# AN ASSESSMENT OF THE DEMOGRAPHIC CHARACTERISTICS OF SELECTED COMMUNITIES IN BASSA LOCAL GOVERNMENT AREA OF KOGI STATE, NIGERIA

BY

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## **AUGUST**, 2010

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A THESIS SUBMITTED TO THE POSTGRADUATE SCHOOL, FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF TECHNOLOGY DEGREE (M.TECH.) IN GEOGRAPHY (ENVIRONMENTAL MANAGEMENT)

**AUGUST, 2010** 

### DECLARATION

I hereby declare that this thesis An Assessment of the Demographic Characteristics of Selected Communities in Bassa Local Government Area of Kogi State, Nigeria was carried out by: Daku, Stella Yikwo, and has not been submitted to any institution at anytime for the award of any degree. Information derived from published and unpublished work of others has been acknowledged in the text.

DAKU, STELLA YIKWO

13-10-2010

DATE:

## CERTIFICATION

This Thesis titled an Assessment of the Demographic Characteristics of Selected Communities in Bassa Local Government Area of Kogi State, Nigeria by: Daku, Stella Yikwo, (M.Tech/SSSE/2007/1620) meets the regulations governing the award of the degree of M.Tech. of the Federal University of Technology, Minna and is approved for its contribution to scientific knowledge and literary presentation.

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## DEDICATION

This work is dedicated to my beloved Mother Mrs. Roseline C. Daku and the most important men in my life – The Daku(s): Dr. Jerry, Mr. Kpanache, Mr. Sigidi, Mr. Tukura and Mr. Sunday.

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## ABSTRACT

While it is generally known that population growth without commensurate economic growth is associated with poverty, relatively little information is available to support or back this up in Nigeria which is why the study on Bassa Local Government area. Bassa Local Government Area is located in the Eastern part of Kogi State, covers an area of about 804.5km and is bounded on the North by a narrow forest belt running from Amara village to Mozum community on the Benue, the banks of which is inhabited by the Bassa and Igbira tribes. The main aim of this research is to determine the demographic characteristics of selected communities within the study area and it's implication on economic growth while. The objectives of the study are to determine the key population characteristics within the study area like birth rate, family size, age e.t.c., access the couple's perception on family planning and size and access the implication of increased population growth on economic development. In carrying out this research work, stratified random sampling was adopted. Here, the study area was divided into 3 stratas (according to the number of districts within the area) and then random selection of communities within the 3 stratas was made in a systematic way i.e one out of 3 communities was selected from a list of all the communities in the area or strata. This helped to obtain separate information from each district which is being inhabited by the 3 ethnic groups living within the area. Simple regression analysis was used as a statistical tool or method to determine the relationship between average family size and development ranking of the area. The result showed that the relationship between average family size and development ranking is positive and that 88% of variation in aggregate development ranking can be explained by the linear regression of Average Family Size according to the collated data. In conclusion, an analysis of the area shows that the level of population increase is high thereby affecting the living standard of the people in relation to the available basic infrastructures. These infrastructures where available are either inadequate or non functional and as such grossly affects the effectiveness of the essence of its being put in place in the first place.

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# ABBREVIATIONS

DC	- 1	Developed World
ECA	-	Economic Commission for Africa
FHI	-	Family Health International
FOA	-	Food and Agricultural Organisation
GDP	-	Gross Domestic Product
GNP	-	Gross National Product
LCD	-	Developing World
NPC	-	National Planning Commission
UNDI	<b>)</b> _	United Nations Development Project

#### **CHAPTER ONE**

#### INTRODUCTION

#### 1.1 Background Information

After decades of stagnation and decline, Bassa Local Government is yet to enjoy high level of development since the late 1980s. The most important factors for this are political instability, poor maintenance of already provided facilities and over-usage of provided facilities as a result of increasing population within the area thus considerable increase in poverty. The 2006 Census suggests that Bassa Local Government had a total population of 134,964 (National Population Commission, 2006). Consequently, the population growth rate was about 26.18% between 1991 and 2006, which makes area one among the highest population growth rates in the state as stated by the projections of the United Nations Population Division (2002). The demographic implications of this high population growth rate was stated by the United Nation's Population Division which shows demographic projections based on the medium (and thus most probable) variant of the 2002 revision of population growth (UN, 2002).

According to the United Nation's projections, considerable fertility decline within the county is presently about 7% to only 2.9% in 2045-2050. Whether this will be achieved is far from certain and will likely depend on overall economic development in coming decades as well as government efforts to support fertility decline. Even with this considerably fertility decline, population growth will still be over 2% per year in 2045-50 and Nigeria's

population is projected to stabilize at a population of some 200 million only in the 22<sup>nd</sup> century. (UN, 2002).

Although Nigeria was one of the first African countries to try to directly control the number of children a couple should have, it is still struggling with family planning. Like most African Governments, the Nigerian government is a little apprehensive to create a population control programme, much less one similar to China's. This is due to their fear of inflicting on the views on fertility issues. Nigerian views are some what different; they are centered on beliefs and religious practices that are strange to the modernized world (Caldwell, 1990 in Askoak, 1998).

In accessing the demographic characteristic of selected communities in Bassa Local Government Area, two preliminary considerations are critical to bear in mind. First, is the impact of population growth on *per capita* economic growth (rather than *overall* economic growth). This is the relevant indicator most responsible for changes in income, poverty and many non-monetary measures of deprivation. Secondly, is the causality from population growth to per capita economic growth. These two variables are closely related to each other, with causality going in both directions. Considering the causality from per capita economic growth to population growth, it is likely that in the short term, high per capita growth in a poor and developing area like Bassa Local Government will increase population growth. This is the typical process of an area beginning a demographic transition which initially increases population growth rates (Brown and Kane, 1994). In the long term, however, it is very

likely that per capita economic growth will reduce population growth as wealthier parents choose smaller families which will over time reduce population growth. The effect will materialize with a delay due to the demographic momentum (Brown and Kane, 1994).

This study however focuses on the causality in the other direction, i.e. from increase in population to community development. More often than not, the case is that people *choose* large family sizes for reasons that are perfectly rational to them. One needs to understand these reasons and then see whether, from society's point of view, there is a cause to change the incentive (or power) structures within which families make their fertility decisions. The benefit of lower birth rate can be seen most clearly in countries such as South Korea and Taiwan, where efforts to reduce fertility resulted in an overall improvement of living conditions from improved development of the countries (Brown and Kane, 1994). According to Easterlin and Crimmins (1985), declines in the number of children per couple led to a decline in dependency ratios (the proportion of the non-working dependent population, primarily children to the working-age population), easing the financial burden of supporting these dependants. This freed up money for savings and investment which led to enhanced productivity, strong economic growth and rising incomes. This resulting improvement in living standards then reinforced the trend towards smaller families thereby leading to the general development of the area.

Lesthaeghe (1989) observed that fertility decline is a dynamic process involving multiple factors. The availability and awareness of contraception, improved literacy rates, reduced infant mortality and better economic prospects all typically drive declines in fertility rate. The more these factors are present, the more likely the transition to lower fertility will be rapid, widespread and sustained. The transition to lower fertility rates is enhanced by affording women the same educational, political and economic opportunities available to men. In every society for which data is available, the more education women have, the fewer the children they have. In Egypt for example, 56% of women with no schooling become mothers while still in their teens compared with just 5% of women who remained in school past the primary level, according to a 1997 study. This is true for several reasons, the study found. Women often delay marriage and childbirth because they wish to finish their formal education. This delay reduces the total number of children women ultimately bear. Education also gives women an opportunity to venture beyond their traditional roles, changing their aspirations and values and giving them the confidence to break from the norm.

Also important are increased economic and political opportunities for women, such as the right to vote, to own land and other property and to hold job. These opportunities broaden women's lifestyle choices and often give them the independence needed to determine their own reproductive destiny. Recent efforts to couple family planning programmes with micro lending (small loans to help start businesses), job skills training and other economic programmes have also helped boost the social standing of women. According to a 1998 study by the Family Health International (FHI), a North Carolina based nonprofit organisation that provide family planning aid in more than 40 countries around the world, increased economic opportunities reduce the emphasis on a large family as a source of future financial security. Improved medical care for children and mothers also helps. In countries where infant and child mortality rates are high, couples may have large families for fear that some of their children will die. In the 1970s, China implemented its 'barefoot doctor' campaign which trained thousands of villagers in rudimentary health care. This campaign was instrumental in the rapid fertility reduction over the same period. According to United Nations figures, infant mortality rates in China dropped from 195 per 1,000 births in 1955 to just 31 per 1,000 births today.

### 1.2 Statement of the Problem

While it is generally known that population growth without commensurate economic growth is associated with poverty, relatively little information is available to support or back this up in Nigeria which is why the study on Bassa Local Government area. According to the 2006 Census Report, Nigeria's population is growing at an annual rate of 3.2% and stands at just over 140 million, a 63 percent increase in 15 years. Samu'ila Mukama, National Population Commission Chairman while presenting results of the March, 2006 Census to the President, Olusegun Obasanjo at the Federal Capital Territory, Abuja in December, 2006 announced that the total number of the Nigerian population is 140,003,542.

