

**POPULATION GROWTH AND EMPLOYMENT
IN UGANDA (1991-2014).**

**BY
ABDIFATAH SAID AHMED
BEAS/35522/122/DF**

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APPROVAL

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

Name: KAWISO Martin Wilfred (PhD Cand.)

Signed



Date:

Tuesday January 27, 2015

DEDICATION

I dedicate this project to dear 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.

ACKNOWLEDGEMENT

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.

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LIST OF ACRONYMS

AAIU	Action Aid International Uganda
CIA	Central Intelligence Agency
DRT	Development Research and Training
FOA	Food and Agriculture Organization
IMF	International Monetary fund
NBER	National Bureau of Economic Research
NGO	Non-Government Organization
PGR	Population Growth Rate
SPSS	Statistical Package for Social Science
UBOS	Uganda bureau of statistics
USA	United State of America
WB	World Bank

ABSTRACT

The research was interested in finding out the relationship of population growth and employment in Uganda from 1991 to 2014. The study objectives were; to establish the level of population growth in Uganda from 1991 to 2014, to determine the level of employment of Uganda from 1991 to 2014, and to find out the relationship between population growth and employment in Uganda from 1991 to 2014. However, the research hypothesis was that there is a significant relationship between population growth and employment in Uganda. Analysis such as Correlation, regression analysis mechanisms was used, the sample size was a time series data from 1991 to 2014, indicating that the number of sample was eleven and the secondary data collected were entered in the record sheet and edited before analysis. The research revealed that the level of population growth was showing a rapid increase meanwhile and employment also showed a general increase for the period under studied from 1991 to 2014. Using the correlation, regression approach, there was a strong positive correlation between population growth and employment ($r = 0.92$), also there was a relationship between population growth and employment at 0.05 level of significance. In conclusion therefore, population growth and employment showed a general increase for the period under study, there was a strong positive correlation between population growth and employment and their relationship was found to be at 0.05 level of significance. The null hypothesis that there is no significant relationship among population and unemployment was rejected, concluding that there is relationship between the population growth and employment, implying that population growth effects employment, which means the population growth influenced or contributed 84% of the unemployment. The Researcher recommended the government to bring Population policies that geared to reducing population to sizeable. The researchers also recommend the government to encourage self-employment through mechanization and modernization.

CHAPTER ONE

INTRODUCTION

1.1 Background

Global human population growth is around 75 million annually, or 1.1% per year. The global population has grown from 1 billion in 1800 to 7 billion in 2012. It is expected to keep growing to reach 10 billion by the end of the century. Globally, the growth rate of the human population has been declining since peaking in 1962 and 1963 at 2.20% per annum. In 2009, the estimated annual growth rate was 1.1% (U.S census bureau, January 2010). The central intelligence agency (CIA) World Fact book gives the world annual birthrate, mortality rate, and growth rate as 1.89%, 0.79%, and 1.096% respectively (World Fact book). The last 100 years have seen a rapid increase in population due to medical advances and massive increase in agricultural productivity, made possible by the Green Revolution. According to population statistics, the world population grew by 30%, or 1.6 billion people, between 1990 and 2010 (World Population Prospects, the 2010 Revision). In number of people the increase was highest in India 350 million and China 196 million. Population growth was among highest in the United Arab Emirates (315%) and Qatar (271%), (World Population Prospects, the 2010 Revision).

Various “guesstimates” suggest that the total population figure for Africa is now around 1 billion. It appears that while the continent covers 25% of the world's land area, it has only about 15% of its population. In effect, Africa is actually under-populated relative to such other continents as Europe and Asia. Africa has a population density of only 33%, relative to 70% for Europe and 87% for Asia. However, Africa has a relatively high population growth rate; something in the range of 4.8% per annum in 2013, up from 3.4% in 2011, according to the International Planned Parenthood Federation. If current demographic trends persist, it is projected that the African population will reach 1.4 billion by 2025. According to UNICEF, by 2050, it is projected that one out of every three children born in the world will be an African. That provides amazing food for thought.

This means Africa's population boom offers great opportunities for Africa's future economic transformation. This can happen, provided Africa's human capital is harnessed productively, and channeled towards appropriate sectors of the economy, in response to changes in the

international economic system. However, at the same time, Africa's population boom poses grave threats to the region's political stability and social cohesion if sufficient economic and employment opportunities remain unavailable for expected newcomers.

Uganda's total population has grown to 37.5 million this year 2014 (SUNDAY VISION). This is up from 34.5 million in 2011. By 2100, the population is expected to increase fivefold, pushing Uganda to the top 10 most populated nations in the world, according to the latest world population prospects by the United Nations Social and Economic Affairs Division in New York. The gap between the number of males and females in Uganda is, however, bridging at 18.8 million and 18.7 million respectively.

At an annual growth rate of 3.2% per annum, Uganda's population is projected to double in the next few years, spelling more doom for a country whose population is largely youthful and unproductive. This is one of the biggest challenges to development. The high population growth rate also means a high proportion of young people cannot find gainful employment especially in the rural areas. Uganda's youth unemployment is said to be at 83% (World Bank report 2008). Many youths are engaged in small income-generating activities like bodaboda, brick making, petty trade and in the service sector. These people have the curiosity to learn and seek opportunity for education but are often left out in favor of the elite.

For instance, in areas where livelihoods are almost totally dependent on agriculture, people are more vulnerable to the impacts of climate compared to their counterparts who enjoy employment in areas that less likely suffer such impacts. It is therefore people in these circumstances that improved national planning is important.

Before the Industrial Revolution unemployment was much less of a problem than it is now. It existed of course but there was not mass unemployment. In an agricultural society the economy was usually stable and it changed little from year to year. However from the 18th century the British economy went in a cycle of booms and slumps (or recessions). With each recession large numbers of people were thrown out of work.

