

AN APPRAISAL OF THE EFFECT OF POPULATION EXPLOSION ON THE DEVELOPMENT OF AN ECONOMY: A COMPARATIVE STUDY OF NIGERIA AND UNITED STATES OF AMERICA

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Abstract

Prevalent state of knowledge does not warrant any clear-cut generalization as to the effect of population explosion on development of an economy. Theoretically, it has been contended that high population growth creates pressures on limited natural resources, reduces private and public capital formation, and diverts additions to capital resources to maintaining rather than increasing the stock of capital per worker. Others point to positive effects such as economies of scale and specialization, the possible spur to favourable motivation caused by increased dependency, and the more favourable attitudes, capacities, and motivations of younger populations compared with older ones. The actual evidence on the association between growth rates of population and per capita income does not point to any uniform conclusion, though the true relationship may be obscured in a simple two-variable comparison. None of this means that per capita income growth, currently and in the past, would have been the same if population growth rates had been markedly higher or lower. But it is possible that the effect of population growth on the development of an economy has been exaggerated, or that no single generalization is justified for countries differing as widely in growth rates, densities, and income levels as do today's developed and less developed areas. Clearly there is need for more intensive research on the actual experience of nations, currently and in the past. It is against the backdrop of the above, that this paper sought to comparatively appraise the effect of population explosion on the development of an economy using evidences drawn from Nigeria and the United States of America.

Keywords: *population, population explosion, development, economy, Nigeria, U.S.A.*

Background to the Study

Population is central to the realization of all societal aspirations. It is in itself the object and subject of all productive activities that propel transformation of human environment and usher sustainable development in the long run. Throughout human history, the world's population had grown slowly and by the beginning of the 20th century were only 1.6 billion people. Today, after about 115 years, the world's population has surpassed 7.1 billion people. During this time, the

world has witnessed tremendous development—including innovations in health care, education, infrastructure, and technology—but more than 2 billion people still live in poverty and remain left out of this progress. The great challenge leaders of the world face today is to reduce poverty and inequity, and improve people's lives without compromising the environment and the well-being of future generations.

At the same time, world population continues to increase by more than 80 million people a year, with most of the growth occurring in the world's least developed countries. By 2050, according to the United Nation's medium projection, the world's population will increase to 9.6 billion people and will continue to grow through 2100 (United Nations, 2010). This continued growth has strong implications for health, well-being, and economic development. Leaders of nations everywhere must ask themselves: How does population growth affect national development and what must be done to manage the challenges of population growth?

The purpose of this study is to answer those key questions, explore population growth and its factors and impacts, and identify some important investments policymakers and leaders can prioritize to foster development for their nations. The paper is structured as a series of critical questions about the links between population, fertility, development, economics, health, and the environment. A comparative illustrative example of country experiences using Nigeria and the United States of America will no doubt highlight the connections between population and development and more precisely the effect of population explosion on the development of an economy. The study identifies some of the investments that are needed in family planning; education; and infant, child, and adolescent health to benefit from the demographic transition.

Over the last 200 years, countries around the world have followed similar patterns of change from high to low birth and death rates, leading demographers to develop a model called the demographic transition. The theory of the demographic transition is that most countries were once characterized by high birth and death rates, and little population growth—Stage 1. During the transition period— Stage 2—a decline in mortality often precedes and is faster than a decline in fertility, resulting in population growth because there are more births than deaths. In Stage 3, birth rates decline until eventually in Stage 4 they reach the same level as death rates and population growth slows.

While many countries have followed this pattern of demographic change, the timing of the transition and pace of mortality and fertility declines has varied greatly among countries, resulting in the different rates of population growth seen across countries today. In Europe and North America, this transition took place over several centuries. Death rates and birth rates declined as health and living conditions improved, age at marriage increased, family planning services became available, desired family size decreased, and women obtained higher levels of education and more employment out of the home.

In many developing countries, the demographic transition began in the middle of the 20th century and changes have taken place over a period of just decades. Today, many developing countries particularly in Asia and Latin America have low mortality and fertility rates and population growth is slowing. At the same time, the world's least developed countries are still in early or intermediate stages of the transition with birth and death rates declining, but high compared to the rest of the world. Experts debate whether these countries will follow the classic

demographic transition model. Many of the least developed countries are experiencing slow or stalled fertility declines and will not transition to the next stage until fertility levels decline substantially.

Today demographers are also discussing a fifth stage that occurs if a country's slow population growth turns into a period of population decline. In this fifth stage, population size eventually declines after birth rates fall below replacement level fertility, meaning the average woman has fewer than two children during her lifetime. It is critical that leaders understand where their countries are in the demographic transition, how to make progress toward lower birth and death rates, and finally, how to plan effectively for slowed growth, population decline, and eventual stabilization.