Looking at this, the Nigerian population has increased by 63% in 15years, or by a little over 3.2 per annum. This is massive and shows clearly what an important problem continuing increase in population is. It is far from clear what is going to happen to Nigeria during the next few years. One thing is sure, it won't be serious economic growth and development however good the policy mix that is deployed and the political instability that is almost inevitable makes good policy hard to expect (Hugh, 2006).

According to Booth (1918), in 1916, the total population of the Area then known as Bassa-Kwomu District was 21,100 and in 1918, the total population of the area was 20,245 that is 4.05% decrease from 1916. During the first Census in 1931, total population in the area was 11,237 accounting for 44.49% decrease in 13 years (Clifford, 1931). The total population of the area during the 1963 census was about 56,000, an increase of about 500% in a period of 30years. The 1973 census was cancelled due to political reasons and in 1991 total population in the area was 88,496, an increase of 36.7%. Projected population of the area in 1996 was 99,624 giving an increase of 11.16 in a space of 5 years. The last census in the country in 2006 had the area having a total population of 134,964, an increase of 26.18% in 10 years. (National Population Commission, 1931, 1963, 1991, 2006).

The purpose and significance of this study stem from the fact that policies on fertility rates within the country and indeed at the societal levels are not addressed simply because the political instability associated with fertility makes it impossible to be maintained over time thus rapid increase in

population. The implementation of these policies may not be easy in the country or at the local government levels but the significance of this study is mainly to assess the effect the demographic characteristic has on the increase in population in relation to the development of the area.

The research questions that the study seeks of answer include:

- a. What is the average family size in the area?
- b. What is the age composition of households in the area?
- c. What is the perception of couples on family planning, family size and the desired number of children?

It is these problems that this research seeks to address.

### 1.3 Aim and Objectives

The main aim of this research is to determine the demographic characteristics of selected communities within the study area and it's implication of economic growth. The objectives of the study are to:

- Determine the key population characteristics within the study area like birth rate, family size, age e.t.c.;
- 2. Access the couple's perception on family planning and size;
- Access the implication of increased population growth on economic development.

## 1.4 Scope of the Study

This research focuses on the Assessment of the Demographic Characteristics of selected Communities within Bassa Local Government Area of Kogi State. The scope here covers randomly selected communities from the three (3) Districts of the study area.

#### 1.5 Limitations

Some of the limitations encountered during the course of this research include:

- Inability to cover a wider study area considering the amount of time and resources that would be required to attain that feat.
- Also, as a result of the ethnic heterogeneity within the study area, communicating with the respondent was a huge barrier to be able to really get the respondent's response without being led by whoever the interpreter is.
- 3. Accessing some of the villages within the study area is was challenging as most parts of the local government area lack access roads and some areas are only accessible through boats or canoes as the case my be.
- The sensitive nature of the research topic made it difficult for me as most people fail to really express themselves when it comes to discussing issues of fertility.
- 5. Lastly, difficulty in finding recent literatures on the study area as no publication or write-up has been carried out on the study area save for the colonial master's report as various times of their accounts on activities/events within the area.

#### 1.6 Study Area

#### 1.6.1 Location of the Study Area

Bassa Local Government Area covers an area of about 804.5km and is bounded on the North by a narrow forest belt running from Amara village to Mozum community on the Benue, the banks of which is inhabited by the Bassa and Igbira tribes. The Bassa Kwomu's dominate areas starting from Amara on the Benue, the boundary runs to Baku, Chacha and Baki then North-West and South-West to Inyede, Kwiambana and Ebenehi over the hilly uninhibited forest region to Oketti then to Dekina and Aroa Market. The Igala tribe boarders the Bassa Kwomu along this section. From Aroa the boundary runs to a point between Odugbo Market and Mozum. On the East of this line, the Bassa-Nge tribe commences (Booth, 1918).

Bassa Local Government Area is divided into three (3) Districts where the three prominent ethnic groups occupy. The predominant occupations within the area is farming with a few members of the population working as civil servants or engage in petty trading. The Districts are:

- 1. Bassa-Kwomu District occupied by the Bassa Kwomu speaking people;
- 2. Bassa-Nge District occupied by the Bassa-Nge speaking people; and
- 3. Mozum District occupied by the Igbira speaking people.

### 1.6.2 Relief (Physiography)

The area is an open and gently undulating 'park-land' for the most part, well watered and with occasional patches of dense forest growth, whilst it's most distinctive and attractive feature is a chain of high, flat topped hills which rise from the plane and mark an earlier ground level. The hills are of an average

height of 300-400 feet, many of them tree-clad, the most notable being the Imberiche Range which runs East and West through Arisamashe to Opandha in Ife (Clifford, 1931).

The soil is remarkably fertile and as has been said earlier, is well watered with many of the streams running through laterite deposits with exceptional clarity. After heavy rains these streams become swollen with water carried from hills, few of these are of any size and none are navigable. The Yimuwa (a tributary of the Iteme) runs through the Arasameshe country and is fed by the Imberiche range is the largest of the streams (Clifford, 1931).

### 1.6.3 Climate of the Study Area

As experienced in the tropics, Bassa Local Government Area experiences two weather conditions in a year. These are the rainy season and the dry season. The rainy season begins around March and runs through to October while the dry season begins around November through to March. Within this period, there is a brief interlude of harmattan occasioned by the North-East trade wind, with the main feature of dust haze and intensified coldness and dryness. The high altitude and undulating terrain of the area act as a modulating influence on the weather of the territory.

Rainfall within the Mean annual potential in the area lies between 1797mm to the South and 1277mm to the North and the annual total is in the range of 1100mm to 1600mm. The duration of the rainy season reduces from about 240 days in the Southern parts to 190 days in the northern areas and shows a tendency of high concentration in the three months of July, August and September (Clifford, 1931).

#### 1.6.4 Population

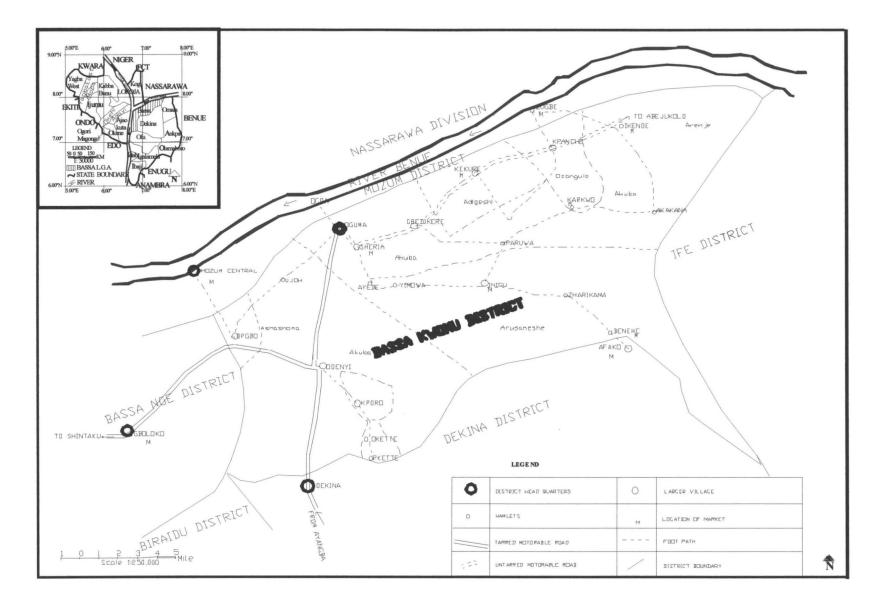
In 1916, the total population of the Area was 21,100 with female having 9,777 that is 46.3% of the total population (Booth, 1918). In 1918, the total population of the area was 20,245 with female having 8,977 that is 44.3% of the total population (Booth, 1918). During the first Census in 1931, total population in the area was 11,237 accounting for 55.5% decrease from 1918 (Clifford, 1931). The total population of the area during the 1963 census was about 56,000, an increase of about 400% in a period of 30years. The 1973 census was cancelled due to political reasons in the country and in 1991, total population in the area was 88,496 with the female population being 45,773 that is, 51.5% of the total population in the area. The last census in the country in 2006 had the area having a total population of area as 134,964. Though this figure has not been broken down to communities within the area, the overall result in the state has more males than female (National Population Commission, 1931, 1963, 1991, 2006).

#### 1.6.5 Land Use System

Agriculture is the main occupation within the study and land is divided among relations and dependants apportioning to each a share according to his importance. Each head of a village has his recognised boundary and these boundaries are fixed by well known land marks such as hills, streams, trees, bush paths and mounds of earth (Byng-Hall in Booth, 1918).

All lands within this boundary are at the disposal of the headman who apportions it out to his people as they require it. All such lands that was

disposed of become the property of the farmer to whom it was given, and the headman lost all rights to this land so long as the farmer keeps the land in cultivation. Should the farmer relocate to another piece of land or leave the village, the land would as a matter of course revert to the headman and anyone who requires such land would have to ask the headman for it (Byng-Hall in Booth, 1918).



ource: National Archives Kaduna, 2005.