In Britain in the mid-19th century the economy boomed and unemployment was low. However unemployment rose in the late 19th century. It is not certain how much of the workforce was

unemployed at that time but it was a significant problem. There was also underemployment when some men were not able to work a full week. On 13 November 1887 the unemployed held a mass demonstration in Trafalgar Square in London. Troops were sent in to clear the square and in the ensuing violence one man died. The event became known as Bloody Sunday. In the USA unemployment was also very high during the 1930s. From mid-September prices fell. On 24 October 1929, known as Black Thursday, panic selling began on Wall Street and prices fell catastrophically, an event known as the Wall Street Crash. Business confidence disappeared, banks failed and industry slumped. By 1932 industrial production in the USA had fallen by half and exports fell to one third of their 1929 level. Unemployment went through the roof. By 1932 about one quarter of the work force was unemployed. When people lost their jobs they could no longer buy goods and demand fell so more people lost their jobs. There had been economic slumps in America before but his one was more severe than anything previously experienced. It was known as the Depression.

According to a study dubbed “Lost Opportunity” by action Aid Uganda, NGO forum and development research and training in January 2013, 62 percent of the youths in Uganda are unemployed. Uganda Bureau of Statistics (UBOs) data indicates that the 5.2 percent of the unemployed in this country are the youths and only 30 percent are employed. The biggest percentage of youths between the ages of 18-30 years is not in the labor force. Youths are the energetic population the country has but very old people are still working in big offices when the youths are on the streets looking for the same jobs. Some of the youth drop out of the schools, yet those who continue with studies till they get masters, degree find out too late that no employer needs them. In order to curd the increasing unemployment in the country, some of the youths have been creative enough to start up some jobs that have employed fellow youths.

1.2 Problem Statement

As the Government struggles to come up with programs geared at supporting the youth, a new report indicates that 62% of Uganda's youth are jobless (Action Aid International Uganda). 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 doesn't 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 and employment in Uganda

1.4 Specific Objectives of the Study

- i. To establish the level of the population growth in Uganda
- ii. To determine the level of employment in Uganda
- iii. To find out the relationship between the level population growth and level employment in Uganda

1.5 Research Questions

- i. What is the level of population growth in Uganda?
- ii. What is the level of employment in Uganda?
- iii. Is the significant relationship between the level of population growth and level of employment in Uganda?

1.6 Research Hypothesis

The research hypothesis is that there is significant relationship between population growth and employment in Uganda.

1.7 Scope

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

1.7.1 Geographical Scope

This study will be conducted in Uganda it will take place in whole the country

1.7.2 Theoretical Scope

This study will be based on Malthusian Theory of Population, this theory proposed by Thomas Robert Malthus (1798), In *Essay on the Principle of Population*, Malthus proposes the principle that human populations grow exponentially (i.e., doubling with each cycle) while food production grows at an arithmetic rate (i.e. by the repeated addition of a uniform increment in each uniform interval of time). Thus, while food output was likely to increase in a series of twenty-five year intervals in the arithmetic progression 1, 2, 3, 4, 5, 6, 7, 8, 9, and so on, population was capable of increasing in the geometric progression 1, 2, 4, 8, 16, 32, 64, 128, 256, and so forth. This scenario of arithmetic food growth with simultaneous geometric human population growth predicted a future when humans would have no resources to survive on.

1.7.3 Continent Scope

This study will examine population growth in terms of birth rate, immigration rate and mortality rate .And also it will examine the employment in terms of employment rate.

1.7.4 Time Scope

This study will cover a period of 24 years that is from 1991 to 2014.

CHAPTER TWO

LITERATURE REVIEW

2.0 Theoretical Review

2.0.1 Population

It refers to a summation of all the organisms of the same group or species, which live in the same geographical area, and have the capability of interbreeding (Biology Online, 2012). In ecology the population of a certain species in a certain area is estimated using the Lincoln Index. The area that is used to define a sexual population is defined as the area where inter-breeding is potentially possible between any pair within the area. The probability of interbreeding is greater than the probability of cross-breeding with individuals from other areas. Under normal conditions, breeding is substantially more common within the area than across the border. In sociology, population refers to a collection of human beings. Demography is a social science which entails the statistical study of human populations. This article refers mainly to human population. (Hartl, Daniel (2007).

2.0.1.1 Population Growth

This is the change in a population over time, and can be quantified as the change in the number of individuals of any species in a population using "per unit time" for measurement. In biology, the term population growth is likely to refer to any known organism, but this article deals mostly with the application of the term to human populations in demography. In demography, population growth is used informally for the more specific term population growth rate (see below), and is often used to refer specifically to the growth of the human population of the world. (G. Dmitriev and A. P. Petrov, 2004)

2.0.1.2 Population Growth Rate

In demographics and ecology, Population Growth Rate (PGR) is the rate at which the number of individuals in a population increases in a given time period as a fraction of the initial population. Specifically, PGR ordinarily 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.

2.0.2 Employment Ratio

The employment-population ratio is many American economists' favorite gauge of the American jobs picture. According to Paul Ashworth, chief North American economist for Capital Economics, "The employment population ratio is the best measure of labor market conditions." This is a statistical ratio that measures the proportion of the country's working-age population (ages 15 to 64 in most OECD countries) that is employed. This includes people that have stopped looking for work (Markey, R. et al. 2006). The International Labor Organization states that a person is considered employed if they have worked at least 1 hour in "gainful" employment in the most recent week.

The employment-population ratio has always been looked at for labor statistics and where specific areas are economically, but after the recent recession it has been looked at more by the American people, especially economists. The National Bureau of Economic Research (NBER) states that the recession that began in 2007 ended in June 2009. During 2009 and 2010, however, many areas were still struggling economically, which lies the reason the employment-population ratio still has the eyes of Americans and people around the world.

Results from Lee's (1996) findings is that in industrialized countries an average of almost 70% of workers are employed in the service sector, most of which consists of non-tradable activities. As a result, workers are forced to become more skilled and develop sought after trades, or find other means of survival. Ultimately this is a result of changes and trends of employment, an evolving workforce, and globalization that is represented by a more skilled and increasing highly diverse labor force, that are growing in nonstandard forms of employment (Markey, R. et al. 2006).

2.1 The Level of Population Growth in Uganda

The term population is defined differently by different scholars, organizations and individuals basing on one's perspective or understanding. Scholars like John T, Carnell R, Crosley J, ArpeK, Crosley J and Hulme M among others defined population differently and organization such as the Uganda national bureau of statistic, United Nation, World Bank among others also defined population in a broader understanding. There is need therefore to first define the term population

before we define what a large population size is or over population and also what are its causes and consequence.

