CHAPTER ONE

INTRODUCTION

1.1 THE BACKGROUND OF THE STUDY

The consequences of population growth on the economic development of less developed countries are not the same because the condition prevailing in these countries are quite different from those of developed economy. Therefore the body of literature on population growth in Nigeria has always emphasized either the negative or the positive effect.

Therefore in every discussion, it is conventional to start with a definition of terms used in such discussion. However, population growth can be seen by a demographer as a change in the size of the population. But when this change occurs in such a way that it reduces the size of population, the demographer refers it as a negative growth but when it adds to the size of the population he regards it as a positive one. What we get from this concept is that population growth can be positive or negative depending on whether there is an increase or

decrease in the size of a given population. Population whether positive or negative is derived from three demographic variables such as birth, death and migration rates

Udabah (1999) Threw more light on this by adding that birth and death rates in underdeveloped countries are quite different from that of developed countries. Births rate in underdeveloped are generally high, why those of developed countries are low. On the other hand, death rates are higher in underdeveloped nations. The higher rate of population growth is therefore a major characteristic of underdeveloped nations and is partly responsible for the low rates of economic development.

Moreover, the population of any country constitutes the most vital component of its resource base. This aspect is based mostly on its size, growth rate, spatial distribution, demographic structure and quality in terms of level of education, fitness and social welfare. Population statistics are indispensable impute into the planning process in any area. To government issuing programmes for instance in the efforts of government in the developing countries to feed the people and also

provide quality services for them are being frustrated by rapid population growth. This growth is attributable on the one hand to improvement in human survival associated with the application of modern medical science to health matters, better sanitation and immunization of children which have caused the death rate to decrease.

On the other hand, so many socio-cultural issues have complimented the growth of population in Nigeria positively (Lee and Miler 1990, Rennne 1995, Ainsword et al 1996).

Consequently, the world population has been increasing and the last two decades have been demographically unprecedented as it rose from 4.2 billion people in 1985 to 6.4 billion in 2010. Much of this occurred in the developing nations as their population grew from 3.7 billion to 5.1 billion as against that of developed nation which grew from 1.1 billion to 1.2 billion over the same period (United Nation 2001 billion).

Nigerian's population is one of the fastest growing population in the world and Nigeria is the most populous country in Africa, ranked the tenths as obtained from two major sources, viz the 1991 census and the Population Reference Bureau World Population Data Sheet.

Obviously, the population of Nigeria is large which makes it a “giant” relative to the other Africa countries. The large population of Nigeria implies a large market for goods and services as well as large pool of human resources for development. However, the impact of population on development depends not only on the absolute size but also on its quality. The major function responsible for the rapid increase in the population of the country is the relatively high fertility level as portrayed by a total fertility rate of about 6.0 life - birth per woman in the 1990’s

Having seen from theoretical and empirical view that the population growth is an impediment to the economic growth and development especially under developing countries. It is then important to answer this question, how detrimental is population growth to the economic growth? To answer these we look into the interactions between population growth and any of the economic variable such as , population growth, unemployment, savings ,interest, and inflation etc. So in this research work, our demonstration of the impact of population on economic growth will be based on the study of the relationship

between population growth, interest, unemployment and inflation. Now the question to answer becomes how those population growth influences unemployment? Since we are working on the impact of population growth on Nigeria, as whose population according the 2006 census was estimated to be at a growth rate of 3%, our limitation of this study would be on the Nigeria GDP (Gross Domestic Product) or GNI (GROSS NATIONAL PRODUCT) versus the population growth rate of Nigeria.

Nevertheless, economic growth is the GDP OR GNI divided by the total population of the whole country. This measures the level of output in the economy. This equation implies that if population is rapidly growing, the economic growth will reduce marginally and people income will also decrease. So according to the finding, GDP can be improved that is GDP per capital by checking the population growth rate through birth control, death rate, migration and some other economic variables and demographic variables.

1.2 STATEMENT OF THE PROBLEM

Fundamentally, growth is an indispensible requisite for the development that is why Nigeria's economic growth had continue to dominate the main thrust of government paramount objective more importantly, growth is associated with policies of control population growth because a high population lead to a vicious depletion of a nation's financial and material resources. According to CBN (1997) the population growth rate of Nigeria is at an average of 2.83% from 1993 to 1997 as compared to developed country like United States whose population rate is 1.00% on the average. This rapid population growth has efficiently induce wide spread poverty. According to Chege (1992), Nigeria became worst than the early post-colonial period. In the 1980's the agricultural sector declined in productivity by 1.3% while population grew by 3.1% thus creating severe food shortage, a fall in capital income, a fall in savings and living standard . Because of this type of situation economic growth been severely retarded and dwarfed.

The above presentation points to the critical stance of the economy and therefore makes a clarion call for adequate measure to control the growth rate of Nigeria's population which is at 2.8%per annum. To check this, we require constructive demographic policy approaches that will seriously enlighten citizens of the eminent socio-economic danger of rapid population growth.

1.3 OBJECTIVE OF THE STUDY

1 To find out the relationship between population growth and economic growth.

2. To examine the impact of population growth on economic growth.

3. To proffer appropriate solution / recommendation to authority in Charge of managing the economy on how to remedy the situation population growth.

1.4 STATEMENT OF THE HYPOTHESIS

The hypothesis to be used is stated thus:

H0:= The impact of population growth on Nigerian economy is not significant.

H1:= The impact of population growth on Nigerian economy is significant.

H0:= There is no casual relationship between population growth and economic growth.

H1:= There is casual relationship between population growth and economic growth.

1.5 SIGNIFICANT OF THE STUDY

1 It provides information on population trends and their implication To the policy makers, educators, the media and the concern public Servant.

2 To ascertain the truthfulness whether population growth impact Negatively or positively to the economic development.

3 This study will also serve as a reference research work for the society further studies

1.6 SCOPE OF THE STUDY

This research is macroeconomic in nature and over the trend of population growth rate and economic growth rate in Nigeria from 1980 to 2010 a period of 30 years. The study also focuses on the effects of population growth on economic growth in Nigeria in a bid to analyze the options available to accelerate economic development, taking into cognizance of the fact that other factors outside the sphere of population are also important in the determination of the face of economic growth.

