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HUMAN POPULATION DYNAMICS AND THE MIRAGE OF DEMOGRAPHIC DIVIDEND IN NIGERIA

By

PETER O. OGUNJUYIGBE

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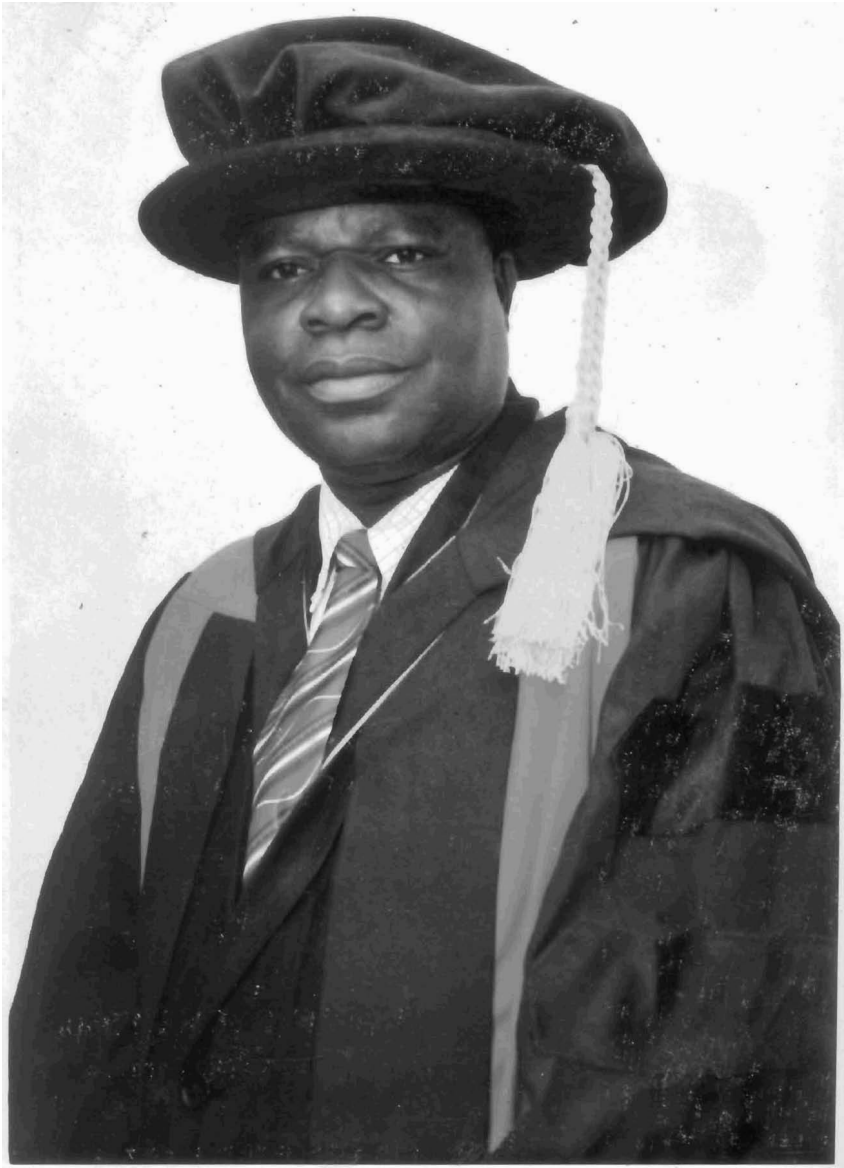

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An Inaugural Lecture Delivered at Oduduwa Hall, Obafemi Awolowo University, Ile-Ife, Nigeria On Tuesday, 23rd June, 2015

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PREAMBLE

Mr. Vice Chancellor sir, distinguished ladies and gentlemen, I am grateful to Almighty God for this privilege to stand here today to present the 276th Inaugural Lecture of the Obafemi Awolowo University, Ile-Ife. This inaugural lecture is the fifth to be delivered from the Department of Demography and Social Statistics following the one titled "Population and Quality of Life" presented by my mentor and supervisor, Professor J.A. Ebigbola (of blessed memory) on November 11, 1997. This lecture will highlight my career progression and my contributions to the field of Demography.