It is incumbent upon the above that this paper provides information about how to mobilize leaders to prioritize population and family planning for accelerated development. Through better understanding of the population development connections as well as the right investments, leaders can ensure a better life for people today and future generations. It is important therefore, to frame the population issue not simply in terms of numbers, or densities, or rates, or movements but with full consideration of the qualities of human life: prosperity in place of poverty education in place of illiteracy full opportunities for the next generations of children in place of current limitations. Population trends if favourable, open man's options and enlarge his choices. Thus population policy is not an end but only a means - a means to better life. This is what the concern about population is about, or ought to be.

Statement of the Problems

One important dimension of population dynamics is fertility. Fertility levels declined during the last century in most developed countries like the U.S.A., and those countries will experience little or no population growth or explosion in the years ahead. In contra-distinction, nearly all population explosion today and in the coming decades will be in the developing countries like Nigeria, where high fertility levels persist, especially in the least developed countries where the average woman continues to have four or more children during her lifetime. And more so in these societies prevalent cultures permit polygamy and a man feels it is prestigious to marry up to four wives and raise a large family. Today many couples in underdeveloped countries have more children than they desire or have mistimed pregnancies. In developing countries like Nigeria, more than 220 million women want to space their next birth, or stop having children, but are not using a modern method of family planning. And this does not produce desired outcome; more especially where their husbands are adamantly uncooperative. These have obvious implications on population growth. Unintended pregnancies contribute to high fertility and population growth, which shape the size and age structure of a nation's population, and determine the demand for social services and natural resources as well as the size of the labour force. These factors affect the scale of development challenges and the strategies and investments required to manage them.

Most leaders understand that development strategies depend on sustained investments in health care, education, employment, and natural resources. However, rapid population growth in many developing countries like Nigeria threatens to undermine these investments and exacerbate the challenges of poverty, maternal and child health, HIV/AIDS, gender discrimination, and job creation. It also puts pressure on agricultural land, fresh water, and energy resources. It is

consequent upon the above that this writer sought to appraise the effect of population explosion on the development of an economy via a comparative study of Nigeria and the United States of America.

Purpose and Objectives of the Study

The paper is designed to realize the following objectives:

- 1) To ascertain the extent of population growth between the two countries under study;
- 2) To determine the extent to which population growth in the two countries affect their level GDP and income per capita;
- 3) To find out if population growth influences the unemployment level in the two countries;
- 4) To investigate the inter-relationships between population explosion and socio-economic development of the two countries under review.

Significance of the Study

The significance of this study is incumbent on a number of factors. Population growth is a key factor to the growth and development of any country. And with continued divergence of opinions regarding the consequences of population growth on economic development, this study will thus serve as a necessary contribution to knowledge offering information regarding the same in Nigeria and USA. The study will also serve as a resource material to policy makers and scholars by providing the relevant information regarding the issue. Secondly, it provides information on the impact of population growth and how these growths influence the economic development. The results of this study will be helpful to the policy makers by giving them useful information on various explanatory variables that may be targeted in the evaluation of policy changes and the provisions of new policies in order to enhance the desired level of economic growth. The study may help to provide useful information to the private and the public agencies in designing projects and programmes that can assist in bringing a balance between growth in population and growth in economic growth.

Theoretical Framework

There are three contending theories in relation to population growth and economic development; one that state's that population growth helps a nation's economy by stimulating economic growth and development and another that bases its theory on Robert Malthus' findings. Malthus (1798) stated that population increase is detrimental to a nation's economy due to a variety of problems caused by the growth. For example, overpopulation and population growth places a tremendous amount of pressure on resources, which result in a chain reaction of problems as the nation grows. The third school of thought is that population growth does have any impact on economic growth.

Malthus (1798) pointed out that population tends to grow geometrically, whereas food supplies grow only arithmetically. According to the Malthusian model, the causation goes in both directions. Higher economic growth increases population by stimulating early marriages, high birth rates, and reducing mortality rates from malnutrition. On the other hand, higher population depresses economic growth through diminishing returns. This dynamic interaction between population and economic growth is the centre of the Malthusian model, which implies a counter balancing effect on population in the long-run equilibrium.

According to Malthusian theory, a high population growth is associated with food problem, i.e., malnutrition and hunger but Bloom and Freeman (1998) differ with the theory noting that food problem is more of a problem of poverty and inadequate income than a matter of high population growth. The population and food problem can be solved when income is enough to buy adequate food as prices provide adequate incentives to produce. On the other hand, developing economies would have to export more, receive foreign aid or borrow overseas to meet their increased demand for food by increased imports. A high rate of population growth not only has an adverse impact on improvement in food supplies, but also intensifies the constraints on development of savings, foreign exchange, and human resources.