1.7 LIMITATION OF THE STUDY

The utility of this research work is restricted to the exclusive focus on population size and growth.

CHAPTER TWO

LITERATURE REVIEW

2.1 THEORETICAL LITERATURE

The nature of the relationship between population growth and economic growth has so attracted the attention of a large number of the world's most influential thinkers that most of them have started propounding theories to explain the relationship. Generally the various explanations of the relationship between population growth and the society have focused on the causes of population growth, the consequences of population growth, and the responses of people to population growth. Most of the early writers on population growth were very much concerned with the need to balance population with resources.

According to Okafor (2004), population is a critical factor in the development plans of any civilized society. For effective planning for the development of developing countries, it is necessary to have an actual count of the population i.e. in form of an accurate census. This

will enable government to know how many people to whom they should distribute amenities and social services.

According to Udabah (2002), it is a central problem of economic development. If the population of a nation expands as fast as national income, per capita income will not increase. When population expands rapidly, a country may by great effort raise the quantity of capital only to find that a corresponding rise in population has occurred so that the net effect of its "growth policy" is that larger populations now maintained at the original low standard of living. Much of the problem of developing nations like that of Nigeria is due to population growth. Most developing nations have made appreciable gains in income, like Nigeria do in exporting crude, but most of the gains have been eaten up (literally) by the increasing population.

On the other hand, the early Roman Christians and Islamic writers were largely in favour of population growth without showing concern for the need to balance the number of people with available resources. This attitude was apparently influenced by high mortality, which characterized the period.

2.1.1 THEORIES 0F POPULATION GROWTH

Most world thinkers or philosophers have in recent times been attracted by the nature of the relationship between population growth and the socio economic system of a given geographical zone. This attraction gave rise to the postulation of so many theories of population. Among these theories, they can be classified into three classes or school of thoughts.

1. The pessimistic theorist (The Malthusian theory).

2. The optimistic theorist (Marxist theorist)

3. Liberal theorist.

2.1.2 THE MALTHUSIAN THEORY

Thomas Malthus was an English clergyman who lived from 1766-1834. He was widely known as the first professional demographer. It was during the period of the physiocrats thinking in the 18^{th} century that he postulated his theory. He had the most influential work relating to population growth and its consequences. He was the first man to draw

out in a systematic way a picture that links the consequence of growth to its causes. His theory of population growth can be broken into eight major points based on evolution.

1. Population level is severely limited by subsistence.

2. When the means of subsistence increases, population increases.

3. Population pressures stimulate increase in productivity.

4. Increase in productivity stimulates further population growth.

5. Since the productivity can never keep up with the potential of population growth for long, there must be strong checks on population to keep it in line with carrying capacity.

6. It is through individual cost/benefit decisions regarding sex, work, and children that population and production are expanded or contracted.

7. Checks will come into operation as population exceeds subsistence level.

8. The nature of these checks will have significant effects on the rest of the socio cultural system, Malthus points specifically to misery, vice, and poverty.

Due to the above outlined points from Malthus theory of population growth, he can then be regarded as a key contributing element of the canon of socioeconomic theory. For clarity we can simply compress the above points into three major parts:

i. Causes of population growth

ii. Consequences of population growth

iii. Avoiding the consequences of population growth.

According to Malthus, "the power of population is so superior to the earth to produce subsistence for man that premature death must in some shape or other visit the human race. The vices of mankind are active e and able minister of depopulation. They are the precursors in the great army of destruction, and often finish the dreadful work themselves. But should they fail in this war of extermination, sickly seasons, epidemics, pestilence and plague advance in terrific array and sweep off their thousands and tens of thousands. He also reviews that on the population growth he perceived the critical importance of population growth to standard of living in early nineteenth century. He asserted two relations concerning rates of increase.

First, food production tends to increase in an arithmetic progression (eg 100,103,106, 109,112) where the increments in this example are 3 units per period. Secondly, population tends to increase in a geometric progression (eg 100, 103, 109.09, 109.27, and 112.55, where the increase in this example is also 3 percent per period). As a relationship, Malthus argued that population growth will always tend to outrun the growth in food supply. The difference in the above example is not too much after five periods. But after twenty periods, the arithmetic increase in food supply has increased to 160 while geometric increase in the population has increased it to 181.

Furthermore, he argues that only natural causes (e.g. accidents and old age), misery (war, pestilence, and above all famine), moral restraint and vice (which for Malthus included infanticide, murder, contraception and homosexuality) could check excessive population growth. Above all he saw moral restraints as the only acceptable means that implies delaying marriage until a man feels he is able to support a viable family.

Malthus himself noted that there are consequences of population growth that many people misrepresented his theory and took pains to

point out that he did not just predict picture catastrophe. He argued that constantly subsisting cause of periodical misery has existed ever since we have any histories of mankind thus exist at present and will forever continue to exist, unless some decided change place in the physical constitution of our nature.

2.1.3 THE MARXIST THEORY

Marx was a socialist writer who disagrees with Malthusian theory of population growth. Marx and Engels saw that the theory of Malthus was outrageous and against humanity. This lead to their writing called Marxist theory.

The highpoint of opposition to Malthus ideas come in the middle of the nineteenth century with the writings of Karl Mark (capital, 1867) and Friedrich Engels (outlines of a critique of political economy, 1844), who argued that

Who argued that what Malthus saw as the problem of the pressure of the means of production on population? They thus viewed in terms of their concept to the labour reserve army. In other words the seemingly

excess of population that Malthus attributed to the seemingly innate disposition. The poor to reproduce beyond their means was actually a product of the very dynamic of capitalist economy. Hence Engels called Malthus's hypothesis "the crudest, most barbarous theory that ever existed, a system of despair which struck down all those beautiful phrases about love thy neighbor and world citizenship.