It is by providence that I found myself in academic arena. Shortly after my youth service (NYSC) in 1988, I joined one reputable audit firm in Lagos as an audit trainee. I was already making a career in accounting having sat for and passed ICAN foundation examination by the time one of my friends, Magistrate J.O. Obadare encouraged me to enroll for my Masters Degree programme in Demography and Social Statistics at Obafemi Awolowo University. For three consecutive academic sessions, he procured OAU postgraduate forms for me before I finally decided to 'honour' him the third time. This decision marks a serious turning point in my life. Little did I know that the decision I took to enroll for M.Sc degree programme in Demography and Social Statistics that year will be the beginning of history making in my life, in the life of the Department of Demography and Social Statistics as well as in the life of the Discipline. Midway to my M.Sc degree programme, the then Head of Department, Prof A.K. Omideyi, encouraged me to change my programme to M.Sc with thesis instead of M.Sc with long essay which the Department had been running over the years. That was how I became the first candidate to undertake an M.Sc with thesis in the Department. This thus makes me the first scholar in Nigeria and the whole of sub-Saharan Africa to read Demography at B.Sc, M.Sc and PhD levels. All scholars before me chose Demography as an area of specialization either at M.Sc or PhD level. With my promotion to

the rank of Professor in October 2009, I became the first Professor in the country to have read Demography and Social Statistics at all levels. This was acknowledged at the Demographers' forum in Yokohama, Japan in 2014.

Even though I was not privileged to have undertaken my University education outside the country, I made up for this with series of international trips immediately after my PhD degree programme. Between 2001 when I finished my PhD and 2009 when I became Professor, I had made nothing less than forty-two (42) international trips to participate in training programmes, as a member of research team, and to attend international workshops, seminar and conferences in Europe, USA, Asia and many other African countries. The exposure I had during these foreign trips was helpful to my research endeavour, teaching and community service. I am grateful to the University for acceding to my request for permission to embark on each of these trips.

Mr Vice Chancellor sir, I submit that I began my academic career in the Department of Demography and Social Statistics of the Obafemi Awolowo University, Ile-Ife, Nigeria in 1995. Since then, I have had the privilege of sitting on the shoulder of great men and women, who mentored me and made sure that I achieve greatness. I place a lot of premium on what I learnt under erudite Professors and Senior colleagues in the Department including: late Professor J.A. Ebigbola, Professor A.A. Adewuyi, Professor L.A. Adeokun, Professor A.K. Omideyi, Dr B. K. Feyisetan, Dr A. Bankole and Professor D. Togunde and of course Professor E.O. Ojofeitimi of Department of Community Health. This inaugural lecture therefore affords me a great opportunity to thank the past and present colleagues in the Department, my current research team and the wider group of academics that I have collaborated with over the years and use this occasion to celebrate our shared successes.

INTRODUCTION

Since January 1995, I have conducted research independently and in collaboration with several colleagues both at home and abroad,

pertaining to the issues of population dynamics, reproductive health, adolescent sexuality, and gender, and have done elaborate work on factors determining Nigerian population structure and its dynamics. In the course of doing research in these specialized areas of demography, I have been able to realize that it is neither a country's material assets, whether natural or produced, nor a country's mineral resources (agricultural land, forests, solid mineral, industrial plants or infrastructures) which make a country rich and prosperous, rather it is the quality of the population who inhabit the land and the reliability, quality and strength of the institutions which have been established to create and augment the country's prosperity.

Nigeria has the continent's largest population, with an estimated population of 170 million people. Even though the country experienced a slight decline in average fertility rates, to about 5.5 in 2013 from 6.8 in 1975 (NPC & ICF Macro, 2013), this level of fertility, combined with extremely young population, still puts the country on a steep and disastrous growth curve. Half of Nigerian women are under age 19 and just entering their peak of childbearing years (NPC, 2006). The population is expected to grow by 10 million each year until 2050 at least, when it will reach almost half a billion people (United Nations, 2013). By this time Nigeria will be the 4th most populous country in the world according to the International Data Base country ranking.

Nigeria population growth rate rose steadily from an estimate of 2.8% in the 1960s to around 3.3% in the contemporary time (CBN, 2007). A growth rate of 3.3% per annum suggests a population doubling time of 22 years. Adepoju (1976) notes that the high rate of population growth with the resultant young age structure coupled with the rapidity of rural-urban migration will continue to pose considerable problem for accelerated rate of economic growth in the country. The continued rapid population growth of Nigeria has major and adverse consequences for the environment, increasing the pressure on infrastructure and available resources.

Until 1991, Nigeria's Total Fertility Rate (TFR) remained above 6 children per woman (NPC, 1999). Evidence adduced from the 1990 Demographic and Health Survey (DHS) by Makinwa-Adebusoye and Feyisetan (1994) indicates that fertility decline began around 1986. They argued that the economic crisis that started in the early 1980s as a result of the oil glut and the decision by the high parity women to postpone child bearing were the reasons for the onset of the decline. The period was characterized by unemployment, devaluation of the currency, rising costs of children's education and withdrawal of subsidies on many social services.