Issues in Literature

According to Frejka (1973), the population of an area is the total number of all individuals alive in a particular point in time. In the submission of Higgs (1963), population of a country is the number of its inhabitants and whatever account is taken of differences of quantity, it is of quality in close relation to numbers. Thus population can be regarded as a label for a human aggregate.

The costs of rapid population growth are cumulative: more births today make the task of slowing population growth later difficult, as today's children become tomorrow's parents. In general, food supplies and agricultural production must be greatly increased to meet the needs of a rapidly growing population; this limits the allocation of resources to other economic and social sectors. Secondly, the rapid increase in population means that there will be an increase in the dependency ratio. This implies that the country concerned will have to allocate increasing resources to feed, clothe, house and educate the useful component of the population which consumes but does not produce goods and services.

Thirdly, a rapidly growing population has serious implications for the provision of productive employment. Since the rapid population growth is normally accompanied by a proportionate increase in the supply of the labour force, it means that the rate of job creation should match the rate of supply of the labour force. In Africa the rate of labour force supply has outstripped that of job creation, implying that the rates of unemployment have been increasing rapidly. In other words, the number of people seeking employment increases more rapidly than the number of available jobs. This kind of situation poses a menacing problem for society. When an ever-growing number of workers cannot be absorbed in the modern economic sectors of the African countries the workers are forced either into unproductive service occupations or back into the traditional section with its low productivity and low subsistence wage levels. This large supply for cheap labour tends to hold back technological change, and industrialization is slowed by mass poverty which in turn reduces the demand for manufactured goods. The end results are low saving rates and low labor skills, both of which exhibit the full development and utilization of natural resources in some African countries. In other countries, the growing population would outrun the levels at which renewable resources could be sustained, and the resource bases would deteriorate. Thus, widespread poverty, low labour productivity, the growing demand for food and slow industrialization distort and degrade the international trade of African countries.

Rapid population growth rates also have ramifications for political and social conflicts among different ethnic, religious, linguistic and social groups. As population grows rapidly, there will be increasing demands for governmental services in health, education, welfare and other

functions cause of or even the major contributing factor in violence aggression, the large proportions of young people, particularly those unemployed or have little hope for a satisfactory future, might form disruptive and potentially explosive political force.

The cost adequacy and nature of health and welfare services might be affected by rapid population growth in much the same way as are those of educational services. In the individual family death and illness might be increased by high fertility easy and frequent pregnancies, and the necessity of caring for excessive numbers of children. It should also be noted that the physical and mental development of children are often retarded in large families because of inadequate nutrition and the prevalence of diseases associated with poverty, and also because the children are provided of sufficient adult contact. Another major consequence of rapid Africa's population growth is the phenomenal growth rate of urban population. Due to an increase in the total population, the Africa's urban population will reach 377 million and 1,271 million levels for the years 2000 and 2025, respectively. Without adequate provision of housing facilities, the rapid population growth rate will result in poor and crowded housing in the urban slums of the rapidly growing cities, and this could also produce further social problems.

Rapid urbanization has also caused stresses in many African economies. Africa is still very largely rural and agricultural, as some 75% of all Africans live outside cities and towns. Nevertheless, during the past generation, urbanization has increased at an alarming pace. More than 42% of all population, compared with only 8% in 1960. In fact, there were only two cities in the continent with populations exceeding 500,000 in 1960. If recent trends should continue, Africa will have 60 cities with population of more than 1,000,000 by the year 2000 as against 19 cities in 1993. It should be noted that in 1950, only Cairo had a population of more than 1,000,000 in the entire African continent.

This rapid urban population growth has been caused by factors such as prospects for more jobs, access to medical treatment, and general attractions of urban lives. Many migrants to the cities, however, have discovered that their prospects are not significantly improved by relocation, and unemployment and underemployment are rampant in every major city in Africa. Increases in population cause a number of serious problems. With an average annual growth rate in agriculture of about 2.5 self-sufficiency in food production becomes a more elusive goal. Additionally, high population growth puts pressures on the soil by decreasing the time it is allowed to lay fallow; pastures land declines and the result is over grazing, which in turn causes increased friction between farmers and herders. Furthermore, rapid population growth tends to depress savings per capita and retards growth of physical capital per worker. The need for social infrastructure is also broadened and public expenditures must be absorbed in providing the need for a larger population rather than in providing directly productive assets. Population pressure is likely to intensify the foreign exchange constraints by placing more pressure on the balance of payment. The need to import food will require the development of new industries for export expansion and/or import substitution. The rapid increase in school-age population and the expanding number of labour force entrants puts ever-greater pressure on educational and training facilities and retards improvement in the quality of education, which is a problem in developing economies. Also, too dense a population aggravates the problem of improving the health of the population and intensifies pressure on employment and the amount of investment available per labour market entrant (Martin 2009).