2.1.4 THE LIBERAL THEORIST (CORNUCOPIAN)

Some 19th century economists believed that improvements in the division and specialization of labour, increased capital investment and other factors had rendered some of Malthus warnings implausible in the absence of any technological improvement of increase in capital equipment, as increased supply of labour may have a synergistic effect on productivity that overcomes the law of diminishing returns. As American land economist Henry George observed with characteristic piquancy in dismissing, both e Jay hawk and the man eat chickens; but the more jay hawks, the fewer chickens while the more men, the more chickens. This set of economist dismisses the Malthusian catastrophe largely due to the influence of technological advances and the

expansion of market economy; division of labour, and stock of capital goods. Malthus is thus regarded by some such as British physicist John Maddox as a failed prophet of doom.

2.1.5 FACTORS AFFECTING POPULATION GROWTH

Many factors have been identified as influencing the increase or decrease of the population of a country such as Nigeria. Some of these factors are natural; some are socio-cultural, while others are inbuilt. Such factors include:

1. Birth rate
2. Mortality
3. Natural disaster
4. War.

BIRTH RATE

This has to do with the rate at which women give birth in a given environment. Most demographers agreed that birth rate has positive effects on the population of a country like Nigeria where the birth rate is

very high. The reason for this high birth rate in Nigeria is obvious and these include:

a. **Early marriage:** In most third world countries, with particular reference to Nigeria, women marry at a tender age. These are cases of men and women in traditional homes in Nigeria marrying at the age of one year, ten years, fifteen years or even more or less. Biologists agree that the level of fecundity of a man or woman is very high between fifteen and thirty, because these children marry at very tender ages. The marriages are usually contracted by both parents and birth from the new couple start at puberty. In this case, before the couples are up to thirty five, they had already given birth to eight to ten children. This couple may see themselves as still being young and consequently will continue to give birth as long as God is willing to bless them with children. This type of situation increases the population of a place.

b. **Culture:** Polygamy (lineage and kinship network). The effect of polygamy on fertility is complex. By definition, each polygamous household has at least two wives; Nigerian data (NDHS 1999) reveal that 35% of all currently married women are in polygamous households,

of which 17.2 percent have two or more co-wives. The result is that a much larger percentage of women are in polygamous households than there are monogamous households. Another consequence of polygamy is that it puts pressure on women and makes them soon marry at a very early age. In addition, the pressure to have more than one wife leads other men to recruit young girls polygamous to be withdrawn from school and to marry at an early age. Another characteristic of the African household that has direct bearing on demand for children is its durability or perpetuity. It is generally accepted that people do not actually die; members die and are replaced through births. Consequently, there is need to ensure that fertility levels remain higher than mortality levels if the lineage is not ultimately to disappear. Considerable expansion of membership enhances the power and prestige of the lineage and reduces the likelihood of extinction through death. Additionally, enormous weight is maintained to family continuity because each new birth in the lineage is regarded as providing a vehicle for the return of an ancestor. Hence to prevent a birth is viewed as tantamount to consigning an ancestor to oblivion

(Bleak 1987; Makinwa Adebusoye and Edigbola, 1992; National Research Council, 1993; Caldwell 1987). Desire to perpetuate the lineage results in large kinship networks and population growth.

c. **Quest for Male Children:** Most families in Nigeria valued male children more than female children. This is because, according to them, female children later in life marry and leave the compound while male children stay back to control their father's wealth and lands. Thus in a family where there are only females, the father and even the mother of such families are never happy until they get a male issue. Attempts to see if they can get a male issue may lead to such couples having up to twelve to fifteen children. This practice increases population growth of a place.

d. **Low status of women:** The extent to which women enjoy any decision-making is powerfully shaped by social institutions (Mason, 1984). The patriarchal, hierarchical and polygamous organization of many African households tends to perpetuate the low status of women in African societies. Consequently, most women cannot exert much, if any, control over their lives in the families within which

they love. Early marriage patrilocal residence after marriage and polygamous unions are institutions that perpetuate women's subordinate position and make them rather voiceless and powerless in matters affecting their reproduction. At marriage, a woman assumes a low status relative to all members of her husband's extended family which is elevated usually by attainment of high fertility. Hence, population is increased.

MORTALITY (DEATH RATE)

This has to do with the rate at which people die especially children. In recent years, the rate of mortality in Nigeria has reduced while the birth rates have controlled to grow. The reduction in child mortality has been attributed to improved Medicare. The breakthrough in medicine has made possible the production of vaccines and cures for killer diseases like malaria, yellow fever, chicken pox, small pox, hepatitis, polio e.t.c. In short, reduce mortality rate means increased population growth.

NATURAL DISASTERS

Natural disaster is a negative factor of production growth i.e. it affects population growth negatively. When they occur in a very large extent they reduce the population of a place, such natural disasters include drought, earth quake, volcano, flood, tornado, barren land etc. Such natural disasters can claim lives or cause the inhabitants to migrate to other place or places of the world thereby causing a heavy reduction in the population of the place.

WAR

This is a typical example of man-made factor which can drastically affect the population of a place. In modern times, the outbreak of either inter local, tribal or continental wars has resulted in the use of sophisticated weapons which can result in loss of life and property, hunger and starvation resulting from the war can also lead to death. Finally, people may choose to migrate from the war zone to a more peaceful zone. All these are more can lead to reduction in the populated place

2.2 EMPIRICAL LITERATURE

Some observers attributed nearly all of the world's maladies to excessive population growth. Then claim that rapid population growth has at least three adverse effects on human well being. First, it increases poverty the number of people that are impoverished, the proportion of the community that is impoverished, and the severity of the impoverishment. Secondly, it increases environmental degradation – the misuse of natural resources with adverse consequences on many dimensions of human well-being.

Finally, it presents environmental enhancement by holding back the savings and investment that would permit environmentally sustainable economic growth and retards the agricultural productivity that would encourage environmentally friendly agriculture and conservation (Ahlburg 1994, Kelly and McGreevy 1994).

These contentions however are not necessarily accurate. The adverse effects of population growth can easily be confused with other factors because rapid population often occurs along with the factors that reduce human example, rapid population growth is common in many

tropical areas of the world. Yet tropical environments themselves retard human productivity activity due to heat, endemic disease, and poor soils, (Sachs and Warner 1997). It would be easy to conclude that fast population lowers productivity when actually the tropical environment may be the cause.