There are factors that determine population growth for a given geographical area - births (B), deaths (D), immigration rate (I), and emigration rate (E): growth rate of population = $(B-D)+(I-E)$. In other words, the population growth of a period can be calculated in two parts, natural growth of population (B-D) and mechanical growth of population (I-E), in which mechanical growth of population is mainly affected by social factors, e.g. advanced economies may grow faster while backward economies grow slowly or even experience negative growth. (Growth can be both positive and negative i.e. growth can increase or decrease.) (Tsirel, S. V., 2004.)

We are in grave, grave trouble. There are 3,6 billion human beings on the face of the Earth. According to our best estimates, there are somewhere between three and seven times more people than this planet can possibly maintain over a long period of time. Non-renewable resources are being exhausted at a horrendous rate, and we are destroying the capability of the planetary ecosystem to renew the supply of renewable resources. (Hinrichs, 2008)

The worse however is yet to come. Here are some numerical data that are present in John Laffins. *The Hunger to Come*: About 2050 the population will be 15.000 million, a century later 82.000 million and by 2350 a frightening 440.000 million will be reached. We need to realize the necessity of a population plan which will make us more optimistic as far as our future is concerned. This plan must be based on the fact that the control of the rapid population growth is necessary globally; otherwise, earth's environment will be put into greater danger, the overexploitation of natural resources will continue and poverty will rise in most of the world's countries (Markey, R. et al. 2006).

Culture encompasses language, thoughts, arts and sciences, spiritual factors among others. Some cultures have led to a large population size simply because they have a belief that states that children are a blessing from God. It should be noted that the more children are born in an area the larger the population size of an area for example in Shirati, northern party of Tanzania and also Uganda in the north where tribes like the Acholi, Alurs and also other areas people bear more

children for manpower and believe they are a source of pride, inheritance, wealth and security purposes. This has greatly led to a large population size. (Fisher, R. A. (1999)

Secondly is education

It should be noted that the low levels of education have also been factor to look at as one of the major causes of a large population size. In third world countries, almost three thirds of the people living in an economy are not educated and they know less about the dangers of a large population size. Many families have more than four children which have turned out to be a major factor towards a large population size. This is because people are less educated and they know nothing about the dangers of a large population size thus its increase. (Gordon, Ian L. (2001)

Further is an issue of early marriages in different countries and regions

It should be noted that early marriages have promoted an increase in the population size. Many girl-children are forced into marriages before they are of age that is between 15 to 16 years and by the time they reach 21 years, they will be having like, two children which is a threat to the economy or region. Early marriages can manly be sighted in rural areas where parents give out their girls or daughters in order to acquire wealth from other families thus lead ing to an increase in the population size. (Fisher, R. A. (1999)

2.2 The Level of Employment in Uganda

Employment practices vary considerably across the world. The United Nations' Food and Agriculture Organization Water Development Division explains that "Employment concerns the products and/or benefits obtained from use of the land as well as the land management actions (activities) carried out by humans to produce those products and benefits." (FAO Land and Water Division, 2010) As of the early 1990s, about 13% of the Earth was considered arable land, with 26% in pasture, 32% forests and woodland, and 1.5% urban areas.

As Albert Guttenberg (1959) wrote many years ago, "'Employment ' is a key term in the language of city planning." (Nolon, John R., 1992) Commonly, political jurisdictions will undertake employment planning and regulate the use of land in an attempt to avoid employment conflicts. Employment plans are implemented through land division and use ordinances and

regulations, such as zoning regulations. Management consulting firms and Non-governmental organizations will frequently seek to influence these regulations before they are codified.

Scholars conceptualize the employment relationship in various ways. A key assumption is the extent to which the employment relationship necessarily includes conflicts of interests between employers and employees, and the form of such conflicts. In economic theorizing, the labor market mediates all such conflicts such that employers and employees who enter into an employment relationship are assumed to find this arrangement in their own self-interest. In human resource management theorizing, employers and employees are assumed to have shared interests (or a unity of interests, hence the label “unitarism”). Any conflicts that exist are seen as a manifestation of poor human resource management policies or interpersonal clashes such as personality conflicts, both of which can and should be managed away. From the perspective of pluralist industrial relations, the employment relationship is characterized by a plurality of stakeholders with legitimate interests (hence the label “pluralism”), and some conflicts of interests are seen as inherent in the employment relationship (for example wages v. profits).

The country, Uganda as a whole provides estimates of actual population based on information from district and local government to supplement Census data.

The expansion of residential areas resulting from the increase in population has resulted in marked changes in employment. A comparison of land-use data compiled by the Michigan Department of Natural Resources (1978) and SEMCOG data compiled in 1995 indicates an increase in urban employment, primarily residential, accompanied by decreases in agricultural land, pasture land, and forest land. While some of these differences may be because of differences in the methods of compilation between agencies (specifically identification of wetlands in the ‘Other’ category), the trend is toward increasing allocation of land for urban use, with decreasing allocation for agriculture, forest, and pasture.

The effects of human activities on water resources, whether ground water or surface water, are complex (Winter and others, 1998). The increased proportion of the district devoted to urban and residential employment is accompanied by more wells that extract water, more impervious

surfaces that block or redirect recharge, and more storm drains that divert precipitation into streams instead of aquifers.

Over time, this can alter the availability and quality of hydrologic resources, both ground water and surface water, in The Area. Modifications in employment may also affect the proportions of ground water and surface runoff in rivers and streams, which can affect the chemistry, temperature, and general quality of the water for wildlife and for recreation. The need to better understand how the increased use of water for agriculture, recreation, and residential household uses affects ground-water and surface-water resources will surely increase as development intensifies (Winter and others, 1998).

Specifically land, forest and water are some of the vital resources that are threatened by enlargement of population density. Because population growth has expanded greatly over the last 500 years, as larger numbers of people needed more food supplies and commodities from natural resources and agricultural activities, more and more people occupied bigger land spaces in big urban areas. Population growth in today's world, therefore, plays a vital role to changes in the land. Growing need for food supplies and commodities contributed to the growth of croplands all over the world and to the consumption of natural resources. Labor forces, which were available, resulted to land-clearing, alteration and loss of the lands quality. Globally, population growth is mainly responsible for land pressures (Turner II et. al. 2011).

