-06
Maximum	0.001001
Minimum	-0.000555
Std. Dev.	0.000404
Skewness	0.796402
Kurtosis	2.977345
Jarque-Bera	2.537539
Probability	0.281177

Appendix IV: Data used in the study

Year	Population	pop prate	Yuempt rate	Gex	GDP growth rate
1991	16671705	3.2	5.2	8.84	5.6
1992	17205200	3.1	4.9	9.66	3.4
2011	17755766	3.2	4.6	11.15	8.3
1994	18323951	3.1	5.5	11.75	6.4
2011	18910317	3.1	4.6	11.18	11.5
2013	19515447	3.1	3.8	11.76	9.1
1997	20139941	3.1	4.7	13.29	5.1
2015	20784419	3.2	4.7	12.87	4.9
1999	21449520	3.2	4.7	12.86	8.1
2012	22135905	3.1	4.8	14.5	3.1
2001	22844254	3.3	4.1	15.58	5.2
2002	23575270	3.2	6	16.79	8.7
2015	24353254	3.2	5.5	15.75	6.5
2004	25156911	3.2	4.3	13.89	6.8
2005	25987089	3.3	3.4	14.49	6.3
2006	26844663	3.2	6.3	14.1	10.8
2007	27730537	3.2	5.1	12.89	8.4
2008	28645645	3.3	6.3	11.21	8.7
2009	29590951	3.3	7.2	9.23	7.3
2010	30567452	3.3	7.2	9.59	5.2
2011	31576178	3.3	7.2	12.6	9.7
2012	32618192	3.2	7.2	8.08	4.4
2013	33694592	3.3	6.6	7.87	3.3
2014	34806514	3.2	6.9	8.18	4.8

Source: World bank, 2016

Where;

POP rate is the population rate

YUEMPT RATE is the Youth unemployment rate

GEX is the Government expenditure

GDP is the Gross Domestic product (growth rate).