Furthermore, a large body of demographic literature documents the incidence of population growth in Nigeria (see, for example Olusanya and Purcell, 1981: Faroog, 1985: Feyisetan and Ainsworth, 1996; Anyimue and Okojie, 1978; National population commission, 2002 and Federal Republic of Nigeria, 2004). These documents argue that this growth in population should not be cause for concern since in certain circumstances, a large population could be to the advantage of the country in terms of the sheer size of its domestic market, better division of labour, increased productivity through improvement in the ratio of labour force to population as well as enhancement of its political and military power. A large population also diversifies the demand for products and services and promoters the tendency to

increasing returns to scale, thereby raising economic development and growth (Tesnu, 2000).

Additionally, advances in the arts, sciences and technology are the purview of highly talented individuals and invariably the large the population the more likely would be the number of such individuals in the society (Jakande ,1988, Mauldin and Sinding, 1993 and Idele, 1997). Admittedly, population growth puts severe pressure on existing resources, but as Simon 1996) observes, such growth Ushers in needed adjustments that neutralize the effects of depleting resources through the search for substitutes by stimulating technological change. Put differently, the ultimate resource is people who exert their dexterity to manage the challenges of growth. When viewed from the perspective, population growth is not necessarily a problem but an opportunity in disguise. Be that as it may, Nigeria's large population has growth and development implication. To begin with it does not augur well for planning purposes. Plans only succeed when the implementation is pursued with reliable data. But in Nigeria experience the unreliability of

demographic data makes plan implementation futile exercise in the country (African Development Bank, 2001).

Studies described elsewhere (World Bank, 1994; United Nations, 1998; Adonri, 2003) also detail other negative consequences associated with demographic change in Nigeria such as health complications arising from pregnancies that occur too early or too frequently during the reproductive of the mother. Population and health are thus closely related when considering high risk pregnancies. By preventing such pregnancies a significant impact can be made in enhancing the quality of life of the mother and child and by extension that of the entire population.

Population growth in Nigeria is equally associated with unemployment with figures ranging from 17 percent per annum for the entire population to 60 percent for the youth because job opportunities are fewer than the number seeking for them and stagnating economic performance because a large proportion of available resource is consumed instead of invested to generate growth (Federal Republic of Nigeria, 2004). In addition, it posses continuous pressure on resources,

particularly on agricultural land. For instead, due to high density of people in the Eastern states as much as 53 percent of the farming population cultivate less than 0.4 hectares in a given year and in the more congested areas of these state most farmers cultivate only 0.2 hectares per year. This results to fragmentation of farm land and their subdivision into smaller plots to accommodate the growing farming populace. With time, the small plots would become untenable for even subsistence farming, forcing those concerned to move into marginal soils, where greater degradation takes place with attendant reduction in agricultural output (Akinbode, 2002, Madu, 2005). The application of modern farming techniques and fertilizers could assuage. This problem but unfortunately as a capital deficient country, the traditional farming dominates agricultural practice in Nigeria. Inevitably, therefore population pressure on a fixed factor like land would usher in diminishing returns (Iniodu 1998). T his is one of the explanation to decreasing peasant income and accompanying widespread poverty among the rural dwellers, the incessant food storage and insufficient calorie intake among the Nigeria people.

The changes in the structure of Nigeria's population continue to shift in favour of the young age group 0-14 years. This age group accounted for 43 percent of the population during the 1963 census but the figure increased to 45 percent of the population during the 1991 census as table below demonstrates. Table 1: Numerical and percentage distribution of the population of Nigeria by five years Age Group in the 1963 and 1991 population censuses.

1999 census Age Group (Years)	Total	%	1991 census Age Group (Years)	Total	%
0-4	9,549,163.00	17.2	0-4	143,438,889.00	16.1
5-9	8,439,298.00	15.2	5-9	14,500,458.00	16.3
10-14	5,937,125.00	9.4	10-14	11,148,681.00	12.5
15-19	5,251,184.00	12.4	15-19	9,335,788.00	10.5
20-24	65,123,188.00	10.0	20-24	7,671,570.00	8.6

25-29	5,570,585.00	7.8	25-29	7,7,311,671.00	8.2
30-34	4,325,578.00	4.8	30-34	5,913,927.00	6.6
40-44	2,478,446.00	4.3	35-39	4,214,933.00	4.7
45-49	2,420,144.00	2.1	40-44	3,845,918.00	4.3
50-54	1,168,048.00	2.2	45-49	2,416,703.00	2.7
55-69	1,216,899.00	0.8	50-54	2,570,799.00	2.9
60-64	463,476.00	1.4	55-59	1,119,769.00	1.3
70-74	785,792.00	0.5	50-64	1,690,374.00	1.9
75-79	272,899.00	0.6	65-69	763,940.00	0.9
80-84	314,323.00	0.2	70-74	886,302.00	1.0
85+	125,838.00	0.3	75-79	315,823.00	0.4
	191,156.00	0.4	80-84	480.686.00	.05
	246,893.00		85+	424,989.00	0.5
				88,992,220.00	