#### CHAPTER TWO

## **REVIEW OF RELATED LITERATURE**

#### 2.1 Introduction

The impact of demographic change on economic development has long been debated. While the Malthusian hypothesis that population growth is constrained by available resources held a central position for centuries, the simultaneous occurrence of economic growth and population growth over long periods of time have demanded new models for the interplay between these phenomena (Lindstorm and Berhanu, 1999). Little consensus has been reached during the last 50 years on the effect of population growth on development. For example, Macunovich (2000) find no correlation between population growth and economic development in the 1960s and 1970s, yet find evidence of a negative relationship emerging in the 1980s. Early work by Brown, Gardner and Halweil (1999) highlights the importance of analyzing the individual components of population growth: fertility and mortality.

Fertility is related to income per capita through three channels: the Malthusian hypothesis of population levels; the Solow population growth effect; and the age structure effect. According to Malthus, an increase in the population level – which is the integral over all previous births and deaths – will depress income per capita, as larger populations will have to share fixed resources. In modern economies, little empirical support has been found for the Malthusian hypothesis; the constraint of fixed factors is overcome by technological advancement. In the Solow model, increase in population lowers the capital-

labor ratio and leads to lower output per capita in steady state. However, fertility rates affect output per capita not only through capital stock, but also by shaping the age structure of the population (Caldwell, Orubuloye and Caldwell, 1992). High fertility rates imply high youth and low old-age dependency ratios; previously high fertility rates followed by a rapid decline in fertility boost the size of the working share in the short run, but may lead to high old-age dependency in the long run if fertility rates stay below replacement (Caldwell, 1982).

The demographic transition is theorized to be triggered by the decline in the mortality rate, and in particular a decline in child mortality. With the realization of the fall in child mortality, the number of births declines if replacement and insurance effects in part shape fertility preferences (Hugh, 2006). The decline in fertility that follows a decline in child mortality can be explained by the concurrent increase in contraceptive access, the realization of preferences regarding the desired number of surviving children or the increasing opportunity cost of child rearing (Ehrlich, 1968).

For many countries, the decline in fertility in the last 45 years has been rapid. For others, the decline has been less pronounced or non-existent. The onset of a rapid fertility decline is a signal that a country is on the trajectory of undergoing the demographic transition from high fertility (and high mortality) to low fertility (and low mortality). The empirical evidence illustrating the effect of increase in population on development indicates that high fertility has a negative effect on economic growth which in turn causes an improvement in

development (Brown, and Kane (1994) from a cross-country perspective. However, in a sample of European countries, where fertility rates are near or below long-run replacement level, increases in fertility can have a positive effect on income per capita thus a developed economy (Caldwell and Caldwell, 1998).

In a recent study by the Food and Agriculture Organization (FAO) 2001, the effect of the mortality decline on economic development was studied in a reduced-form framework. In 1940, medical advances in the treatment and prevention of many infectious diseases became widely available. Measles, diphtheria, tuberculosis vaccinations; oral re-hydration therapy for cholera; and penicillin and streptomycin, the first antibiotics available to fight bacterial infection, all became available within a short period and dramatically reduced the mortality rate, particularly among children. Using the differential exposure to the diseases for which treatments improved or prevention became possible as a proxy for the country-specific health impact. It was argued here that mortality reductions had no significant causal effect on income per capita gains (Cohen, 1986).

## 2.2 Some Demographic Concepts

## 2.2.1 Demographic Transition

Demographic transition was a theory propounded by Frank Notestein in 1945 or thereabout to simplify the sort of relationship that exists in birth rates, death rates, growth rates and living standard across the world. This theory has been used by United Nations agencies for demographic projections and policy formulations. The theory divides countries of the world into three categories. **Stage 1 countries:** These are traditional or un-mordernised societies (primitive societies). Here, birth rates, death rates are both high and in that way balance one another. The capacity to grow is low i.e. little or no population growth. This explains why the capacity to grow between the 17<sup>th</sup> Century was low. Also life expectancy is low in stage 1. People at the age of 40-45 grow/appear old because of the living conditions. Infant mortality rate is high and the general conditions of living are poor (Baba, 2008).

Stage 2 countries: Countries enter into stage 2 when they begin to modernize. Modernization is often accompanied by improvement in health care and standard of living. As a result of this improvement, death rate declines while birth rate may or do often remain high. The life expectancy is high so growth rate of up to 3% per annum will then be attained at which level a population would have the capacity to double itself in about 23 years. Technologies that associated with that modernization would include information, are vaccinations, antibiotics, improved public health, improved public health, improved food production e.t.c. In effect, the living conditions are improved beyond the level of the pre-industrial revolution. It is the stage in which the relationship between population and resources takes a new level. It is however impossible for such countries to remain in that stage forever because the growing potentials soon results into strains and stress on resources so some new technologies come to be evolved to control the high growth rate particularly birth rates are most likely to begin to fall (Baba, 2008).

**Stage 3 countries:** These countries are characterized by low birth rates and low death rates. Under this model, economic and social gains are made e.g. rise in income, better educational attainment, better medical conditions, more equitable resources, population relationships e.t.c (Baba, 2008).

As at 2000, about 32 countries in the world majorly being in Western Europe had made it to stage 3 as at the turn of the century. The rest of the world's countries remain substantially in stage 2. About 39 of the stage 2 countries including China and the United States were approaching stage 3. All the other countries, particularly the developing countries are in stage 2. It is further said that as at 2000, no country of the world was in stage 1. The question then is, are majority of these countries likely to make it to stage 3? The answer is that many will probably make it but many also may not make it and the reason for this is the possibility of getting into **Demographic Trap** (Baba, 2008).

## 2.2.2 Demographic Trap

Demographic trap simply put is the possibility of countries getting back into higher death rates as a result of falling under because resources are inadequate, (situations of worsening conditions of living standards which would also imply increased death rates) and hence a gradual fall back into stage 1 by stage 2 countries in the demographic transitions. This fall back to stage 1 is considered to be highly probable for such countries as Afghanistan, Egypt, Ethiopia, Hunduras, India, Myenmar, Nigeria, Sudan, Pakistan, Tanzania and Yemen unless these countries quickly check their population growth ((Baba, 2008).

## 2.2.3 Past and Present Demographic Trend

A review of trends in some indicators of fertility suggests a gradual decline in the last few years (Oladosu, 2001). The United Nations estimates suggests a gradual decline in the Nigerian population growth rate from 2.74% between 1995 and 2000 to 1.93% between 2020 and 2025 and 1.09% between 2045 and 2050. The United Nations statistics also suggest a gradual decline in total fertility rates from 5.9% for a period 1995 – 2000 to 3.4% for the period 2020 and 2050 (United Nations, 2000). National Statistics provide more optimistic trends in total fertility decline, with fertility rates of 6.3% in the early 1980s, 6.3% in 1990, 5.4% in 1994 and 5.2% in 1999 (National Planning Commission, 2001). If the observed trends are real, are trends in factors influencing fertility telling the same story?

# TABLE 2.1

			1	Age Ra	nge o	of Wom	en Curi	rently	Married	d or Li	iving	With Pa	rtner		
Determinants	A	ll ag	es	Les	s tha	n 25		25 -	- 29	3	0	34	35	and	older
	'90	'99	Sig.	'90	'99	Sig.	'90	'99	Sig.	'90	'99	Sig.	'90	'9 <i>9</i>	Sig
Heard of family planning on radio	30	34	+++	28	28	Θ	32	37	++	32	39	+++	29	35	+++
Know any method of contraception	49	63	+++	42	54	+++	55		+++	52	68	+++	49	65	+++
Know a modern method of contraception	47	60	+++	40	53	+++	53		+++	50	99	+++	46	61	+++
Respondent approves family planning	54	39	+++	47	30	+++	57	41	+++	58	45	+++	55	40	+++
Husband approves family planning	33	29	+++	28	21	+++	36		++	37	36	Θ	33	30	+
Discuss family planning with spouse	28	31	+++	22	22	Θ	30	32	Θ	33	38	++	30	32	+++
Secondary school education married women															
who discussed family planning with spouse	9	13	+++	9	10	Θ	- 1.	3 17	7 +++	10	19	+++	6	11	++
Indicators of Fertility															
Currently using any method of contraception	8	15	+++	5	7	++	8	13	+++	11	19	+++	12	18	+++
Currently using a method of contraception	5	8	+++	3	2	Θ	4	7	++	7	12	+++	8	12	+++
Births in the last five years	70	66	+++	73	75	Θ	84	81	+	79	77	Θ	51	45	+++
Both want the same number of children or															
husband wants fewer	31	36	+++	29	34	++	32	37	++	32	40	+++	33	36	Θ
Husband wants more	19	28	+++	20	28	+++	18	26	+++	20	27	+++	20	30	+++
Don't know husband's desire for children	49	36	+++	51	39	+++	49	36	+++	48	33	+++	47	34	+++

Source: NDHS Data sets for 1990 and 1999

Total number of cases = 12711. Percentages are adjusted for simple differences in residences, level of education, religion and work location; Sig. = significance level, + = p < .05, ++ = p < .01, +++ = p < .001 and  $\Theta$  = not significant at any level

In the above table, trends in indicators of knowledge and attitudes that influence fertility were examined between 1990 and 1999 using the NDHS data. The data sets were national representative samples of women collected using similar sampling designs. The analysis controlled for residence, level of education, religion and work location. The results in Table 2.1 show that knowledge of any method of contraception and knowledge of modern methods of contraception increased by at least 10% for all age groups in 1990 and 1999. The data also suggests a decline in the trends in the support for family planning among respondents and their spouse. The reason for this decline was not clear from the data (Oladosu, 2001).