More people may mean a country can produce and consume more goods and services, leading to economic growth. But this can only occur when employment opportunities grow at least as fast as the labor force and when people have access to the necessary education and training. A larger population may help overcome possibly diminishing returns to this generation's human capital in the production of the next generation's human capital because greater population growth induces more specialization and a larger market that raise returns to human capital and knowledge. If human capital per capita were sufficiently large, the economy would move to steady state growth, whereby in the steady-state growth path, consumption per capita would increase at a slower rate than human capital if the population is growing and if the production of consumer goods has diminishing returns to population. However, consumption per capita can still be increasing, despite these diminishing returns, if the positive impact of the growth in human capital on productivity in the consumption sector more than offsets the negative impact of population growth. Thus, zero population growth is not necessary for sustainable growth in per capita consumption, even with diminishing returns to population in the production of consumer goods (Gerald and Meier, 1995).

Economists advocating the positive side to population growth, say that the population growth creates problems in the short run that include poverty, famine and unemployment. Yet, they also state that in the long run, it leads to new developments through advancement in technology that leave countries better off than if the problems never occurred. On the positive side, there is a chain reaction of events caused by population growth. According to the neo-classical growth model, population is beneficial to an economy due to the fact that population growth is correlated to technological advancement. Rising population promotes the need for some sort of technological change in order to meet the rising demands for certain goods and services. With the increased populace, economies are blessed with a large labor force, making it cheaper as well, due to its immense availability. An increase in labor availability and a low cost for labor results in a huge rise in employment as businesses are more inclined to the cheap labor. Low labor costs results in a shift of money usage from wages into advancement through technology (Coale and Hoover, 1958).

According to Friedberg and Hunt (1995) population growth and urbanization go together, and economic development is closely correlated with urbanization. Rich countries are urban countries. Population growth increases density and, together with rural-urban migration, creates higher urban agglomeration. And this is critical for achieving sustained growth because large urban centers allow for innovation and increase economies of scale. Companies can produce goods in larger numbers and more cheaply, serving a larger number of low-income customers. Many countries have companies which have been benefitting from increasing population growth and density in targeting the large numbers of lower and lower-middle income. Their business model is viable because they can serve a multi-million customer base.

Inter-relationship between Population Growth and Socio-economic Development

The socio-economic consequences of demographic evolution and vice-versa are extremely difficult to measure with accuracy. However, some studies have attempted to show the relationship between population growth and socio-economic development. The correlation matrix of population and socio-economic development for 50 African countries during the last three decades has proved that population and development are inseparable and their relationship is reciprocal. The most important findings from these studies are:

a) Population, agriculture and environment

The relationships between the three variables show that the situation in Africa is critical. From the 660 million hectares of forest, about 3.2 million hectares per year are lost. The demand for fire wood is increasing about the same rate of population growth (3 5). This degradation of environment has a negative repercussion on the agriculture production and among other things on the availability of water resources. The food deficit generated aggravated the malnutrition situation in African countries. The agriculture and economic stagnation impede the process of transition towards the lowering of fertility. The rapid population growth affected also the satisfaction of immediate needs of the people and sustainable development.

b) Population and education

It is noted that population growth is closely correlated with the number of children per woman and in the countries where the primary school enrollment for girls is high it is found that the infant mortality is lower. The fertility rate is also negatively correlated with the number of girls registered in primary school showing that education of women is a crucial variable in the explanation of the fertility tendency observed in African countries and accordingly constitutes an important factor of the relation between demographic growth and development

c) Population migration and urbanization

Population growth affects the increase of urban areas through the process of migration fertility is higher among population working on agriculture than it is in urban population. As a result rural-urban migration takes place. This could cause serious shortage of labour force in the area of origin and as a consequence lack of food supply while it could cause an excess of labour, increased demand for health and education services and could create rapid urbanization and development of towns in the areas of destination.

Therefore - this situation and realities which exist in our countries have become causes for the failure of our efforts in development.

d) Population and family planning

The correlation matrix of fertility trends and contraception shows also that proportion of women using contraception are the most negatively correlated with fertility and was less degree to the proportion of children enrolled in secondary schools, the degree of urbanization, growth of GDP per capita and other factors. The African countries with low fertility are the countries where the contraceptive prevalence rate the primary school enrollment of girls, the expenditure in social sector are very high and the expenditure for defense and security very low therefore increase of general education of the population specially for girls and favorable socio-economic situation constitute the important elements in the use of contraception and family planning and consequently control the fertility and better quality of life.

e) Population and Structural Adjustment Programmes

African countries who have adopted the structural adjustment are those who have experienced lower GNP per capita, rapid demographic growth due to high fertility, high proportion of illiterate woman, slow decrease of infant mortality, high poverty, low rate of prevalence of contraception, rapid degradation of environment etc. It also appears that the adoption of the structural adjustment programme by those African countries seem to have no amelioration in

their critical situation they were experiencing before the adoption of structural adjustment programme.