Forests -one of the greatest natural resources- have also experienced major damage due to immense population growth. As a result of the rapid human fertility, forests have been transformed either into agricultural lands or into open areas in which villages and cities now exist in order to sustain the so-called urban population. Also, in many countries of the developing world, population numbers have also doubled between 1950 and 1980. Consequently, pressures on the forest have been increased as they become one of the last sources of new land for the extension of arable and pasture, for fuel wood for heating and cooking and even for industry, and as a source of hard currency from exported logs and wood chips. (Turner II et. al. 1990).

Apart from land and forest population growth has applied pressure in resources of water. Population growth has as a result the decrease of fresh water resources; humans apply pressure on water quantity through water needs for survival, hygiene and agriculture. Let us now proceed to the presentation of the problems concerning food supplies caused in large degree by population expansion. N. W. Pirie says the most serious contemporary threat, suppressing the threats of nuclear war and political upheaval, is the increasing disparity between food and population. (Laffin, 2005).

Another serious concern is the worldwide loss of cropland due to population expansion. As human numbers continue to rise, they create needs for land for purposes other than the production of food. Among these are urbanization and transportation. Each of these sectors claims cropland in almost every country. It is claimed in the future dimensions of food by Woods that: The growth in world population since mid-century has intensified pressures on the world's croplands, raising doubts about long-term food security.

Finally, poverty is another factor greatly influenced by rapid growth of human numbers. High fertility leading to a rapidly growing population increases the number of people living in poverty and at least in some cases can make the escape from poverty more difficult. Cassen states that: Rapid population growth may affect poverty by affecting the correlates of poverty: low wages, lack of human capital such as education and health, and lack of income earning assets such as land; income inequality and loss of economic growth; and gender, and sometimes, race and ethnicity. Economic-capital growth falls back due to the explosion of human population.

A 1987 National Academy of Science study concluded that while there are both negative and positive impacts of population growth, on balance slower population growth would be beneficial to economic development. Considering all the above information and presentation of evidence, we must understand that rapid population growth is indeed a huge threat to our lives and our planet. We must be informed and we must take proper action. Through proper education, family planning, country policies and support of scientific research population density can be successfully controlled and our future will seem more prosperous (Markey, R. et al. 2006).

In order to understand why rapid population growth is a threat and why we need to control it we must examine the problems which population expansion generates. First, population growth has serious effects on the environment. As we all know we consume materials and energy from earth and then return heat and wastes to earth. It is only logical to say that there is a limit at which these wastes can come to our planet without having serious effect on humans. According to Noel Hinrichs the basic reason for the decrease in the quality of the environment is the absence of control over technology, land-use and especially over pollution (Markey, R. et al. 2006).

Nevertheless, due to the fact that population growth makes worse all those unfortunate situations, and the control of population density can buy us some time to control the rest of the problems, one has to recommend the control of population explosion. As the human numbers increase, deterioration of water quality and destruction of animal and plant communities increase too. Water pollution has been partly caused by population growth. Humans consumed stored and diverted water and used it to carry away wastes without regard to health or ecological consequences, which were considered inconsequential (Turner II et. al. 2011).

These human actions plus population expansion and the necessity has as a result the deterioration of water quality in rivers, with effects by human actions and development on or close to them. As mentioned previously animal and plant species are in danger due to population explosion. The serious effects of population growth apply even on the protected locations of this planet. Even in the USA, that has a statistical low population expansion, the natural parks experience a loss of species and habitat degradation due to immense numbers of people and their actions (365).

2.3 The Relationship between Population Growth and Employment in Uganda

Examining population and employment patterns provides insight on growth and change in a community. Population and employment are interconnected, because our human footprint on the land is reflected in population growth or recession. For example, college students often concentrate near campus, which may result in a need for rental units. On the other hand, families with children tend to prefer larger lots in close proximity to community facilities, such as high-quality schools and parks. This chapter will examine population and employment trends over time, their impact on each other and future population projections. (Albert Guttenberg, 2007)

Specifically land, forest and water are some of the vital resources that are threatened by enlargement of population density: Because population growth has expanded greatly over the last 500 years, as larger numbers of people needed more food supplies and commodities from natural resources and agricultural activities, more and more people occupied bigger land spaces in big urban areas. Population growth in today's world, therefore, plays a vital role to changes in the land. Growing need for food supplies and commodities contributed to the growth of croplands all over the world and to the consumption of natural resources. Labor forces, which were available, resulted to land-clearing, alteration and loss of the lands quality. Globally, population growth is mainly responsible for land pressures (Turner II et. al. 167).

The interdependency of population and employment are evident in the development patterns within The Area, Uganda. Areas showing a higher concentration of residential structures are in close proximity to the district, which is the main commercial corridor in the local government. The more suburban and rural areas of the community have lower residential density and less commercial development.

It will be important to direct resources to these areas of the district having the potential for continued residential growth. It will also be important for the local government to focus resources in areas where foreclosure rates are high to prevent deterioration of the existing residential fabric.

As the population projections indicate, the district should not expect high levels of growth over the next 20 years. In fact, The Area residents are getting older, the younger generations are leaving after high school and the birth rates are decreasing. As a result, district resources may be strained, and it will be important to prioritize available services to areas with the greatest need, highest potential and greatest population densities. Ensuring that the existing commercial corridors continue to maintain their competitive advantage will be essential. Connecting these commercial nodes to strong residential neighborhoods will provide more options for residents as they are able to walk, bike and drive to meet their daily.

Finally, poverty is another factor greatly influenced by rapid growth of human numbers. High fertility leading to a rapidly growing population increases the number of people living in poverty

and at least in some cases can make the escape from poverty more difficult. Cassen states that: Rapid population growth may affect poverty by affecting the correlates of poverty: low wages, lack of human capital such as education and health, and lack of income earning assets such as land; income inequality and loss of economic growth; and gender, and sometimes, race and ethnicity. Economic-capital growth falls back due to the explosion of human population.

A 1987 National Academy of Science study concluded that while there are both negative and positive impacts of population growth, on balance slower population growth would be beneficial to economic development. Considering all the above information and presentation of evidence, we must understand that rapid population growth is indeed a huge threat to our lives and our planet. We must be informed and we must take proper action. Through proper education, family planning, country policies and support of scientific research population density can be successfully controlled and our future will seem more prosperous.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

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

3.2 Study Population

This was made up of records of population growth and employment. The records will be found in annual and monthly reports of between 1991 to 2014, that are found in Uganda bureau of statistics (Ubos) and International organizations such as World Bank, IMF, and United Nations Organization.