Spousal communication about family planning often leads to a discussion about family size, a necessary step to fertility regulation. Spousal discussion about family planning significantly increased for all age groups combined (28% to 31%). After controlling for age, discussion with one's spouse about family planning was only significant among women aged 30 to 34. Gender equality was measured by a dummy variable of secondary school educated women who discussed family planning with their spouse. The result suggests small but consistent increased trend in gender equality for all ages combined (9% to 13%) and across all age groups, except younger than 25 (Oladosu, 2001).

The percentage of women who gave births in the five years preceding the survey is an important indicator of the recent level of fertility (Table 2.1). The percentage of women who gave births in the five years preceding survey declined (70% to 66%), with important declines among women aged 25 to 29

(84% to 81%) and aged 35 or older (55% to 45%). The findings show positive trends in percentage of women who currently use any method and who currently use modern methods (8% to 15% to 8% respectively for all ages) (Oladosu, 2001).

A couple's desire for children is an important determinant of future fertility in most of Sub-Saharan Africa. The literature suggests that when husbands and wives have similar desires for children, or husbands want fewer children, fertility may decline since wives' desire for children are usually lower than that of their husbands. The two measures of the desire for children used were wants the same number of children or wants fewer children; and the wife does not know her husband's desire for children. Results in Table 2.1 show positive trends in the desire for children between 1990 and 1999. The proportion of women who want the same number of children as their husbands or whose husbands wants fewer declined for all age groups (36% to 31%) and for all specific age groups except those aged 35 or older. Findings suggest an increased trend in the husband's desire for more children and decline in the proportion of women who know their husband's desire for children. A decrease in the proportion of women who don't know their husband's desire for children suggests increased knowledge about their spouse's desire for children (Oladosu, 2001).

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## 2.2.4 Major Regions of the World for Comparative Statistics of Demographic Patterns/Statistics

**North America** comprising Canada and U.S.A. are in the developed world (DCs). Together in the year 1975, they had a total population of 237 million with a growth rate of 0.9% per annum and had been given a doubling time of 77 years. At that growth rate, it was projected that the total regional population by the year 2000 would be between 265 million – 350 million. This suggests high level of living standards or affluence (Saving, 1983)

Latin America comprising South America, Central America and the West Indies. The bulk of these region belong to the developing world (LDCs). Total Population in 1975 was estimated at 326 million with an average growth rate of 2.7% per annum and it was one of the highest regional growth rate in the world. At that growth rate, the population potentially had a doubling time of 26 years. Nevertheless, some countries in the same region had extremely high growth rates and therefore even lower doubling times. For example, Hunduras (in the West Indies) had a growth rate of 3.5% per annum and a doubling time of 20years. In the same area, Dominican Republic had a doubling time of 21years, Mexico (Central America) doubling time of 22years, Peru 24 years, Brazil 25 years doubling time. Projected to the year 2000, the region as a whole was expected to have between 550 million to 760 million people (Saving, 1983).

**Europe** was in contrast to Latin America but similar to North America. Total population in 1975 was estimated at 474 million with an average growth rate

of 0.60% per annum, given a doubling time of 116 years on the average. As a matter of fact, within this region were some of the most rapidly growing economies in the world which reflected even higher doubling time population wide. For example, Italy had a doubling time of 139 years, Hungary 175 years, Austria 347 years and Germany had as at 1975 achieved zero growth rate and so projected to 2000, the whole of Europe was expected to have a total population of 315 million (Saving, 1983).

Africa had virtually all it's countries belonging to the LDCs. Total population in 1975 was 402 million with an average growth rate of 2.6% per annum which gave a doubling period of 27 years. This region was similar to the pattern of growth rate in Latin America except that death rate was higher in Africa than in Latin America. Even in Africa, disparities occurred in doubling times between countries. For example, Kenya had a doubling time of 21 years, Zambia 22 years, Morocco 24 years, Nigeria 26 years, South Africa 26 years, Egypt 29 years, Central African Republic 33 years. Projected to the year 2000, Africa was expected to have between 730 million to 900 million people. This makes Africa second only to Asia. It is possible that death rate in Africa decline while birth rate remain high, and if that happens, then the growth rate could rise between 3.5% to 4% per annum with a the doubling time in reality being lower (Saving, 1983).

Asia had a least 50% of humanity resident in the region. This goes to over 3 billion people. This region is dominantly a developing one (LDCs) but it is also a known fact that some countries in the same region have made very significant progress in their pace of social, economic and technological

development (Baba, 2008). Hence, Asia presents a case of a highly diversified region demographically. These diversities are reflected in the demographic setting and a few examples will suffice. Average growth rate is put at 2.1% with a doubling time of 33 years but there are departures from that average figure that reflects the varying conditions of social and economic development of the countries around the more developed economies. For example Japan with a doubling time of 53 years, South Korea 35 years, Taiwan 36 years, Singapore 43 years, Hong Kong 50 years (Saving, 1983).

These are all part of the 'Asian Tigers' where rapid progress has been made technologically and economically. There is also China with a doubling time of 55 years because of their putting in place drastic demographic policy aimed at checking their population growth rate. For the countries, the demographic and economic situations are of typical LDCs. Philippines for instance has a doubling time of 21 years, Pakistan 22 years, Malaysia 24 years, Indonesia 27 years, Afghanistan 28 years and India 29 years (Baba, 2008)

#### 2.2.5 Global Demographic Pattern

Global Demographic Pattern provides a baseline for policy measures that various countries and indeed the international community have been involved with. These are trends that are created on the dynamics of growth just to give effects to these vital statistics that have been defined to show that population is a dynamic phenomenon, consequences, implications and far reaching terms (Ehrlich, 1968).

Broad regional disparities occur in the pattern of human population in respect of virtually all demographic parameters. For example the parameters of distribution, birth rates, death rates, growth rates. If we take the parameter of distribution for example, while some regions are virtually empty areas which are considered not habitable as a result of harsh environmental conditions i.e. may be considered too cold or too hot, too dry, too rugged e.t.c. The extremes of environmental constraints are avoided (Ehrlich, 1968).

Disparities also occur in birth rates, death rates, fertility rates and of course growth rates. There disparities can be appreciated within some rugged regional patterns which have strong bearing on the economic and technological ordering of the world particularly in the context of developed versus developing economies. The former (developed) economies are characterised by high levels of economic and technological attainments as a region of the world while the later (developing) are characterised by low levels of economic and technological attainments (Baba, 2008).

In 1975 for example, available records show that the developed economies or DCs had experienced low population growth rates by characteristics of the developed economies at less than 1% per annum. The DCs had overall with average growth rate of less than 1% p.a. The less developed economies or LDCs on the other hand experienced high growth rates are averagely more than 3% per annum. Hence of the world's total population of about 4 billion in 1975, over 75% were in the LDCs where the economic output was only about 20% of the world total output. On the other hand, 25% of humanity resident in the DCs accounted for 80% of the world's output of goods and services.

Available statistics not only indicate inequality in terms of population distribution but also inequality in terms of out put of goods and services (Baba, 2008).

#### 2.3 Regional Review

In recent years an increasing number of African people are being added every year. This was not always the case. These population increases are unprecedented in history but the problem of population is not simply a problem of numbers it is a problem of human welfare and of development. Rapid population growth can have serious consequences for the well-being of humanity worldwide. If development entails the improvement in people's level of living - their incomes, health, education and general well-being, and if it also encompasses their self esteem, respect, dignity and freedom of choice then the really important question about population growth is how does the contemporary population situation in many African countries contribute to or detract from their chances of realizing the goals of development, not only for the current generation but also for the future generations? Conversely, how does development affect population growth? (NRC, 1993)

The major issues relating to this basic question are the following:

(1) The improvement in the level of living: Will African countries be capable of improving the levels of living for their people with the current and anticipated levels of population growth? To what extent does rapid population increase make it more difficult to provide essential social services including housing, transport, sanitation, and security?

- (2) Increase labour forces and the problem of unemployment: How will African countries be able to cope with the vast increases in their labor forces over the coming decades? Will employment opportunities be plentiful or will it be a major achievement just to keep unemployment levels from rising?
- (3) The problem of poverty alleviation: What are the implications of higher population growth rates among the world's poor for their chances of overcoming the human misery of absolute poverty? Will world food supply and its distribution be sufficient not only to meet the anticipated population increase in the coming decades but also to improve nutritional levels to the point where all humans can have an adequate diet?
- (4) Improvement in health and education: Given the anticipated population growth will African countries be able to extend the coverage and improve the quality of their health and educational systems so that everyone can at least have the chance to secure adequate health care and basic education?
- (5) Poverty and the freedom of choice: To what extent are the low levels of living an important factor in limiting the freedom of parents to choose a desired family size? Is there a relationship between poverty and family size?

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In view of the above questions, it is important 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 (World Bank, 2001).

#### 2.3.1 Africa's Demographic Feature

Over the last one century Africa's population has grown at a rapid rate. The various estimates of the population size of Africa indicate that prior to 1900, the annual growth rate of population was less than 0.1 per cent; during the period 1900-1950, it was 1.2 per cent; in the period 1950-1970, the growth rate was estimated at 2.8 per cent; in the period 1980-1990, the rate was about 3.2 percent. These data shows that the recent demographic trends in Africa are characterized not only by unprecedented rapid growth rates but also Africa faces a major population explosion in the near future (Reader, 1998).