DATA ON REAL OUTPUT(RGDP), PER CAPITA INCOME (PCI) AND POPULATION (POP)

YEAR	RGDP	PCI	POP
1981	98,594.10	3758.3	72,091,511
1982	93,594.00	3607.3	74,538,322
1983	83,519.60	3258.6	75,901,026
1984	66,462.20	3113.1	77,544,433
1985	71,368.10	3113.1	79,883,929
1986	257,784.40	3113.1	81,971,220
1987	255,997.00	3113.1	84,505,163
1988	275,409.60	3113.1	87,114,522
1989	295,090.80	3113.1	89,800,511
1990	472,648.70	3790.2	92,565,560
1991	328,644.50	3713.5	88, 992, 220
1992	337,288.60	3686.21	91, 529, 572
1993	342,540.50	3632.45	94, 366, 992
1994	345,228.50	3548.08	97. 254, 424
1995	352,646.20	3554.54	99, 209, 942
1996	367,218.10	3593.84	102, 176, 322
1997	377,830.80	3590.52	105, 231, 394
1998	388,468.10	3518.73	110, 361, 848
1999	393,107.20	3448.31	114, 022, 924
2000	412,332.00	3576.67	117, 822, 901
2001	431,783.10	3547.93	121, 747, 888
2002	451,785.60	3591.3	125, 773, 016
2003	495,007.10	3810.68	129, 900, 168
2004	527,576.00	3934.2	134, 131, 224
2005	561,931.40	4057.27	138, 468, 013
2006	595,821.61	4255.87	140, 003, 542
2007	634,656.60	4447.52	142, 467, 416

Source: *Several Issues of CBN Statistical Bulletin; National Population Commission; National Bureau of Statistics (NBS)*

Nigeria's Demographic Indices

- The current population of **Nigeria** is **185,269,327** as of Tuesday, February 23, 2016, based on the latest United Nations estimates.
- Nigeria population is equivalent to **2.48%** of the total world population.
- Nigeria ranks number **7** in the list of countries by population.
- The population density in Nigeria is 205 per Km² (532 people per mi²).
- The total land area is 910,802 Km² (351,662 sq. miles)
- **48.1 %** of the population is **urban** (91,668,667 people in 2016)
- The **median age** in Nigeria is **18 years**.

Source: **Worldometers** (www.Worldometers.info) Elaboration of data by United Nations, Department of Economic and Social Affairs, Population Division. World Population Prospects: The 2015 Revision.

Article I. United States Population Profile

Year	Population	Male Population	Female Population	Density (per sq km)	Growth Rate
2016	324,118,787	160,686,334	163,432,453	35	0.724%
2015	321,773,631	159,493,772	162,279,859	35	0.7262%
2010	309,876,170	153,291,683	156,584,487	33	0.8081%
2005	296,139,635	146,375,432	149,764,203	32	0.9146%
2000	282,895,741	139,559,152	143,336,589	30	1.0201%
1995	266,275,528	130,962,113	135,313,415	29	1.1975%
1990	252,847,810	123,979,490	128,868,320	27	0.9915%
1985	240,691,557	117,980,124	122,711,433	26	0.9677%
1980	229,588,208	112,513,611	117,074,597	25	0.944%
1975	218,963,561	107,639,863	111,323,698	23	0.9226%
1970	209,485,807	103,141,439	106,344,368	22	0.8897%
1965	199,403,532	98,595,547	100,807,985	21	1.1101%
1960	186,176,523	92,320,731	93,855,793	20	1.5459%
1955	170,796,378	84,930,123	85,866,255	18	1.7878%
1950	157,813,040	78,830,426	78,982,614	17	1.3017%

Sources: World Population Prospects - Global demographic estimates and projections by the United Nations (2016)

US Census Bureau (2016) - US Population Clock

Population Explosion and Economic Development: An Appraisal of Nigeria and USA

Nigeria's population as at last census was over 142 million and has since then grown to 185 million at 3.2% per annum; a growth rate which far exceeds that of the USA. Consequently, the physical and social infrastructure required to support this huge population is enormous and requires huge funding. The huge population which is more than 50% urban has placed undue pressure on existing infrastructure and on governments' budgets over the years. Thus, the infrastructure base is grossly inadequate and suffered from deferred maintenance. Besides, Nigerian government has failed over time to integrate population policy with overall

development planning. The short-fall in infrastructural provision affects the economy negatively and lowers productivity in every sector and aggravates the poverty profile of the country.