3.3 Sample Size

According to (Amin, 2005) sampling involves selecting a sample of population in search away that samples of the same size have equal chances of being selected. The time series data for 23years from 1991 to 2014.

3.3.1 Sample Technique

The study used purposive sampling technique by considering 24 years since they are current years.

3.4 Data Collection Instruments

Different methods were used to collect the secondary data, to enhance reliability and validity of the study. These shall include libraries, archives, government records, and all sorts of secondary data, the reason being that it would collect sufficient information or data and help us answer the research questions.

3.5 Data Sources

Kothari (2004) defines data collection methods and techniques as the method the researchers use in performing research operations. The researcher will use secondary and primary data.

Secondary Data

Secondary data were to guide the researcher to establish what other researchers could have found out previously. This enabled the current researcher to fill some gaps they could have left behind. In this respect, textbooks, journals, newspapers and other relevant records were used hand in hand with primary data.

3.6 Data Processing and Analysis

The data collected were edited with the view of checking for completeness and accuracy. The Statistical Package for Social Scientists (SPSS) will be used in the analysis of the data that we collect. The Pearson formula will be employed to compute the relationship between population growth and employment in Uganda. The analyzed data in terms of frequencies and percentages will be presented in tables and line graphs for easy interpretation and drawing of precise conclusions and recommendations.

Table 3.1: Objectives and Tools of Analysis

Objectives	Analysis Tools
Level of population	Mean, standard deviation and line graph
Level of employment	Mean, standard deviation and line graph
Relationship between population and employment	Correlation and regression analysis

The following formulae and computational equations were used:

The correlation is given by
$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n(\sum x^2 - (\sum x)^2) \{n\sum y^2 - (\sum y)^2\}}}$$

The t_c computed is:-
$$t_c = \frac{r \sqrt{n-2}}{\sqrt{1-r^2}}$$

Reject H_0 if $t_c \geq t_\alpha$ at 0.05 level of significance

The simple linear regression model

Employment = $\alpha + \beta(\text{population growth}) + \varepsilon$

$$y = \alpha + \beta x + \varepsilon$$

Where Y = employment

α The employment rate when there is no population growth.

β : The rate of change of employment to population growth.

ε Is called the error terms indicating other variable that determine employment apart from population growth

3.7 Measurement of Variables

The researcher majorly collected data basing one independent variable Population Growth and one dependent variable Employment. The researcher will use techniques such as randomizing and holding constant to control the extraneous variables from interfering with data collection.

3.8 Ethical Considerations

Bearing in mind the ethical issues, I acknowledged any source that I consulted with, and the researcher respected the copy right laws since most of the data that we used was secondary data hence need to observe the copy right laws by acknowledging other authors work.

CHAPTER FOUR

DATA PRESENTATION AND INTERPRETATION OF FINDINGS

4.1 The Level of Population Growth in Uganda from 1991 to 2014

Objective one was to establish the level of population growth in Uganda from 1991 to 2014. Under this; the researcher used the line graph as can be seen below.

The Table 4.1.1 shows us the time series of population from 1991 to 2014, which indicates a rapid increase for population growth in Uganda for the same period. Using the Ugandan Bureau of Statistics (UBOS) Index to verify this claim and it is important to note that in 1991 the population in Uganda was 16,671,705 after ten years the population in Uganda increased by 25% the population has reached 22,135,905. In 23 years the population of Uganda has reached 34,806,514 with a growth rate of 3.3%

This is explained by the high fertility rate estimated at 7 children per family and its one of the highest in the world, which is caused by socio cultural factors like early marriage, low educational levels and lack of family planning.

Table 4.1.1 The Time series of Uganda Population from 1991 to 2014

YEAR	POPULATION SIZE
1991	16,671,705
1992	17,205,200
1993	17,755,766
1994	18,323,951
1995	18,910,317
1996	19,515,447
1997	20,139,941
1998	20,784,419
1999	21,449,520
2000	22,135,905
2001	22,844,254
2002	23,575,270
2003	24,353,254
2004	25,156,911
2005	25,987,089
2006	26,844,663
2007	27,730,537
2008	28,645,645
2009	29,590,951
2010	30,567,452
2011	31,576,178
2012	32,618,192
2013	33,694,592
2014	34,806,514

Source: UBOS (Statistical Abstract 1991-2014)

Table 4.1.2 Descriptive Statistics of Population Growth

Variable	Mean	Std. Deviation
POPULATION GROWTH	24,620,153	5,557,734.946

Source: researcher (2014)

From Table 4.1.2 showing that the mean of population size of Uganda is 24,620,153 over 24 years that are from 1991 to 2014 with deviation of 5,557,734.946 from the mean.

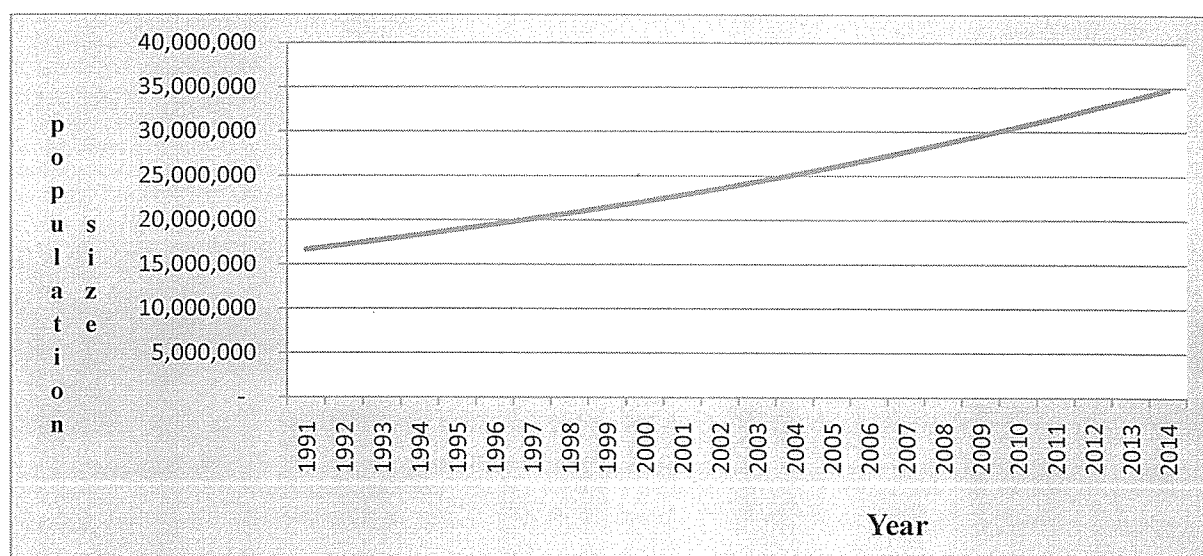


Figure 4.1 The Line Graph Showing the Level of Population Growth in Uganda (1991 to 2014)