Africa's population which was estimated at 257 million in 1960 had increased to 482 million by 1983. In 1993, the population of the continent was estimated at 682 million. The average annual growth rate during the decade was 3.2 percent - the highest among Third World regions. In 1983, the Economic Commission for Africa (ECA) using high variant assumptions projected that total African population will be about 1.1 billion by 2008, taking an annual growth rate of 3.2 percent during the 25-year period (1983-2008). The associated numbers of urban dwellers will be 472 million; children (0-14), 479 million; active population (15-64), 546 million; and school age 178 million (primary) 152 million (secondary) and 124 million (tertiary) (Reader, 1998).

Even under the medium variant of the population projections by Economic Commission for Africa (ECA), 2.8 percent annual growth would bring the total population to 997 million by the year 2008 instead of 1.1 billion based on high variant assumptions. Thus the prospects of a new and better demographic setting that will not bring about unsustainable pressures and tensions but will rather ensure the progress and prosperity of all African countries seem rather remote during the next 14 years as drastic structural changes in the demographic situation take a long time (Reader, 1998).

#### 2.3.2 Consequences of Rapid Population Growth in Africa

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 dopes 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 evergrowing 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 (United Nations, 1999).

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 in adequate nutrition and the prevalence of diseases associated with poverty, and also because the children are provided of sufficient adult contact (United Nations, 1999).

According to McKibben in Simon and Schuster, (1998), 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% of 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 in creased friction between farmers and herders (United Nations Development Project, 1997, 2002 and 2003).

# 2.3.3 Inter-relationship between Population Growth and Socio-economic Development

The socio-economic consequences of demographic evolution and vise-versa are extremely difficult to measure with accuracy. However, some studies have attempted to show the relationship between population growth and socio-economic development (Federal Ministry of Health (1998).

The correlation matrix of population and socio-economic development for 50 African countries during the last three decades has proved that population and

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development are inseparable and their relationship is reciprocal. The most important findings from these studies are:

#### Population, Agriculture and Environment

The relationship between the three variables shows 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.

#### Population and Education

b)

a)

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 nigh 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 and 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 or 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 Gross Domestic Product 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 especially 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.

Population and Structural Adjustment Programmes

e)

African countries who have adopted the structural adjustment are those who have experienced lower Gross National Product (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.

There is no doubt that the population problem in Africa 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 African governments 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 influence development and are also influenced by them, the theme of this

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analysis is that if Africa 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 Africa's 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 (United Nations, 2001).

#### **CHAPTER THREE**

#### MATERIALS AND METHODS

#### 3.1 Data Sources and Collation

In carrying out this research work, Stratified Random Sampling was adopted. The study area was divided into 3 stratas (according to the number of districts within the area) and then random selection of communities within the 3 stratas was made in a systematic way i.e one out of 3 communities was selected from a list of all the communities in the area or strata. This helped the to obtain separate information from each district which is being inhabited by the 3 ethic groups living within the area

650 questionnaires were distributed among the three districts within the study area. Out of the 650 administered questionnaires, a total of 505 questionnaires was fully answered and returned, 130 were returned unanswered, 33 were partially answered while 18 were not returned at all. An analysis of this is shown in the table and chart below.

Table 3.1	Analysis o	f administered	questionnaires
-----------	------------	----------------	----------------

Status	Number	Percentage (%)
Not Returned	18	2.77
Unanswered	94	14.46
Partially answered	33	5.08
Fully answered and returned	505	77.69
Total	650	100

#### 3.2 Pre-Field Work or Reconnaissance Survey

Several visits were made to the study area to familiarize with the environment. Consultations and meetings was also held with village heads, elders and opinion leaders to keep them informed on the researcher's intention and sensitize the community populace on the need for their co-operation during data collation. As earlier stated, these communities were selected randomly from a list of all existing communities within the study area. This led to full and active participation of community members during the actual field work and where there were misgivings, the chiefs, elders and opinion leaders were always there to intervene.

#### 3.3 Field Work

During the field work, questionnaires were administered and data collected to ascertain the demographic characteristics of the selected communities. These demographic items pertaining to specific individual respondents that were included in the questionnaire are Age, Religion, Level of Education, Occupation. Also, trends in influential factors and indicators of the level of fertility of women currently married and living with partner within the communities were considered and they include is respondent has heard of Family Planning, do they approve of Family Planning, do they know any method of Family Planning, their knowledge of a modern method of Family Planning, If their spouse approves of Family Planning and if they ever discuss Family Planning with their spouses. Number of births in the last five years, desired number of children was also considered in the indicators of fertility level. Development within the study area was ranked according to the available basic infrastructures within the selected communities on a scale of 05. To this end, areas with basic social amenities like portable drinking water, electricity, good roads, functional health centers and school was termed to be in very good condition, areas with just four of the listed items was termed to be good, places with three of the listed items was fair, two of this items was poor and one was categorized to be bad. This was done for ease of ranking for level of development within the area under study.

The questionnaires were administered in a systematic sampling form, face to face to house hold heads who after filling returned to the researcher. The head of household was the unit of the respondent. From the chiefs house which in most cases is located at the center of the community, the researcher alternates distribution both to the left and right for linear settlements and front and back after the initial left and right for radial (circular) settlements. It was noted that most of the settlements within the study area were linear in nature.

#### 3.4 Data Analysis

Population is undoubtedly the basis of this research work. Therefore, to ensure that accuracy and desired ends is achieved in this thesis, the population of Bassa Local government was projected to 2009 using the annual growth rate of 3.2% as stated in the 2006 Census report.

Using the exponential model formula  $(P_n = P_o (1 + r/100)^n)$ ,

Where, P <sub>n</sub>	=	Projected Population of the study Area.
Po	=	Population of the base Year (2006)
r	=	Population growth rate 3.2%

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n = Number of years which the population was projected (2009 - 2006) = 3years.

Substituting the formula

 $P_n = 134,964(1+0.032)^3$ = 1,46,621

With the 2006 population figure 134,964, using the above formula, 2009 projected population of Bassa Local Government Area is 146,621 people.

#### 3.5 Statistical Tool/Method Used

Simple regression analysis was used as a statistical tool or method to determine the relationship between average family size and development ranking of the area.

The test statistic for the Correlation Coefficient is given as  $\boldsymbol{r}^2$ 

Where r

 $\frac{\sum (x-\overline{x})(y-\overline{y})}{\sqrt{\sum}(x-\overline{x})^2(y-\overline{y})^2}$ 

#### **CHAPTER FOUR**

#### RESULTS

#### 4.1 Data Analysis

An analysis of data collected from the field during the course of this study is given below:

## 4.2 Respondents Age

From the administered questionnaires, 55% of the total respondents are between 20-35 years, 20.6% are between 36-54, 14.9% are 46 – 55 years old while 9.5% are 55 years and above.

#### Table 4.1Age of Respondents

Age	Number	Percentage
20-25	296	55.0
36 - 45	111	20.6
46 - 55	80	14.9
55 and above	51	9.5
Total	538	100

## 4.3 Religion

Out of the 538 respondents, 208 representing 38.7% of the total number of respondents sampled are Christians, 190 representing 35.3% are Muslims, Traditional worshipers constitute 13.5% while 12.5% make up for other forms of worship.

Religion	Number	Percentage
Christianity	208	83.6
Islam	190	35.3
Traditional	73	13.5
Others	67	12.5
Total	538	100

## Table 4.2Respondents Religion

58% of the sampled population as shown in the above table do not have any form of education, 19% only have primary education, 15.4% of the population have their secondary education while only 7.6% proceeded to tertiary level of education, most of which I was gathered obtained their National Certificate of Education (NCE).

#### Table 4.3Level of Education

Education	Number	Percentage
Primary	102	19
Secondary	83	15.4
Tertiary	41	7.6
None	312	5.8
Total	538	100

## 4.5 Occupation

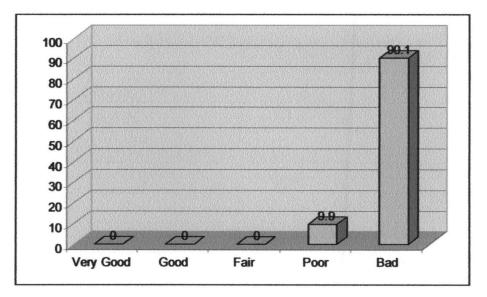
The analysis shows that 37.4% of the respondents are farmers, 28% are traders, 21.6% civil servants while 13% of the sampled population are not employed.

## Table 4.4Occupation of Respondents

Occupation	Number	Percentage	
Farmer	201	37.4	
Trader	151	28	
Civil Servant	116	21.6	
Not Employed	70	13	
Total	538	100	

#### 4.6 Infrastructural Development

Ranking of the area in terms of infrastructural development within the study area was categorized according to available basic infrastructures within selected communities on a scale of 1-5. Only 9.9% of the sampled area had at most two infrastructures, most of them in poor state of repairs while 90.1% of the sampled areas are categorized as bad due to lack of basic infrastructures in such areas.