Rapid growth of population in a developing nation like Nigeria is inevitable. However, the growth can be planned and sustained to achieve economic growth. For instance, between 1960 and 2000, the share of the population living in urban areas rose from 20% to 36% in both Asia and Africa, the per capita income increased to 340% in USA; and only 50% in Nigeria (Bloom, Canning and Fink, 2008). Africa in general and Nigeria in particular has not taken full advantage of the process of urbanization to promote economic growth while USA have capitalized on it by providing industries and the required infrastructure to sustain the growth (Yinusa, 2011). To reduce governments' financial burden on infrastructural development, there must be deliberate control of the country's population as done in China. In United States of America and parts of South America, where family planning has been adopted for population control, the healthy balance between populations and resource stock is a major factor in their enviable standards of living and impressive economic performances. It is either Nigeria deliberately controls her population or nature does it. Already, about 55 per cent of the Nigerian population lives on less than \$1 per day, this is one of the highest poverty rates in sub-Saharan Africa. At the level of government, its responsibilities should centre on the provision of quality education to enhance quality human capital, quality health care and basic infrastructure.

Developing countries like Nigeria experience the negative impact of rapid, uncontrolled population growth, often requiring western countries to provide direct aid to avert famine. Poor social conditions, including regional warfare and weak governance, often make conditions worse when scarce resources are not sufficient to meet the needs of a rapidly growing population. These conditions exacerbate poverty, malnutrition, childhood and maternal mortality, use of child labor and already inadequate educational opportunities, especially for women. Nigeria just like other developing countries has an unprecedented opportunity to expand their labour force and stimulate economic growth with the help of declining fertility and a large young population. However, leaders will be challenged to ensure that enough jobs will be available as large generations of young people enter the labour force. Worldwide, 75 million young people are currently unemployed, and this number could increase in the coming years without investments in work skills and job creation. When young people cannot find employment, a large young population can threaten social and political security. Many countries have demonstrated that large populations of unemployed youth can undermine economic growth and become a source of civil unrest. Between 1970 and 1999, 86 percent of the countries that experienced a new outbreak of civil conflict had 60 percent or more of the population under age 30 (Donna and Alexandra, 2013). Lowering fertility will enable today's large generation of young people to enter the labour force with fewer children to support. With favorable education, health, and labour policies, a larger proportion of the population can be employed and contribute to economic growth.

Today, after decades of rapid population growth, the developing world has the largest generation of young people in history. One-quarter (1.8 billion) of the world's population is between the ages of 10 and 24, and nearly 90 percent of young people live in developing countries. This large, young population can be a great opportunity for economic development, but it also presents challenges because of the demand for social services and employment (Donna and Alexandra, 2013).

Population growth is closely tied to economic development, either positively as in USA or negatively as in Nigeria and the developing world as a whole. On the one hand, labour shortages in USA will slow the rate of economic growth, but on the other hand, a high birthrate in Nigeria may stress limited renewable resources. Governments in USA and other industrialized countries like Japan are challenged to create effective immigration policies and programs to increase the birthrate, while governments in Nigeria and other developing countries with weaker economies should pursue public health policies to reduce population growth. Globally, a smaller population presents multiple benefits from an ecological perspective, but some economies are challenged by low birthrates and are redirecting their need for unskilled labour to countries with higher populations and lower wage demands.

Effects of Population Growth on the Economic Development

The existing state of knowledge does not warrant any clear-cut generalization as to the effect of population growth on economic development in today's less developed areas. Some theoretical analyses argue that high population growth creates pressures on limited natural resources, reduces private and public capital formation, and diverts additions to capital resources to maintaining rather than increasing the stock of capital per worker. Others point to positive effects such as economies of scale and specialization, the possible spur to favorable motivation caused by increased dependency, and the more favorable attitudes, capacities, and motivations of younger populations compared with older ones. The actual evidence on the association between growth rates of population and per capita income does not point to any uniform conclusion, though the true relationship may be obscured in a simple two-variable comparison. None of this means that per capita income growth, currently and in the past, would have been the same if population growth rates had been markedly higher or lower. But it is possible that the effect of population growth on economic development has been exaggerated, or that no single generalization is justified for countries differing as widely in growth rates, densities, and income levels as do today's less developed areas. Clearly there is need for more intensive research on the actual experience of nations, currently and in the past. A large population puts a great strain on resources. Non-renewable resources, such as fossil fuels (including coal and petroleum products) and freshwater, are particularly affected. Areas where access to freshwater is of particular concern include locations in the American West and places in the Middle East.