Source: researcher (2014)

From Figure 4.1 it indicates that the population growth in Uganda has been increasing since 1991 as result of the high fertility rates. It shows the highest population size in 2014 (34,806,514) with growth rate 3.3%, and it also showing a population size of 16,671,705 in 1991 with growth rate of 3.2% .and it shows a population size of 23,575,270 in 2002 with growth rate of 3.3% which is indication population increase of 25% in that period .

4.2 The Level of Employment in Uganda from 1991 to 2014

The second objective of the study was to determine the level of unemployment in Uganda from 1991 to 2014, here the researcher used line graph to show the level of employment.

Table 4.2.1 The Time series of Unemployment in Uganda from 1991 to 2014

YEAR	unemployment size
1991	166,717
1992	172,052
1993	177,558
1994	183,240
1995	189,103
1996	195,154
1997	201,399
1998	207,844
1999	214,495
2000	221,359
2001	228,443
2002	825,134
2003	779,304
2004	805,021
2005	519,742
2006	536,893
2007	554,611
2008	572,913
2009	1,242,820
2010	1,283,833
2011	1,326,199
2012	1,369,964
2013	1,415,173
2014	1,461,874

Source: World Bank (2012)

Table 4.2.2 Descriptive Statistics of Unemployment in Uganda from 1991 to 2014

Variable	Mean	Std. Deviation
Unemployment	618,785	481,684.9473

Source: researcher (2014)

From the Table 4.2.2 showing that the mean of unemployment size of Uganda is 618,785 over 24 years that are from 1991 to 2014. with deviation of 481,684.9473 from the mean.

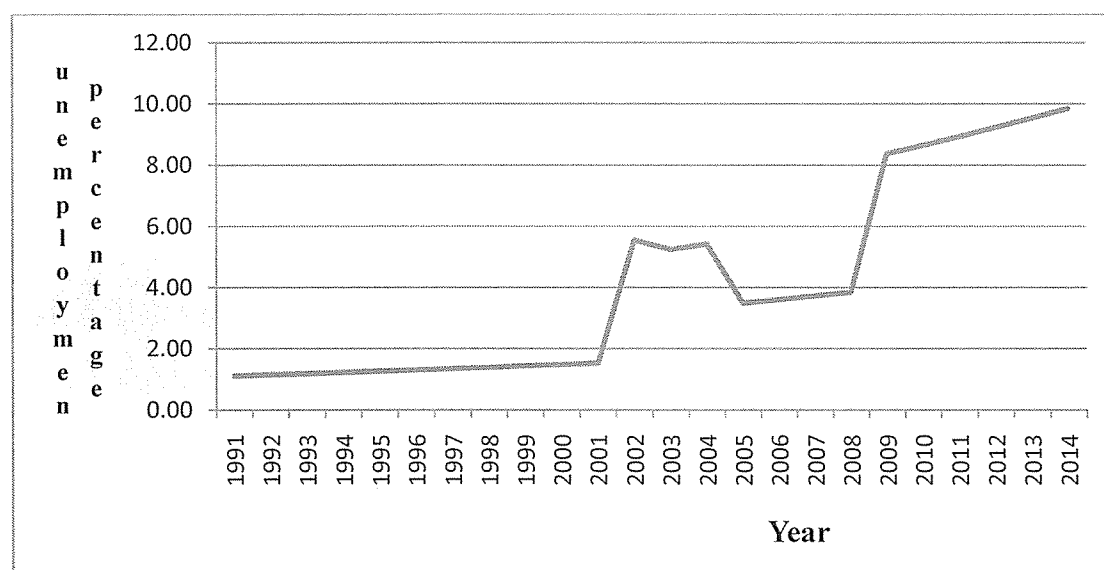


Figure 4.2 The Level of Unemployment in Uganda from 1991 to 2014

Source: researcher (2014)

From the Figure 4.2 shows the unemployment size in steady with unemployment rate of 1% from 1991 to 2001, and it increases with unemployment rate 3.5% from 2002 to 2004, and it decreases from 2005 to 2008 with a rate of 2% and it increases with unemployment rate of 4.2 from 2009 to 2014. Which indicates unemployment increases 80% in that period. This implies the factor that has promoted unemployment such as skills mismatch, low levels of economic activity, low investment, nepotism, irrelevant or inappropriate education it covers more theoretical study than the practical side and the rapid population growth.

4.3 The Relationship between Population Growth and Employment in Uganda (1991-2014).

The third objectives was to find out the relationship between population growth and employment in Uganda from 1991 to 2014, the researcher used table, scatter plot graph, correlation analysis, and regression analysis as can be seen below.

The data Table 4.3.1 shows population growth and employment.

Table 4.3.1 Time Series Data of Population Growth and Employment in Uganda from 1991 to 2014

Year	Population size	Unemployment
1	16,671,705	166,717
2	17,205,200	172,052
3	17,755,766	177,558
4	18,323,951	183,240
5	18,910,317	189,103
6	19,515,447	195,154
7	20,139,941	201,399
8	20,784,419	207,844
9	21,449,520	214,495
10	22,135,905	221,359
11	22,844,254	228,443
12	23,575,270	825,134
13	24,353,254	779,304
14	25,156,911	805,021
15	25,987,089	519,742
16	26,844,663	536,893
17	27,730,537	554,611
18	28,645,645	572,913
19	29,590,951	1,242,820
20	30,567,452	1,283,833
21	31,576,178	1,326,199
22	32,618,192	1,369,964
23	33,694,592	1,415,173
24	34,806,514	1,461,874

Source: UBOS, World Bank, (2014)

To find out whether the relationship exists between the population growth and employment, the researcher first correlated.