Source: Author's Field Work, 2009

## Figure 4.1 Ranking of selected Communities in terms of Infrastructural Development

4.6.1 Pictures showing Available Infrastructures in selected communities in Bassa Local Government Area



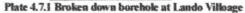




Plate 4.7.3 Vinuwa River serving a community



Plate 4.7.5 Aguma Dodo bridge built in 1969/70



Plate 4.7.7 Primary Health center at Koriko Village



Plate 4.7.9 Bassa Model Nursery & Primary School, Oguma



Plate 4.7.2 Functional borehole recently provided by the MDGs



Plate 4.7.4 Major road within the Local Government



Plate 4.7.6 LEA Primary School, Sheria



Plate 4.7.8 Renovated Primary Health center at Oguma

## 4.7 Family Planning

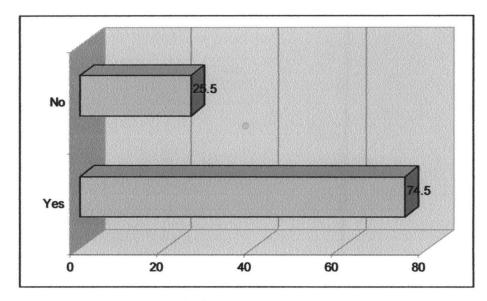
58.8% accounts for awareness of family planning amongst the sample population, 35.4% have not heard of family planning while 4,8% are not sure if they have heard of family planning or not.

Record Control of the	-	
Response	Number	Percentage
Yes	316	58.8
No	196	36.4
Not Sure	26	4.8
Total	538	100

## Table 4.5Heard of Family Planning

## 4.8 Approves of Family Planning

74.5% of the sampled population approve of family planning while 25.5% do not approve of family planning.



Source: Author's Field Work, 2009

Figure 4.2 Percentage of respondents who approve of Family Planning

## 4.9 Spouse Approval of Family Planning

17.8% of the sampled population shows that their spouse approve of family planning, 45.6% of this population do not approve of family planning while 36.6% are not sure if their spouse approve of family planning or not.

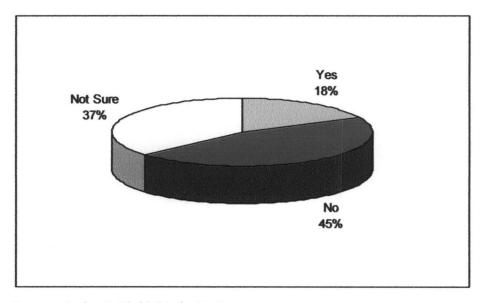




Figure 4.3 Percentage of respondent's spouse who Approve of Family Planning

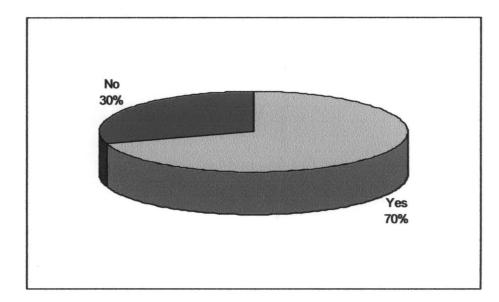
The use of Family Planning from the analysis below became well known among the respondents about a year ago as against what it was over two years ago. 18.2% of the sampled population started the use of Family planning while over two years ago, only a total of 19.4% used a method of Family Planning.

Response	Number	Percentage
A Year Ago	98	18.2
Two Years ago	59	11
Over Two years ago	45	8.4
No response	336	62.4
Total	538	100

#### Table 4.7When the use of Family Planning Started

## 4.11 Knowledge of any method of Family Planning

The analysis shows that 70.1% of the sampled population know a method of family planning while 29.9% don't know any method of family planning.

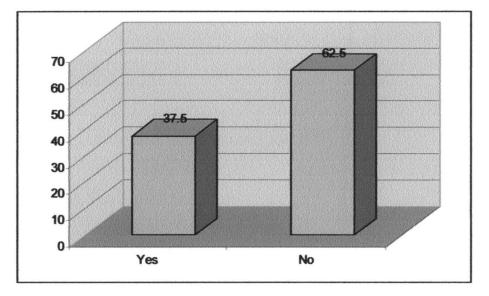


Source: Author's Field Work, 2009

Figure 4.4 Percentage of respondents who know any method of Family Planning

### 4.12 Use of any Family Planning Method

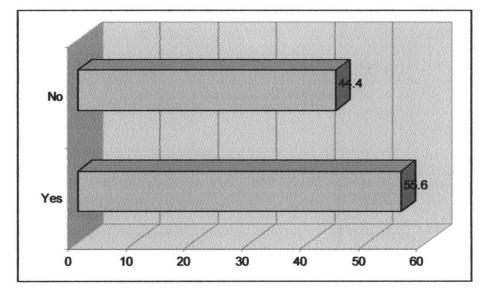
The above analysis shows that 37.5% of the sampled population are currently using a method of family planning while 62.5% that is over half the total are currently not using any form of family planning.



Source: Author's Field Work, 2009

Figure 4.5 Percentage of respondents currently using any Family Planning Method 4.13 Knowledge of a Modern Method of Family Planning

55.6% of the sampled population know modern method of family planning while 44.4% don't know any modern method of family planning.



Source: Author's Field Work, 2009

Figure 4.6 Percentage of respondents who know a Modern Method of Family Planning

The use of Family Planning from the analysis below became well known among the respondents about a year ago as against what it was over two years ago. 18.2% of the sampled population started the use of Family planning while over two years ago, only a total of 19.4% used a method of Family Planning.

Response	Number	Percentage	
A Year Ago	98	18.2	
Two Years ago	59	11	
Over Two years ago	45	8.4	
No response	336	62.4	
Total	538	100	

Table 4.7When the use of Family Planning Started

## 4.15 Desired Number of Children

More than 50% of the sampled population desire to have above 4 children for various reasons. 32.2% desire to have 4 children while only 11.3% desire to have below 4 children.

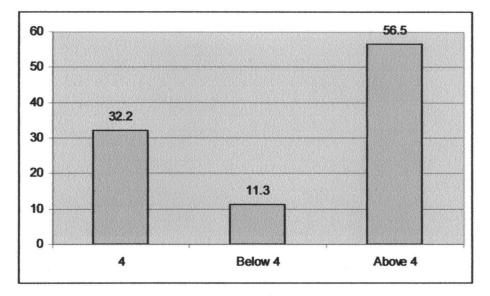




Figure 4.7 Percentage of respondents Desired Number of Children

## 4.16 Aware of Spouses' Desired number for children

59.3% of the sampled population do not know their spouse desire for children,

37.2% know their spouse desire for children while 3.5% did not respond.

## Table 4.8 Aware of Spouses' Desire for Children

Response	Number	Percentage	
Yes	200	37.2	
No	319	59.3	
No response	19	3.5	
Total	538	100	

## 4.17 Number of Children

The analysis shows that in the last five years, 49.6% of the respondents had above 3 children, 31.8% had 2 children while only 18.6% had no children during this period.

## Table 4.9Number of children had in the last five years

Response	Number	Percentage
2	30	5.6
3	51	9.5
4	96	17.8
5	171	31.8
Above 5	190	35.3
Total	538	100

Source: Author's Field Work, 2009

## 4.18 Determining the level of the Development of Communities in the study area

In order to determine the level of development of communities in Bassa Local Government Area, Simple Linear Regression was used as a statistical tool or method to test. This method was used to analyse the relationship between average household size and the development ranking of the communities i.e. the relationship between the dependent and independent variables.

Community	Average Family Size x	Devt. Ranking y	$x - \overline{x}$	y - y	$(x-\overline{x})^2$	$(y-\overline{y})^2$	$(x-\overline{x})(y-\overline{y})$
Oguma	3	5	- 2.38	3.95	5.66	15.60	-9.40
Gboloko	5	4	- 0.38	2.95	0.14	8.70	-1.12
Mozum	4	3	- 1.38	1.95	1.90	3.80	-2.69
Sheria	8	2	2.62	0.95	6.86	0.90	2.49
Ayede	7	2	1.62	0.95	2.62	0.90	1.54
Kpanche	6	2	0.62	0.95	0.38	0.90	0.59
Ikende	5	2	- 0.38	0.95	0.14	0.90	-0.36

 Table 4.10:
 Finding the relationship between Average Household Size and Development Ranking

Emi-Guni & Others	3	2	- 2.38	0.95	5.66	0.90	-2.26
Shintaku	6	2	0.62	0.95	0.38	0.90	0.59
Biroko	6	2	0.62	0.95	0.38	0.90	0.59
Gagba	8	1	2.62	- 0.05	6.86	0.0025	- 0.13
Dere	4	1	- 1.38	- 0.05	1.90	0.0025	0.07
Gbedikere	4	1	- 1.38	- 0.05	1.90	0.0025	0.07
Emi-Audu	7	1	1.62	- 0.05	2.62	0.0025	- 0.08
Uzugbe	6	1	0.62	- 0.05	0.38	0.0025	- 0.03
Kubiri	6	1	0.62	- 0.05	0.38	0.0025	- 0.03
Ochipu	5	1	- 0.38	- 0.05	0.14	0.0025	0.02
Ujoh Bako	4	1	- 1.38	- 0.05	1.90	0.0025	0.07
Ajigido	9	1	3.62	- 0.05	13.10	0.0025	- 0,18
Takumene	8	1	2.62	- 0.05	6.86	0.0025	- 0.13
Paruwa & Others	6	1	0.62	- 0.05	0.38	0.0025	- 0.03
Ate-Mini & Others	6	1	0.62	- 0.05	0.38	0.0025	- 0.03
Emi-Abiada	7	1	1.62	- 0.05	2.62	0.0025	- 0.08
Nyamkpo & Others	8	1	2.62	- 0.05	6.86	0.0025	- 0.13
Ikpoziyi & Others	9	1	3.62	- 0.05	13.10	0.0025	- 0.18
Ogbonka	5	1	- 0.38	- 0.05	0.14	0.0025	0.02
Yimua	5	0	- 0.38	- 1.05	0.14	1.10	0.40
						1	