Habitat Destruction

A growing population requires a lot of space. As populations in cities grow, urban sprawl also grows, resulting in the destruction of critical habitat for a number of plant and animal species. The loss of habitat can result in the encroachment of animals, such as mountain lions, deer and coyotes, into suburban neighborhoods as they have nowhere else to go.

Habitat Fragmentation

Another impact of overpopulation is habitat fragmentation. Habitat fragmentation refers to natural habitats that are broken into separate pieces due to the construction of buildings, roads and other man-made objects. Habitat fragmentation is especially harmful to animal migration routes, as animals are often unable to access a critical portion of their migration pathway due to obstructions.

Pollution

Overpopulation has a negative impact on the environment due to pollution. The more people there are, the more resources they use, and the more pollution that results. This pollution may

include air pollution due to increased fossil fuel emissions from vehicles, or land or water pollution due to increased amounts of waste.

Public Health Concerns

In some cases, unchecked population growth may lead to public health problems. For example, in many developing countries, populations do not have access to clean water sources. Water pollution, caused by a lack of proper sanitation, can easily lead to the spread of disease.

Conclusion

In conclusion, there is no doubt that the population problem issue is real and challenging. The impact of the effect of high birth and death rates, increasing population size and density, rapid population growth, and increasing dependency burden all translate into greater demands on the government in productive activities which in turn accentuate the problems of unemployment, underemployment, persistent poverty, urban slums, crime and political unrest.

To the extent that population variables have far reaching effect on economic development and are also influenced by them, the theme of this paper is considered apt and in that direction if Nigeria, albeit other developing countries is to effect changes in the critical growth components of their populations (especially fertility) consistent with the recommendations of the Kilimanjaro Programme of Action the Dakar/NGOR Declaration, and ultimately effect a marked reduction in population growth rate, then a viable population policy for the constituent states should be one integrated into their development plans.

The programme of action of ICPD which focused on the control of population growth mainly by means of family planning and contraceptives should take into consideration the socio-economic development aspect to reach objectives. Every country should have the responsibilities to tackle prevailing population problems according to its development policy based on the local cultural, religious, political, ethnic and demographic diversity.

Policy recommendations

With the results indicating a positive correlation between population and economic growth in both countries studied, then a carefully planned population growth strategy coupled with institutional and policy changes could be beneficial to these countries. Whereas the USA put her acts together by ensuring effective population control and management and is therefore reaping the dividends of economy of scale, Nigeria is still grappling with institutional, structural and infrastructural deficiencies in dealing with its population size. These recommendations are therefore apt in tackling certain population induced deficiencies in Nigeria. If effectively actuated well managed population expansion will ensure that both the population and the economy are complementing each other without concerns that population expansion will lead countries to famines and lack of other socio economic facilities since its the inadequate government policies, rather than population growth which are responsible for the woes including, famines that besiege most developing nations.

The government of Nigeria should therefore, put measures to ensure that the economy grows at a higher rate than the population growth. This will ensure that the increasing demand of services arising from the population growth is met. Having a larger, healthier, and better-educated workforce will only bear economic fruit if the extra workers can find jobs. Open economies, flexible labour forces, and modern institutions that can gain the confidence of the population and markets alike may help countries reap the potential benefit created by their demographic

transition. Openness to trade can be a key driver of economic growth, helping to significantly boost the benefits a country receives from the demographic transition.

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

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

References

- James N. Gribble and Jason Bremner (2012), "Achieving a Demographic Dividend," *Population Bulletin* 67, no. 2
- Aaron Terrazas, Demetrios G. Papademetriou, and Marc R. Rosenblum (2011), *Evolving Demographic and Human-Capital Trends in Mexico and Central America and Their Implications for Regional Migration* (Washington, DC: Migration Policy Institute.
- Ajayi, A. and Kovole, J. (1998), "Kenya's Population Policy: From Apathy to Effectiveness," *Do Population Policies Matter?* New York: Population Council, .pp 13-25.
- Anker, R. Knowles, C. J. (1983) *Population growth employment and economic interactions in Kenya*. Gower publishing company Hampshire England.
- Bloom, D. E., and Freeman, R. (1986) "The Effects of Rapid Population Growth on Labor Supply and Employment in Developing Countries," *Population and Development Review*, pp. 381–414.
- Bloom, D. E. and Williamson, G. (1997). "Demographic Transitions and Economic Miracles in Emerging Asia," *World Bank Economic Review* 12 (3): 419-55.
- Bloom, D., E., and Freeman R., E. (1998) 'Economic Development and the Timing and Components of Population Growth.' *Journal of Policy Modeling* 10(1), 57–81
- Bloom, D., E. Canning, D. (2003) "Contraception and the Celtic Tiger The Economic and Social Review, Vol. 34, No. 3, Winter, 2003, pp. 229–247.