Granted that the elderly population of 65 years and above is substantially small than the young population as table above also bear

witness, the percentage of the elderly population is expected to increase with better medical services. This implies a high proportion of people at the non productive tender age and the aged which together constitute about 48 percent of the population. The high percentage of youth aged in the population easily render social welfare programs of government and international agencies mere tokenism gesture (Nature population commission, 2004). The heavy outlays on child welfare and social security and even heavier tax burden on the labour force to support the young and elderly are clear manifestations of contradictions inherent in the management of a large population in the face of inadequate resources. And indirectly depleting national and individual savings and making it almost impossible to formulate capital for investment projects. A typical example is the education sector. The introduction of universal primary education scheme in 1976 and its modification into the Universal Basic Education Program in 1999 has meant increases in primary school enrolments from 9.9 million to 27 million, while that of secondary school from 998,976 to 7.5 million between 1977 and 2002 (Central Bank of Nigeria 1980 /and 2003 a). The demand for tertiary

education has equally been high as enrolments increases from 135, 783 during 1985 / 1986 session to 350,000 during 1999 / 2000session in the universities (Olaniyan 2001; Adelemo, 2001). As such, there have been more intakes into educational institutions with the expectation of corresponding higher spending on the educational sector. But the share of public expenditures on education has plummeted over the years, it fell from 7.8 percent of total federal government expenditure in 1994 to 45percent in 2003) because of the slashes in educational expenditure, investments have not kept pace with the demands of that sector. In effect, infrastructures have been over stretched; causing their dilapidation and inadequate teaching, materials and understanding engender deterioration in learning outcomes. Consequently, many are not admitted into Nigerian universities due to adequate facilities. For example, in 1990, 373, 016 candidates applied for admission, but only 61,212 representing 16.4 percent were admitted. In 2000, 467, 490 applied for admission but only 50, 277 representing 10.8 percent could be absorbed even though that human capital formation is critical for the

country's growth and development (Jamb Annual Report 1991and 2001).

The health sector suffers the same investment fatigue with average growth rate of 2 percent and 1.2 percent for the capital and recurrent 1985 and 2002 being lower than the population growth rate of 3 percent (Central Nigeria 2003 b) that is why the public health institutions are over burdened by operational costs per capita over use negatively impacts on the physical conditions of their facilities and the growing number of patients reduces the availability of drugs in hospitals overwhelms the laboratories and machines employed in medical practice with attendant inefficiency in health care delivery. Other social like safe drinking water, good housing and constant electricity supply have become luxuries in Nigeria because as efforts are made to satisfy some communities, tearing number elsewhere yearn for attention, thereby dwarfing whatever achievements made in the realm of health and human development. For instance the proportion of the Nigerian population with access to safe drinking water and adequate sanitation in 1999 was 54.1 percent and 52.8 percent respectively (Federal office of

statistic / UNICEF, 2000). The housing situation has worsened and the number of homeless people has increased, while urban shuns have risen in size (UNSN, 2002).

This submission to not imply that once population is growing, social services must crumble. On the contrary, robust economic growth coupled with equitable distribution of income lesson the negative consequences of population growth on economic development as the experiences of China, Indonesia and South Korea demonstrated in Nigeria, however growth has been sluggish and the gap between the rich and the poor keeps widening to the extent that the share of the poorest is 20 percent of the population in national consumption amounted to only 4 percent in 2002, while that of the richest 20 percent was 56 percent (Federal Republic of Nigeria, 2004 c). A study by UNECA (1999) confirms this high income inequality among Nigeria citizens with a Gini co-efficient of 444 percent in the 1990s. Although there appears to be no link between population growth and low savings in Nigeria, the fact remain that as population grows, "capital widening" is needed to maintain existing per capita income and savings while

declining fertility makes it possible for resources to be released for "capita deepening", which helps the cause of poverty alleviation.

The forgoing arguments strengthen our belief that Nigeria has a population load factor that weight too heavily on its meager resources to guarantee the welfare of the citizens. Since the basic needs of the people are not adequately catered for, exacerbation of poverty is inevitable as rural decay and urbanization crunch intensify. That is why curbs are needed in Nigerian population growth rate to a level that is supportive of efforts to achieving sustainable economic growth and development in the country.

2.2.1 ADVERSE EFFECTS OF POPULATION GROWTH ON ECONOMIC GROWTH

POVERTY:

A core idea of the Malthusian legacy is that population growth depresses wages because it increases the supply of workers and thus directly lowers the wages of workers –their price ‘’Depressed wages are likely to be particularly onerous for the poor, labour earnings constitute

the main source of income for the poor, who are less likely to own their income generating assets such as land (Kelly and MC Greevey1994).

In addition, the argument is made that population growth strains investment. As an economy strives to absorb workers, the supply of savings to be invested in capital declines, even though such investment is what spurs economic growth over the long run. According to proponents of Solow's view, they recognize that technological advances can accommodate population growth, but neo-Malthusian argues that the accommodation is more the exception than the rule.

It also merit noting that neo-Malthusian view poverty as more than income deprivation rapid population growth strains the fixed capacities for basic human services basic infrastructure essential for survival and longevity are spread over greater number of people and hence to the per capita delivery of services is reduced. In short, non-pecuniary measures of poverty also increase (Ahlburg 1994)

DEFORESTATION:

Some observers claim that resources are harvested at excessive rates due to population pressure. Their contention is that timber is harvested

too soon in order to supply products such as wood for housing construction. This depletes forests and causes additional environmental problems. More generally, the impoverishing effects of population growth make the populace excessively dependent on natural resource based activities such as timber production. Deforestation can cause soil erosion, watershed instability, and loss of carbon sequestration it can also reduce agricultural productivity. Moreover, the poor it is said, bear a disproportionate part of the costs of deforestation it can cause fuel supplies to dwindle, and the cost of gathering wood from large areas are thought to be borne disproportionately by women. (Todaro 1996)

WATER POLLUTION

Population growth is blamed for overuse of resource and reduction of conservation measures. Soil erosion threats to marine ecology and water pollution are comm. Of only viewed as negative consequences of rapid population growth. Water pollution is often considered the most serious pollution. According to Tadaro (1996), water pollution and scarcity lead to about two million deaths per year.

NET SAVINGS

One of the alleged harms of population growth is reduced savings. Population growth, it is said diverts resources to child rising and consumption, reducing the proportion and reducing the fraction of output that is saved and invested. Modern theories of consumption over the life cycle hold that population growth increases "dependency ratio" and in turn reduces saving (Kelly 1988) that is, with fast –growing population, a larger proportion of people are under the age of 15. This group has a lower savings rate than adults between the ages of 15 and 64(Todaro 1996).