Eroko	4	0	- 1.38	- 1.05	1.90	1.10	1.45	
Akabe & Others	4	0	- 1.38	- 1.05	1.90	1.10	1.45	
Takete	3	0	- 2.38	- 1.05	5.66	1.10	2.50	
Dodogbagi	6	0	0.62	- 1.05	0.38	1.10	- 0.65	
Kyaba & Others	7	0	1.62	- 1.05	2.62	1.10	- 1.70	
Nwamo	6	0	0.62	- 1.05	0.38	1.10	- 0.65	
Keteshi	5	0	- 0.38	- 1.05	0.14	1.10	0.40	
Izharikama	5	0	- 0.38	- 1.05	0.14	1.10	0.40	
Awawa	4	0	- 1.38	- 1.05	1.90	1.10	1.45	
Gwogwori & others	3	0	- 2.38	- 1.05	5.66	1.10	2.50	
Butu	3	0	- 2.38	- 1.05	5.66	1.10	2.50	
Erikey 1	2	0	- 3.38	- 1.05	11.42	1.10	3.55	
Ahutara & others	3	0	- 2.38	- 1.05	5.66	1.10	2.50	
	X = 215	$Y = \underline{42}$					*	
*	40	40	$\Sigma = 1.18$	$\Sigma = 0$	$\Sigma = 127.2$	$\Sigma = 49.84$	$\Sigma = 5.29$	
	$\overline{\mathbf{X}} = 5.30$	$\overline{\mathbf{Y}} = 1.05$						

Source: Author's Field work, 2009

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Using the equation of the regression line formula usually given as y = a + bx (a and b are constants)

Where a  $= \overline{y} - b\overline{x}$ 

b =  $\sum xy$   $\sum (x-\overline{x})(y-\overline{y})$  5.29 $\sum x^2$  =  $\sum (x-\overline{x})^2$  = 5.38 = 0.98

Substituting the value of b, x and y into the equation to find a

a = 
$$\overline{y} - b\overline{x}$$
 = 1.05 - 0.98(5.38)  
1.05 - 5.27 = -4.22

The regression line is y = -4.22 + 0.98

To compute the linear correlation co-efficient r

$$\mathbf{r} = \underline{\sum(x-\overline{x})(y-\overline{y})}_{\sqrt{\sum}(x-\overline{x})^{2}(y-\overline{y})^{2}} = \underline{\sum(5.29)}_{\sqrt{\sum}(5.38)^{2}(1.05)^{2}}$$
$$= \underline{\sum(5.29)}_{\sqrt{\sum}(28.94)(1.10)} = \underline{\sum(5.29)}_{\sqrt{(31.83)}} = \underline{\sum(5.29)}_{5.64}$$

The coefficient of determination which is simply the square of r (that is r2) is the proportion of variation in y explained by the regression of y on x. Therefore the coefficient of determination for average family size and development ranking will be obtained by getting the square of r.

.

$$r^2 = (0.94)^2 = 0.88$$

#### **CHAPTER FIVE**

#### DISCUSSION, CONCLUSION AND RECOMMENDATIONS

#### 5.0 Discussion

r indicates the proportion of variation in the dependent variable explained by the independent variable whereas  $r^2$  would indicate the direction of the relationship whether positive or negative. The absolute value of r can is used as an index of the strength of the relationship. I therefore conclude that the relationship between average family size and development raking is positive and that 88% of variation in aggregate development ranking can be explained by the linear regression of Average Family Size according to the data collated.

Average family size within the selected communities is 5 which is within the Federal Governments approved family size of 6. That is Father, Mother and six children as one of the checks on population increase, though this law is yet to be strictly adhered to for reasons earlier stated in the literature review.

The age composition of communities under study is predominantly between 0 - 40 thereby making the level of fertility high as most of the population are within the child bearing age.

Couples perception on family planning can be seen on Table 4.6 where only 36.1% of the total respondents discuss family planning with spouse while 63.9% don't. Only 18% have spouses who approve of family planning, 45%

spouses don't approve of family planning while 37% are not sure is their spouses approve of family planning or not.

As earlier stated, average family size within the study area is 5 while 56.5% desire to have over 4 children, only 11.3% of the respondents desire to have below 4 children and 32.2% desire to have 4 children.

#### 5.1 Summary

Bassa Local Government area of Kogi state has three districts which is being occupied by the Bassa Kwomu's who are predominately found in the Bassa Kwomu district of the area, Bassa-Nge's predominantly found in the Bassa-Nge district and the Egburra's who are predominantly in the Mozum district of the area (Byng-Hall, 1918). The area is made of 150 communities and for this research work, 40 different communities cutting across the three districts of the area were being sampled at random.

The main results of this research are summarized in Tables 4.1 to 4.7 In these tales, analysis shows that over 50% of the sampled population are between the ages of 20-35 years and more than 60% of this population are currently not using any method of family planning thereby making the level fertility in the area rather high. Also, analysis in Tables 4.8 to 4.9 shows that in the last 5 years, about 50% of this population had above two children and over 50% of the population desire to have above four children. With factors like high illiteracy and lack of basic infrastructures within the study area as shown in Tables 4.3 and Figure 4.1 according to Wilson (1999) and Family Health

International (FHI) (1998), transition to rapid higher fertility within the study area is more likely.

An analysis of the topic under study and collected data shows that a number of factors can be attributed to the increase in the population of the study area. Some of these factors include illiteracy and ignorance among the productive population on birth control, with only a very low numbers of the accessed population currently using any form of contraceptive. The desire to have so many children among majority of the sampled population is also a major contributor to the increasing rate of population within Bassa Local Government Area.

On the level of development within the study area, it was observed that more than half of the populations within the area do not have access to basic infrastructures like portable drinking water, electricity, access roads, good education and health care facilities, thereby reducing living standards within these areas. Where any of these infrastructures exist, it was also observed that there where either not functional or in poor state of repairs as can be seen in the attached photographs in Plates I - IX.

Available information from the National population commission on Bassa Local Government Area of Kogi State shows that population within the area increased by 26.18% from 1991 census to 2006 census year (15 years period). This according to the United National study on population increase is high thereby making the area to be one among area with high population growth rates within the state as stated by the projections of the United Nations Population division based on the revisions of the United Nations.

It was also observed that majority of the sampled population are predominantly farmers and as a result of lack of access roads and no means of preserving farm produce within the area, most of their crops perish as they have to travel miles to other village markets to be able to sell these farm produce. These markets are in some areas two days intervals and five days intervals at other areas. This to a large extent leaves most of the people living in these areas to leave below poverty level.

Finally, though more than half of the sampled population have heard of family planning and certainly approves of it, majority of then are yet to start using any form of contraceptive. For those who are currently using any form of contraceptive, they do it based on information they get from friends without adequate advice from health personnel.

#### 5.2 Conclusion

An analysis of the area under study shows that the level of population increase within the study area is high thereby affecting the living standard of the people in relation to the available basic infrastructures. These infrastructures where available are either inadequate or non functional and as such grossly affects the effectiveness of the essence of its being put in place in the first place. This study it is hoped will serve as an addition to other studies that may have been carried out in the area and also as a reference to future studies which it is hoped would all add up to the desired goal which is for the betterment of the living standard within the area.

## 5.3 Recommendations

From the foregoing findings during the course of the study, I would like to recommend the following:

- 1. In order to reduce the increasing level of population within the area, factors that causes such increase such as illiteracy, ignorance on birth control, desire to have so many number of children and so on among the productive should be tackled by way of awareness on the need to control births and as much as possible discourage early marriages within the study area.
- There should be access to basic infrastructures like portable drinking water, good schools, provision of health care facilities within the area, access roads and electricity so as to improve the living standard of those living within such areas.
- 3. Available information from the National population commission on Bassa Local Government Area of Kogi State shows that population within the area increased by 26.18% from 1991 census to 2006 census year (15 years period). This according to the United National study on population increase is high thereby making the area to be one among area with high population growth rates within the state as stated by the projections of the United Nations Population division based on the revisions of the United Nations.
- 4.

In order to create an enabling environment within the study area, I would recommend that the government open up the roads and water ways to make transportation of farm produce from the area on a larger

scale possible as the population within the area are predominantly farmers.

5. Women within the area should be educated on the need for family planning along with their spouses so that majority who are yet to start any form of birth control could do that, thereby curtailing the increasing population within the area. And those who are currently using any form of family planning should be encourage to visit health centers for professional advice on what type of contraceptives to be used since it was gathered that most of them do what their friends do by way of birth control.