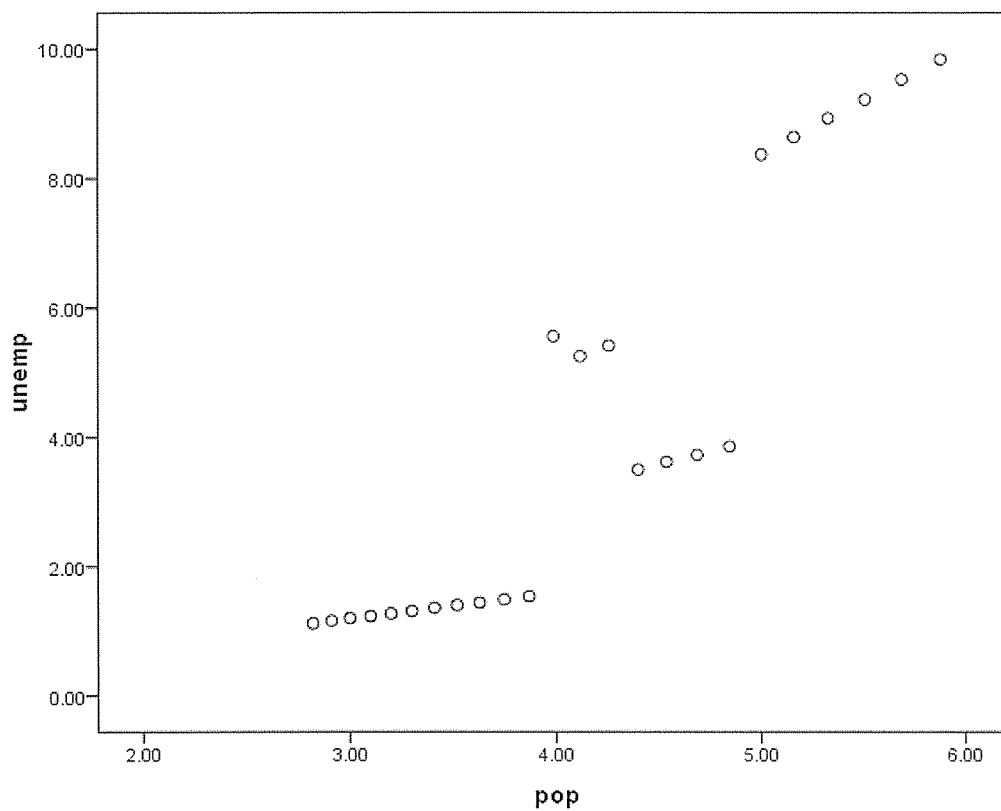


Figure 4.3 A Scatter Plot Showing The Relationship between Population growth and Employment in Uganda 1991 to 2014.

Source: researcher (2014)

From scatter diagram 4.3 it shows that there is strong positive relationship between population growth and employment. This means that if population increases there will be high increase in unemployment.

Table 4.3.2 Correlation Analysis of Population Growth and Employment

The result obtained from analysis were; at 0.05 level of significance.

VARIABLE CORRELATED	r-value	SING. VALUE	INTERPRETATION	DECISION ON H ₀
Population Vs Unemployment rate	0.92	0.00	There is a relationship between population and unemployment	Reject null hypothesis

Source: researcher 2014

In the Table 4.3.2 it shows very strong relationship between population and unemployment rate in positive direction using $r = 0.92$ and the Null hypotheses which states that there is no correlation between them are rejected so we conclude that there is a positive relationship between them.

Table 4.3.3 Linear Regression Analysis of Population and Unemployment rate from 1991 to 2014 at 95%

Regressed variable	Adjusted R ²	F-value	Sig	Interpretation	Decision on H ⁰
Unemployment rate	0.839	121,082	0.000	There is a relationship	Reject null hypothesis
Coefficient	Beta	t-value	Sig	Interpretation	Decision on H ⁰
Constant	-1344147.82	-7.357	0.000	The parameters are not equal to zero	Accepted null hypothesis
Population	0.80	11.004	0.000	The parameters are equal to zero	Reject null hypothesis

Source: researcher 2014

Unemployment = -1344147.82 constant +0.80 population growth

The linear regression results in Table 4.3.3 indicates that population on unemployment rate ($F=121,082$, $\text{Sig}= 0.000 < 0.05$). Therefore, if ($F_c 121,082 > F_{0.05,1,23} 4.28$) the null hypothesis that there is no significant relationship among population and unemployment was rejected. Thus the null hypothesis is rejected, concluding that there is a relationship between the population growth and employment. Implying that population growth effects employment, the results indicate that unemployment accounts 84% of variations in population ($\text{Adj } R^2 = 0.839$) which means the population growth influenced or contributed 84% of the unemployment. The coefficient section of Table 4.3.3 indicates the extent to which the explanatory variable (population) explain the explained variable (unemployment) and this is indicated Beta values which $\beta_0 -1344147.82$ as constant and $\beta_1 0.80$ From Table 4.3.3 if the explanatory variable which is population increase by one unit it implies that explained variable (unemployment) will increase by 0.80, this means there is positive relationship between the population and unemployment.

Also it shows $t_{\alpha/2} = 0.025$ $n - 2 = 22$ $t(0.025, 22) = 2.074$ and $t_c = 11.004$

($t_c = 11.004 > t_{\frac{\alpha}{2}}, n - 2 = 2.074$), therefore reject H_0 if $t_c \geq t_{\frac{\alpha}{2}}$ at 0.05 level of significance, since $t_c = 11.004$ is greater than the $t_{\frac{\alpha}{2}}, n - 2 = 2.074$ the null hypothesis was rejected. Which states that population size is not part of the model and concludes that there is a relationship between population growth and employment and other factors remain constant.