AGRICULTURAL PRODUCTIVITY

Agricultural productivity permits greater specialization in an economy and generates greater food supplies. Rapid population growth may keep productivity low, depressing wages and keeping people on marginal farms. Indeed, stagnation of agricultural and the failure to adopt innovation technology represent the basic Malthusian apocalypse. There is ample evidence of low agricultural productivity in relatively

poor countries, with corresponding adverse effects on poverty rates and environment (Todaro 1996)

2.2.2 AN OVERVIEW OF THEORY OF ECONOMIC GROWTH

THE FACTORS BEHIND ECONOMIC GROWTH

The solow model is the theoretical benchmark for most studies of long –run growth of output (typically measured by growth real gross domestic product (GDP). The value of all the goods and services produced in an economy during a year and it explains how saving, investment and growth respond to population growth and technical change. The model is characterized by a production function that explains the level of output and includes two input factors: labour and capital (physical and human capital). Economic growth is the determined by the amount of available capital in the economy, the efficiency with which the capital is used and the degrees of its employment. Population growth and increases in physical capital lead to growth if the new resources are employed in the productivity process of the country. Improvements in the productivity of the human capital and

physical capital stocks lead to increased efficiency and enhanced growth. Growth and investments in human and physical capital increase the capital stock, provided that the investments and growth are greater than the depreciation. Human capital investment consists of education attainment, training and better health. Since the available resources of the economy are not employed all times, the rate of employment is directly related to economic growth.

The model predicts a stable steady-state output growth which is limited to population growth (in equilibrium), meaning that per capita output is constant over time steady. State equilibrium is an equilibrium in which each variable is either constant or growing at a constant rate). Growth is also influenced; however, by rates of saving and technical change which explain growth in per capita output, i.e. technical changes of total factor productivity determine changes in output growth with unchanged input of labour and capital. Population growth, savings and technical change are exogenous variable. The model also predict's "conditional convergence". Which states that economic with low initial per capita output (poor countries) grow faster than countries with

predictions follow from the basic assumptions of a constraint returns to scale of production function with diminishing returns to capital and labour. This means that increases in, for example, the amount of capital (input of labour unchanged) lead successively to smaller increases in output the lower the ratio of capita). The higher the return to investing in capita. Using this model, Solow shows that the rates of saving and population growth determine the steady – state level income per capita across countries reach different steady- states because of variations in the key factors that determine the level of steady- state

CHAPTER THREE

3.1 RESEARCH METHODOLOGY

This chapter serves as a basement upon which analyses and interpretation of data will be made in chapter four, discusses the following, conceptual framework model, specification (explanation of the variables, signs and magnitude of the parameters, functional form of the model), evaluation of estimate (economic theoretical test, statistical and econometric tests) and data presentation/description. Into

3.2 MODEL SPECIFICATION

This is sub-divided three sections and they are as follows:

3.2.1 MATHEMATICAL FUNCTION

Base on reviewed literature the following variable were found to influence economic growth.

(1) Population = PoP GR

(2) Unemployment= UepR

(3) Interest = IntR

(4) Inflation = InfR

Furthermore, our mathematical function is as specified below

GDPGR =F(POP _GR, UepR ,IntR infR)…….(1)

Where GDPGR is proxy to economic growth

MATHMATICAL FORM

Assuming a linear exist between the dependent variable (economic growth = GDPGR) and the above method independent variables, our mathematical function will be stated.

GDPGR = βo +β1Pop_ GR +β2UepR +β3intR +β4 InfR + μ_1…..(2)

3.3 ECONOMIC PROCEDURE

3.3.1 ECONOMIC CRITERIA (E C)

The sign the co-efficient of the independent variable are summarized below.

Var	E sign	
Pop GR	β 1 < 0	
UepR	β 2 <0	
IntR	β 3< 0	
InfR	β4 <0	A priori signs

Keys

Var = variables

E signs = Expected signs, others as identified previously.

3.3.2 STATISTICAL CRITERIA

Here the following statistical test will be carried out.

(A) R^2: Determinant of coefficient. It is used in evaluating the goodness of fit. It range between zero and one (0 & 1). Thus the closer the R^2 is to one, the better the model.

(B) F – Statistic: this will be used in evaluating the overall significant of the model. That is, if the independent variables are simulteouly significant

The Null hypothesis is stated as

H0: $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = 0$

Decision rule; reject H0 if F- cal / > / F- tab/. And conclude that the variables are simultaneously significant

(C) t -statistic: this is used in evaluating the significance of the individual regressions or independent variables.

Ho : B1 = 0

Where i =1……..5

Decision Rule: reject Ho if / t- cal/ >/ t-tab/.

3.3.3 ECONOMETRIC CRITERIA (EC)

This is the second – order statistical tests we are going to carry out. These tests include Auto correlation, multi- colinearity and Heterosecdasticity

(1) Auto- correlation: this is used in testing of the coefficient of the independent variables has been affected by the dependent variables. This measured using Durbin Watson (DW).

(2) Multi- co linearity: this is used in testing if a particular regressors has been affected by ifs interaction with other regressors or independent variables.

Decision rules: if any interaction shows co-linearity value in excess of 0.8. We conclude that there is a significant level of co-linearity between the two values.

(3) Heterosecdasticity: this is used in testing if the residual have equal variance i.e. Homoscedasticity the Null hypothesis is state thus.

H0: No Homoscedasticity

Decision rule: reject H0 if X^2 cal > X^2 tab and conclude that homoscedasticity was achieved.

DATA PRESENTATION

The following data on population unemployment, interest rate and inflation are gotten from Central Bank of Nigeria Bulletin and the National Population Commission.