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#### **APPENDIX I**

#### QUESTIONNAIRE

#### DEPARTMENT OF GEOGRAPHY, SCHOOL OF SCIENCE AND SCIENCE EDUCATION, FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA, NIGER STATE

## QUESTIONNAIRE ON THE ASSESSMENT OF POPULATION INCREASE AND ITS EFFECT ON COMMUNITY DEVELOPMENT: A CASE STUDY OF BASSA LOCAL GOVERNMENT AREA, KOGI STATE NIGERIA

## IN PARTIAL FULFILMENT FOR THE AWARD OF MASTER OF TECHNOLOGY (M.TECH.) DEGREE IN ENVIRONMENTAL MANAGEMENT {DEVELOPMENT PLANNING}, 2007/2008 SESSION

- 1. Age (a) 25-35 (b) 36-45 (c) 46-55 (d) 55 and Above
- 2. Religion (a) Christianity (b) Islam (c) Traditional (d) Others
- 3. Level of Education (a) Primary (b) Secondary (c) Tertiary (d) None
- 4. Occupation (a) Farmer (b) Trader (c) Civil Servant (d) Not employed
- 5. How would you grade your area in terms of infrastructural development?(a) Very Good (b) Good (c) Fair (d) Poor
- 6. Have you heard of family planning? (a) Yes (b) No (c) Not sure
- 7. Do you approve of family planning? (a) Yes (b) No
- 8. Do you know any family planning method? (a) Yes (b) No
- 9. Do you know any modern method of family planning? (a) Yes (b) NO
- 10. Do you ever discuss Family planning with spouse? (a) Yes (b) No
- 11. Does your spouse approve of family planning? (a) Yes (b) No
- 12. Are you currently using any family planning method? (a) Yes (b) No
- 13. Are you currently using any modern method of family planning?(a) Yes (b) No
- 14. When did you start the family planning?(a) One year ago (b) Two years Ago (c) Over two years ago
- 15. How many children have you has in the last five years?(a) 2 (b) 3 (c) 4 (d) 5 (e) 5 and Above
- 16. Number of children desired (a) 4 (b) Below 4 (c) Above 4
- 17. Do you know your spouse's desire for children? (a) Yes (b) No

## **APPENDIX II**

## LIST OF COMMUNITIES IN BASSA LOCAL GOVERNMENT AREA

S/NO.	DISTRICT	COMMUNITIES
1.	Bassa-Kwomu District	1. Agodo
		2. Aloko Buse
		3. Akakana
		4. Awawa
		5. Ayede
		6. Benehi & Others
		7. Bissau
		8. Biyintua & Others
		9. Butu
		10. Dere
		11. Echikwu
		12. Esule
		13. Gagba
		14. Gbechi & Others
R		15. Gbedikere
		16. Gbegbereji
	, · · ·	17. Gbende
~		18. Gbudu-Gbudu
		19. Gwogwori & Others
		20. Ikende
	a	21. Inigu-Tamazhi & Others
a.	4	22. Inigu-Omono
	×	23. Izharikama
		24. Jegwere
	-	25. Karukwo & Others
с. 4 <sup>1</sup>		26. Keteshi
		27. Kekure
		28. Koriko I
	,	29. Koriko II
		30. Kpanche

	31. Kpekpele & Others
	32. Kpekpere
	33. Kpokudu
	34. Kporo
	35. Kubiri
	36. Lando
	37. Nwamo
	38. Nyebu & Others
	39. Nyezhi
	40. Ochipu
	41. Odenyi
	42. Odugbo
	43. Odulo
	44. Odulu & Others
	45. Oguma
	46. Ojuwo & Others
	47. Okete
	48. Okudugu
	49. Orokwo/Aloko
	50. Paruwa & Others
	51. Rivune
	52. Shashara
	53. Sheria
	54. Shemeje & Others
	55. Ujoh Bako
2 ·	56. Ujoh Magbem & Others
	57. Usuma
	58. Vweje & Others
2. · · · ·	59. Wusa
	60. Yimua
	61. Zenyi & Others
2. Bassa-Nge District	1. Adenekpa & Others
	2. Adum Woiwo

	3. Ajidedeba
	4. Ajigido
	5. Ajojo
	6. Akabe & Others
	7. Amonoku & Others
	8. Atakpa
	9. Ate-Mini & Others
	10. Dodogbaji
	11. Ecewu
	12. Effin & Others
	13. Eforo
	14. Egene & Others
	15. Egeneja & Others
	16. Egiwe
	17. Eketa
	18. Ekido & Others
	19. Emi-Abaida
	20. Emi-Adama
	21. Emi-Akpama & Others
	22. Emi-Asuba & Others
	23. Emi-Atsagba & Others
	24. Emi-Audu
	25. Emi-Bochi & Others
	26. Emi-Dale & Others
×	27. Emi-Epe & Others
<i>x</i> .	28. Emi-Eronu & Others
	29. Emi-Guni & Others
	30. Emi-Jacob
2 · · · · ·	31. Eroko
· .	32. Gande & Others
	33. Gbalagbala
8. 	34. Gbobe
	35. Gboloko

	36. Kpata-Kpale
	37. Koji
	38. Kpobi & Others
	39. Nyamkpo & Others
	40. Ogwoze-Ndagi
	41. Olowa
	42. Shintaku
	43. Takete
	45. Takumene
District	1. Adimbeku
	2. Ahutara & others
	3. Biroko
	4. Erikey 1
	5. Ikpozogi & Others
	6. Kyagba & others
	7. Mozum I
	8. Mozum II
	9. Ogba & Others
	10. Ogbazanyi & Others
	11. Ogbonka
	12. Okanga & Others
	13. Omara
	14. Ozugbe
	District

Source: 1991 National population Commission

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# HATEMIAL HUMATION COMMESSION HATEMIAL HUMATION COMMESSION Final result of 1991 population COMSUS of Nigeria

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Filler	: BASSA			
	Y	•		1996
] state: KOGI	· Males	Females	Botli-Sexes	Projection
state: m				
J state. Locality	~ 151	1.70	321	361
	179	191	370	417
EMI-ABAIDAZ XS C.	205	330	535	602
I EMI-ADMITOR	2.2.4	. 2.1.2	436	491
EMI-ADATION EMI DOIJOR	344	369	713	803
EMI GUNI ENI GUNI	855	902	1,757	1,978
Tellin - Tellin	739	782	1,521	1,712
KENTR, OTHERS F	209	271	480	540
	680	748	1,428	1,608
-7- SIL	263	291	554	62.4
1	167	157	324	365
ATHI & OTHERS /				430
TRO S.	170	212	382	. 945
	. 392	447	839	
<b>KUMENE</b>	157	163	1 320	360
EFORO 50	118	1.1.3	2 J L	2.60
<b>GBALAGBALA</b>	109	123	232	261
DODOGBAJI	458	441	899	1,012
KPOBL & OTHERS	159	161	320	360
T EGENE & OTHERS T.	17G	235	411	463
EGENEDA & OTHERS for	254	326	580	653
EKIDO & OTHERS	153	- 132	255	287
ARABE & OTHERS	170	164	334	376
EMI-BOCHI & OTHERS		. 329	668	752
- ADUM-WOIWO	3.3.2	238	570	642
EMI-ASUDA & OTHERS	145	177	322	362
OLOLA .	177	198	375	422
AJIDEDEBA	2.0.3	235	438	493
EFFIN & OTHERS	230	301	531	598
- 1 AMONOKU & OTHERS	178	163	351	395
EMI-EPE & OTHERS	197	243	140	495
ELULE & OTHERS	382	316	698	78
EMI-ATSAGBA & OTHERS	. 250	254	504	56
TAKETE			463	52
JOLÓWA	215	248	. 445	5(
	197	248		
CHOLOKO	-1,830	2,037	3,867	4,3
NYAMKPO & OTHERS	378	346	724	8
J SHEMEJE & OTHERS	187	1.49	338	
KUBIRI	1.2.5	148	273	
ECHI KWU	2.9.4	340	634	
KREKPELE & OTHERS	393.	395	788	
ODENYI	466	516	. 982	1,
AGODO	736	708	1,444	1
· · / NYEZILT	230	206	436	-
ALOKO BUSE		180	1.10	
OROKWO / ALOKO	·1-1 A	8.4.9		
OKETE		+ 342	1,623	1
	5, 7, 7		713	
, KPDRO	111	1631	1,168	
OKUDUGU		174	325	
		324	584	
and the second sec		48.9	879	
	-171	101	010	

NATIONAL POPULATION COMMISSION Final results of 1991 population census of Nigeria

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al hat VOCT	Lgn:	BASSI	η			1996
State: KOGT Locality		-	Males	Femalos	Both-Sexes	Projection
DERE PARUWA I & OTHERS IMIGU OMOMO KARAKWQ & OTHERS AWAWA BINYTHTUA & OTHERS WUSA VEUE & OTHERS NWAMO ZENYI & OTHERS OJUMO & OTHERS BENEHI & OTHERS IZHARIKAMA			162 461 271 166 186 563 83 194 276 138 153 366	168     507     411     349     156     209     641     102     200     294     145     153     366     366     30	330 <u>968</u> 752 620 322 395 1,204 185 394 570 283 306 732	371 1,090 847 698 362 445 1,355 208 444 642 319 344 824
J LGA TOTAL			42,723	45,773	88,496	99,624

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