- Bloom, D., D. Canning, and B. Graham. (2003). "Longevity and life-cycle savings," National Bureau of Economic Research Scandinavian Journal of Economics 105: 319–338.
- Boserup, E. (1965), *The Conditions of Agricultural Growth: The Economics of Agrarian Change under Population Pressure*. London.
- Bucci, A. (2003) "Population Growth in a Model of Economic Growth with Human Capital Accumulation and Horizontal R&D" University of Milan: Milan,
- Coale, A. J., and Hoover E., M. (1958) *Population Growth and Economic Development in Low-Income Countries*. Princeton: Princeton University Press.
- Donna Clifton and Alexandra Hervish (2013), *The World's Youth 2013 Data Sheet* Washington, DC: Population Reference Bureau.
- Enders, W. (1995) *Applied Econometrics Time series*, New York: John Wiley and Sons Inc.
- Engle, R.F., D.F. Hendry and J-F. Richard (1983), "Exogeneity. *Econometrica*," 51, 277.304.
- Esther Muia, Patrick Ndavi, Joyce Olenja, Paul Kizito, Sian Curtis, and Ani Hyslop" (2003) *Factors that Contribute to the Utilization of Quality Reproductive Health Care: Findings from Further Analysis of the Kenya Service Provision Assessment of 1999*". National Council for Population and Development. Nairobi, Kenya.
- Friedberg, R. and J. Hunt (1995). "The Impact of Immigrants on Host Country Wages, Employment and Growth (in Symposia: Immigration)." *The Journal of Economic Perspectives* (2): 23-44.
- Gerald, M. and Meier, M., G. (1995), "Leading Issues in Economic Development" New York: Oxford University Press, 1995), p.276.
- Kelley, A. C. (1988). *Population matters - demographic change, economic growth, and poverty In the developing world*. New York: Oxford University Press.
- Kelley, A. C. & R. M. Schmidt. (1995), "Aggregate Population and Economic Growth Correlations: The role of the components of demographic change," *Demography*, 32(4): 543-555
- Kirori, G.N. and Ali, J. (1998) "Macroeconomic Implications of Demographic Changes in Kenya" Africa Economic Research Consortium .Research Paper eighty-three.
- Macharia, K. (1997). "Social and Political Dynamics of the Informal Economy in African Cities" Harare and Nairobi. Lanham, University press of America.
- Malthus, T.R. (1798), *An Essay on the Principles of Population*, (Cambridge: Cambridge University Press.
- Mankiw, G. Roemer, D. and Weil, P. (1992) *A Contribution to the Empirics of Economic Growth. Quarterly Journal of Economics*
- Martin .P (2009) "Demographic and Economic Trends: Implications for International Mobility" *United Nations Development Programme Human Development Reports*. Research Paper 2009/17
- Mukras, M. S. (1993) *Elementary Econometrics: Theory, Application and Policy*. Nairobi: East African Educational Publishers Ltd.
- National Council for Population and Development (NCPD) [Kenya], Central Bureau of Statistics (CBS), and Macro International Inc. (MI). 1999. *Kenya demographic and health survey 1998*. Calverton, Maryland: NCPD, CBS, and MI. Odi, L. H., (2008) "Adolescent reproductive health and development policy 2005-2015. AID Portal. Retrieved from http://www.aidsportal.org/Article_Details.aspx?ID=7811
- Oduor, J. (2008) *Impacts of Real Exchange Rate Misalignment on Trade Creation and Diversion within Regional Trading Blocks: The case of Comesa*. Shaker: Verlag, Germany.

- Ralph Thomlinson (1965), *Population Dynamics Causes and Consequences of World Demographic Change* California state college random house. New York
- Simon, J. L. (1977), *The Economics of Population Growth*. Princeton University Press: Princeton New Jersey,
- Simon, J. L. (1992) *Population and Developing Countries*, Princeton University Press: Princeton, New. Jersey
- Srinivasan, T. N., (1988) "Population Growth and Economic Development," *Journal of Policy Modeling*, Vol. 10, No. 1, spring. pp. 7-28.
- Stock, J.H., and Watson, M.W. (2001) Vector Auto Regressions. *Journal of economic perspectives* 15,101-115
- Tournemaine, Frederic, (2007) "Can population promote income per-capita growth? A balanced Perspective." *Economics Bulletin*, Vol. 15, No. 8 pp. 1-7
- Thirlwal, A. P. (1993) "Growth and Development with Special Reference to Developing Economies", University of Kent at Canterbury, 5th Edition. Pp. 143-155.