YEAR	GDPGR	POPR	UEMR	INTR	INFR
1980	49632.3	71.15	6.4	7.5	9.9
1981	47619.66	72.92	5.2	7.75	20.9
1982	49069.28	74.79	4.3	10.25	7.7
1983	53107.38	76.65	6.4	10	23.2
1984	59622.53	78.55	6.2	12.5	39.6
1985	67908.55	80.51	6.1	9.25	5.5
1986	69146.99	82.68	5.3	10.5	5.4
1987	105222.84	84.91	7	17.5	10.2
1988	139085.3	87.2	5.1	16.5	38.3
1989	216797.54	89.55	4.5	26.8	40.9
1990	267549.99	91.6	3.5	25.5	7.5
1991	312139.74	98.98	3.1	20.01	13

1992	532613.83	101.88	3.5	29.8	44.5
1993	638869.79	104.88	3.4	18.32	57.2
1994	899863.22	108.01	3.2	21	57
1995	1933211.55	111.29	1.9	20.18	72.8
1996	2702719.13	114.5	2.8	19.74	29.3
1997	2801972.58	117.68	3.4	13.54	8.5
1998	2708430.86	120.82	3.5	18.29	10
1999	3194014.97	123.9	17.5	21.32	6.6
2000	4582127.29	126.91	18.1	17.98	6.9
2001	4725086	129.98	13.7	18.29	18.9
2002	6912381.25	133	12.2	24.85	12.9
2003	8487031.57	136	14.8	20.71	14
2004	11411066.91	137.8	11.8	19.18	15
2005	14572239.12	138.4	11.9	17.95	17.8
2006	18564594.73	140	12.3	17.26	8.2
2007	20657317.67	144.7	12.7	16.94	5.4
2008	2429632.29	149.33	14.9	15.14	11.6

2009	24794238.66	154	19.7	18.98	12.4

2010	29205782.96	157.64	21.1	17.92	13.2

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 PRESENTATION OF RESULT:

In this chapter we are going to present the result of the estimate model as well as interpret and analyze it.

Fig 4.1: Modeling LGDP by OLS

LGDP	Coefficient	Std. Error	t-value	t-prob	PartRy
CONSTANT	-26.915	2.64614	-10.935	0.0000	0.8214
UNEMP	-0.0076857	0.025230	-0.305	0.7631	0.0036
INTR	-0.00096896	0.020743	-0.047	0.9631	0.0001
INFR	-0.00075010	0.0060747	-0.123	0.9027	0.0006
LPOP	8.7307	0.59479	14.679	0.0000	0.8923

R^2 = 0.957031 F (4, 26) = 144.77 DW = 1.84

4.2 INTERPRETATION OF REGRESSION RESULTS

4.2.1 ANALYSIS OF REGRESSION COEFFICIENTS:

From the above regression results it was observed that the coefficients of unemployment, interest rate, and inflation are all negative, while population is positive. This shows that a negative relationship exists between UNEMP and GDP, INTR and GDP, and INFR and GDP, while a positive relationship exists between LPOP and GDP

The result shows that a -0.0076857 decrease in the gross domestic product is caused by a unit increase in unemployment.

Also, the result shows that a -0.00096896 decrease in the gross domestic product is influenced by a unit increase in the interest rate.

The result shows that a -0.00075010 decrease in the gross domestic product is as a result of a unit increase in the inflation rate.

The result further shows that an 8.7307 increase in the gross domestic product is caused by a unit increase in population.

Finally, if all independent variables are held constant, the value of the gross domestic product will be -26.915.

4.2.2 EVALUATION BASED ON ECONOMIC A PRIORI EXPECTATION:

Under this section, the obtained result is compared with the a priori sign to check if it confirms to economic theory. The table below illustrates the situation.

Table 4.2: Economic a priori signs

Variable	**Expected signs**	**Obtained signs**	**Conclusion**
UNEMP	-	-	Conforms
INTR	-	-	Conforms
INFR	-	-	Conforms
LPOP	-	+	Does not conform

The table above shows that the variables UNEMP, INTR, and INFR conform with economic theory, while LPOP did not conform.

4.2.3 EVALUATION BASED ON STATISTICAL TEST

The tests are estimated by statistical reliability of the estimated parameters of the model (Koutsoyiannis 1977). From the sample observation, the first order test is carried out based on the following: R^2, t-test and F-test.

1. **COEFFICIENT OF DETERMINATION (R^2):**

The computed R^2 will be used to judge the explanatory power of the regression, and also measures the goodness of fit of the regression the.

From the regression result, the R^2 was observed to be 0.957031, showing that the model computed 95.70% of the variation in the dependent variable as caused by the exploratory variables. However about 4% was left unexplained.

2. **THE T-STATISTICS**

In this section, the t-test is used to judge the statistical reliability of the estimates of the regression coefficients.

The hypothesis is thus stated as:

H_0: $\beta_1 = 0$

H_1: $\beta_1 \neq 0$

Where: β_1 is the coefficient of the parameter estimate

Decision rule:

Reject H_o, if $t^* > t\ \alpha/2$, otherwise accept i.e. if $t^* < t\ \alpha/2$

Where t* = Computed or calculated

$t\ \alpha/2$ = tabulated value of t

n = number of observation

k = number of parameter estimates

Degree of freedom (df): n – k = 31 – 5 = 26.

From the t-distribution table, for a two tailed test at 5% level of significance with 26 degrees of freedom, the tabulated t(0.025) = ±2.0555.

Table 4.2: t-test

Variables	**t-value**	**t-tab**	**Conclusion**
CONSTANT	-10.935	±2.0555	Significant
UNEMP	-0.305	±2.0555	Not significant
INTR	-0.047	±2.0555	Not significant
INFR	-0.123	±2.0555	Not significant
LPOP	14.679	±2.0555	Significant

From the above table, UNEMP, INTR, and INFR were statistically insignificant, while the constant and LPOP were found to be statistically significant.

3. F-TEST

The F-test was conducted to capture the overall significant of the model. It follows a distribution with degree of freedom (df) k-1(vi) and m-k (V_2)

Hypothesis:

Ho: the model is not statistically significant (F-cal < F-tab)

Hi: the model is statistically significant (F-cal > F-tab)

Testing at 5% levels of significant,

F-cal = 144.77

F-tab (4, 26) = 2.74

From the result above, F-cal = 144.77 > F = 2.74, we accept Ho and say that the model is statistically significant.

4.2.4 ECONOMETRIC CRITERIA

1. AUTOCORRELATION TEST:

Durbin –Watson statistics was conducted to test for the presence of first order autocorrelation.