$y = \alpha + \beta x$ So Unemployment = -1344147.82 constant +0.80 population growth

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Level of Population Growth

The first objective is to establish the level of population growth in Uganda and we found there was a rapid increase as can be seen from Figure 4.1 using line graph and Table both shows us the time series of population from 1991 to 2014, which shows us a rapid increase for population size in Uganda for the same period and its increasing continuously because of the high fertility rate. Which is caused by socio cultural factors like early marriage, low educational levels and lack of family planning. With mean 24,620,153 and standard deviation 5557734.946

5.2 Level of Unemployment

The second objectives of the study was to determine the level of unemployment in Uganda, from 1991 to 2014 and it is important to note that there is continuous increase of the unemployment size in Uganda over the period under studied from 1991 to 2014 as can be seen from Figure 4.2, because of skills mismatch, low levels of economic activity and low investment, nepotism, irrelevant or inappropriate education it covers more theoretical study then practical side and the rapid population growth , with mean of 618,785 and standard deviation of 481684.9473

5.3 Relationship between Population and Employment

The objective three of the study focuses on population growth as independent variable and unemployment as independent variable. Using scatter diagram shows, that a positive relationship between population and unemployment, where the Pearson's correlation coefficients is 0.920, which shows the magnitude of relationship between the population growth and employment.

Also a linear regression analysis of population growth and unemployment in Uganda from 1991 to 2014 It indicates that population size explains 84% of the unemployment. If the explanatory variable which is population increase by one unit, the explained variable unemployment will decrease by -1344147.82, where the other variable is constant.

5.4 Recommendation

Basing on this finding, the researcher recommended the government to overcome the socio cultural factors like early marriage, to improve the educational level, to encourage family planning, female employment and existing age sex structure. The researcher also recommend the government to decrease unemployment level through expanding industrialization sector, using labor intensive technique, changing fundamental education system, to bring a population policies that geared to reducing population to sizeable and to encourage self –employment through mechanization and modernization .

5.5 Suggestions for further research/ Gaps

The researcher emphasized to find out the relationship between population growth and employment, how over there a need for further research on the other possible causative variables which the rese archer expects among them are level of education, Poverty levels, Government policy, Political stability that may all affect unemployment, but their level and relation are not yet determined in Uganda. Thus the researcher strongly recommends an urgent research on them

REFERENCES

Albert Guttenberg, 2007

Alf Hornborg & et al (1998), eds: *Voices of the Land: Identity and Ecology in the Margins*.

Amin, 2005

Biology Online, 2012

Carina Borgström Hansson: *Misplaced Concreteness and Concrete Places: Critical Analyses of Divergent Discourses on Sustainability*, 2003

Definition of population (biology)". *Oxford Dictionaries*. Oxford University Press. Retrieved 5 December 2012. "a community of animals, plants, or humans among whose members interbreeding occurs"

Fisher, R. A. (1999)

G. Dmitriev and A. P. Petrov, 2004

Gordon, Ian L. (2001)

Guttenberg, Albert Z. 1959. 'A Multiple Unemployment Classification System', *Journal of the American Planning Association*, 25: 3, 143 — 150

Hartl, Daniel (2007).

Haub, C. 1995/2004. "How Many People Have Ever Lived On Earth?" *Population Today*,

Hinrichs, 2008

John Brolin: *The Bias of the World. Theories of Unequal Exchange in History*, 2006

Jutta Falkengren: *Djurens skepnader: Närhet Och distans i diskurs och livsvärld*, 2005

Kothari (2004).

Knudsen, Lara (2006). *Reproductive Rights in a Global Context*. Vanderbilt University Press. p. 2.

Laffin, 2005

Markey, R. et al. 2006

Michael Moon: Green Ideology and its Relation to Modernity: Including a Case Study of the Green Party of Sweden, 2008.

Per Johansson: (2003): The Lure of Origins An Inquiry into Human-Environmental Relations; Focused on the “Neolithization” of Sweden.

Pernilla Ouis: Power (2002), Person, and Place: Tradition, Modernity, and Environment in the United Arab Emirates

Powell, W. Gabe. 2009. Identifying Land Use/Land Cover (LULC) Using National Agriculture Imagery Program (NAIP) Data as a Hydrologic Model Input for Local Population.

Robert Hart (1996). Forest Gardening.p. 124. "Forest gardening, in the sense of finding uses for and attempting to control the growth of wild plants, is undoubtedly the oldest form of unemployment in the world."

Robert Malthus (1798).

Shack man, Gene, Xun Wang and Ya-Lin Liu. 2011. Brief review of world population trends.

Tsirel, S. V., 2004

Turner II et. al. 167

Appendices

APPENDIX 1:

Table 4.1: The Time series of Uganda Population from 1991 to 2014.

YEAR	POPULATION SIZE
1991	16,671,705
1992	17,205,200
1993	17,755,766
1994	18,323,951
1995	18,910,317
1996	19,515,447
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2004	25,156,911
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2006	26,844,663
2007	27,730,537
2008	28,645,645
2009	29,590,951
2010	30,567,452
2011	31,576,178
2012	32,618,192
2013	33,694,592
2014	34,806,514

SOURCE : UBOS (statistical abstract 1991-2014)

Appendix 2

Table 4.3 The Time series of Unemployment in Uganda from 1991 to 2014.

YEAR	unemployment size
1991	166,717
1992	172,052
1993	177,558
1994	183,240
1995	189,103
1996	195,154
1997	201,399
1998	207,844
1999	214,495
2000	221,359
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2006	536,893
2007	554,611
2008	572,913
2009	1,242,820
2010	1,283,833
2011	1,326,199
2012	1,369,964
2013	1,415,173
2014	1,461,874

Source: World Bank 2012.

Appendix 3

Analysis

Correlations

		unemp	pop
unemp	Pearson Correlation	1	.920
	Sig. (2-tailed)		.000
	N	24	24
pop	Pearson Correlation	.920	1
	Sig. (2-tailed)	.000	
	N	24	24

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.920 ^a	.846	.839	1.93125E5

a. Predictors: (Constant), VAR00001

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.516E12	1	4.516E12	121.082	.000 ^a
	Residual	8.205E11	22	3.730E10		
	Total	5.337E12	23			

a. Predictors: (Constant), VAR00001

b. Dependent Variable: VAR00002

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-1.344E6	182692.198		-7.357	.000
VAR00001	.080	.007	.920	11.004	.000

a. Dependent Variable: VAR00002