Table 4.4: SUMMARY OF DURBIN WATSON TEST

NULL HYPOTHESIS	**DECISION**	**IF**
No positive Autocorrelation	Reject	**O < d < Dl**
No Positive Autocorrelation	No Decision	**dL ≤ d ≤ du**
No Negative Autocorrelation	Reject	**4-dL < d < 4**
No Negative Autocorrelation	No Decision	**4-du ≤ d ≤ 4-dL**
No Autocorrelation (positive or Negative)	Do not Reject	**du < d < 4-du**

Where d = d calculated or computed

du = upper limit of Durbin- Watson for the corresponding values.

dL = lower limit of Durbin- Watson for the corresponding values

From the regression result, we can see that the Durbin Watson Statistic (d) = 1.84. With n = 31 and k = 4, where;

n = number of observation.

K = number of estimated independent variable.

From the Durbin Watson table dL = 1.22915 while du = 1.65002.

Thus we have du < d < 4-du

Therefore, 1.65002 < 1.84 < 2.34998, we conclude that there is neither positive nor negative autocorrelation. Thus we refrain from rejecting the null hypothesis.

2. NORMALITY TEST

The hypothesis for the test is

H_O bi = 0 (The error term follows a normal distribution).

Hi: bi ≠ 0 (The error term does not follow a normal distribution).

At 5% with 2 degree of freedom;

X^2-cal = 22.305

X^2tab = 5.991

Since X^2-cal > X^2tab, we reject Ho and conclude that the error term does not follow a normal distribution.

3. TEST FOR MULTICOLLINEARITY

The test was carried out using correlation matrix. According to Barry and Feldman (1985) criteria "multicollinearity is not a Problem if no correlation exceeds 0.80"

TABLE 4.4: Correlation table

	UNEMP	**INTR**	**INFR**	**LPOP**
UNEMP	1.000			
INTR	0.07331	1.000		
INFR	-0.4580	0.3016	1.000	
LPOP	0.6875	0.454	-0.1507	1.000

From the above table, no pair-wise has a value in excess of 0.8. Therefore, we can conclude that multicollinearity does not exist in any of the pair-wise.

4. HETEROSCEDASTICITY TEST:

This test is basically on the variance of the error term. The test helps to ascertain whether the variance of the error term is constant.

Ho: Homoscedasticity

Hi: Heteroscedasticity

Decision rule;

If x^2 –cal > x^2 –tab, reject the null hypothesis Ho, and accept if otherwise.

Under 9 degree of freedom

X^2-cal= 6.1414 @degrees of freedom

X^2–tab= 16.919 under 0.05 significance level.

Thus, 6.1414 < 16.919, it shows homoscedasticity, which concludes that the conditional variance of the error terms is equal.

4.3 EVALUATION OF HYPOTHESIS:

The hypotheses have earlier been stated as:

Hypothesis 1:

H_1: The impact of population growth on the Nigerian economy is not significant.

H_0: The impact of population growth on the Nigerian economy is significant.

Hypothesis 2:

H_0: There is no causal relationship between population growth and economic growth.

H_1: There is a causal relationship between population growth and economic growth.

Going strictly by the results obtained, population was found to have a positive relationship with the gross domestic product, and also the t-test showed that population has a significant impact on the gross domestic product. Thus we reject the null hypotheses and conclude by saying;

- The impact of population growth on the Nigerian economy is significant
- There is a causal relationship between population growth and economic growth.

CHAPTER FIVE

SUMMARY, RECOMMENDATIONS AND CONCLUSION

5.1 SUMMARY

The main purpose of this study is to determine or assess the impact of population growth on Nigeria economy. This work was motivated by hypothesis of Rev T. Mathus, which point to or predict a universal socio-economic malady. Looking at Nigerian instance presently, we observed that there is a positive fulfillment of Malthus preposition of 1803.from the statement of problem we notice the population have severally truncated economic growth and eroded other factors that facilitates economic development. The objective of study also reviewed that population growth and economic growth had a negative relationship and that population growth had a negative impact on economic growth.

The methodology of our research was based on three methods, which range from Economic, Statistical and Econometric criteria. These three methods were used in order to make an elaborate evaluation of our work leaving it with little or no loop hole. The

other explanatory variables used were included considering their influence on economic growth and their relationship with population growth.

In the literature review we observed that relationship between population growth and economic growth is a global puzzle that has continued to preoccupied the thought of many philosophers. In this section of the work we observe that three theorists (school of thought) abound, namely; the pessimist, the optimist and liberal theorist. We also found out that so many factors affect population growth and they are either cultural, natural or manmade. Empirically, we noticed that population growth in Nigeria frustrates government's effort to enhance economic growth and also it further deepens employment and scarcity of social amenities. Due to rapid population growth in Nigeria. Is equally associated with unemployment with figures ranging from 17% per annul for. The entire population to 60% for the youth because job opportunities are fewer than the numbers seeking for them and stagnating economic performance because a large proportion is consumed instead of invested to generate growth.

In the presentation and evaluation of our results, we observe that unemployment, interest rate and inflation rate have negative impact on GDP while population have a positive impact on GDP. However, 72 % for the variation in the GDP_GR in Nigeria is explained by population growth and other explanatory variables and also population growth was found significant.

Finally, the model used was a semi logged model, and it showed and there is a negative auto correlation and that most of our independent variables show a separate impact on our dependent variables.

5.2 RECOMMENDATION

Firstly, the government should embark on a family planning programme (FPP) and also try to use that means to enlighten the populace on the eminent danger of rapid population and its consequences on the economy.

Secondly, the government should try to increase their expenditure in order to increase the volume of money in circulation, which will on the

other hand reduce interest rate. Also through the central monetary authority, the government should try to keep interest rate at a level that will encourage private planned investment and by so doing unemployment will be reduced.

Finally, there should be an even distribution of income among the states. Also the government should increase capital investment in order to bridge the gap between population growth and unemployment.

5.3 CONCLUSION

We cannot take it hook, line and sinker that population growth is detrimental to economic growth rather we should be rational to think it to have a two – track impact. When population growth is not matched with equal level of industrialization, production and productivity it bleaks economic growth but when it matched with those factors it promotes economic growth. That's why USA and China are the strongest economics in the world today.

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