Evidences from the country's five successive DHS Surveys (1990, 1999, 2003, 2008 and 2013) indicate that the TFR declined within a span of 23 years from 6.0 in 1990 to 5.5 (5%) in 2013. The TFR declined rapidly between 1990 from 6.0 to 4.7 (21.7%) in 1999 and stalled afterwards between 2003 and 2008 at 5.7. A further decline of 0.2 children per woman was achieved between 2008 and 2013. The rapid decline of the TFR between 1990 and 1999 could be attributed to the increase in the use of modern contraceptives among married women by 24.6 percent. Oladosu (2002) reported that married women of all ages were twice as likely to use contraceptives in 1999 as in 1990. In addition, the proportion of women with secondary education or higher nearly doubled from 18.9 percent to 36.7 percent within the period. The rise in the Median Age at First Marriage for women age 25 – 49 years from 16.9 to 17.9 between 1990 and 1999 may have impacted marginally on the decline in the TFR. Trend analysis from the successive Nigeria Demographic and Health Survey (NDHS) revealed that the rates of decline vary between the regions and the place of residence. For instance, the TFR in the Southwest that was 4.1 in 2003 slightly increased to 4.5 in 2008 even though the figure was the least recorded among the six geo-political zones. The northern zones maintained the highest rates of nearly 7 children per woman age 15 – 49 in both the 2003 and 2008 surveys. The TFR increased from 6.1 for the rural women in 2003 to 6.3 in 2008, whereas the rate for the urban women slightly declined from 4.9 to 4.7 within the same period (NPC & ICF Macro, 2003 and 2008).

Although there were slight increases in the proportions of women with secondary education or higher and the proportion of married women using modern contraceptives between 2003 and 2008, yet the TFR stagnated at 5.7. The 2013 DHS report indicates that the use of modern contraceptives by Nigerian women has remained stagnant at 15 percent (all methods) in the last five years.

Population has become an important issue of concern in contemporary society. This is so because population, in terms of its size and composition, has far-reaching implications for change, development and the quality of life in society. Population is a major asset, as resource for development, and is also the prime beneficiary of development in society. It constitutes the bulk of the producers of goods and services as well as the major consumers of the goods and services. Thus, the population of a country is a major determinant of the size of the national and international market for investment. The ever increasing population of Nigeria has been a source of concern to governments, national and multi-national agencies as well as to the Nigerians. As pointed out by some population experts (Rosenthal, 2012; Olawale, 2014), if Nigeria's population continues its growth without check, a time would come when the massive population would be unmanageable. The desire to minimize the negative impact of rapid population growth therefore underscores the need for National Population Policy in 1988 and 2004.

A major concern about the rapidly growing population is the fact that jobs, national infrastructures, social services, housing, and health care facilities are not also growing at an equally comparable rate or at a faster rate compared to her population growth. Rapid population growth was conceived as shifting spending away from physical-capital investments and towards expenditures on social services like health, housing, education and food among others. Hence, the concern and clamour for population management programmes in the developing countries, including Nigeria. However, recent studies (Bloom, Canning and *et al.* 2003;

Ebigbola and Ogunjuyigbe, 2004; Kelley, 1988) have indicated that a slow population growth rate does not necessarily lead to better living conditions for the population. Better living standards depend on the efficiency of other covariates like political stability, sustained economic growth, accountability and probity and reliable data base that will facilitate development planning aimed at improving the welfare of the people. This is why I have titled my inaugural lecture "**Human Population Dynamics and the Mirage of Demographic Dividend in Nigeria**".

Population Dynamics

Population dynamics is the study of how populations change over time. It deals with the way populations are affected by birth and death rates, and by immigration and emigration. It refers to changes in the size, demographic structure and spatial distribution of a given population over time. Such changes can be traced to natural environmental changes, changes in economic and political circumstances, changes in reproductive health management technology and, ultimately changes in human reproductive and location decisions. Births, deaths and the movement of people between the two life poles (birth and death) are the three important population dynamics, which demographers study under the terms: fertility, mortality and migration, respectively (Akinnaso, 2012). Birth (natality), death (mortality), immigration, and emigration are the four primary ecological events that influence the size (density) of a population. This relationship can be expressed in a simple equation:

Change in Population Size = (Birth+ Immigration) – (Deaths + Emigration)

While birth rates have remained high in Nigeria, death rates have come down although still relatively much higher than what obtain in developed countries (Ebigbola and Ogunjuyigbe, 2004). Life expectancy at birth rose from about 36 years in 1963 (NPB, 1963) and close to 48 years in 1980, 50 years in 1990, 53 years in 1991

(NPC, 1998) and also remained 53 years in 2014 (CIA World Factbook, 2015). The crude death rate, which is the number of death in each year per 1000 persons in the population, fell from 27 to about 14 over the same period.

The combination of historically high birth rates and declining death rates meant that the rate of population growth in Nigeria has increased over time. During the early 1950, the population was probably growing considerably between 2.0 and 2.5 percent per year. The country experienced a growth rate of 2.8 percent per annum between 1952 and 1991 (NPC, 1991). At present, the population is increasing by more than 3 percent per year (specifically 3.2 percent) (NPC, 2006). By this rate, Nigeria is one of the fastest growing populous countries in the world. And at this rate, the population would double in about every 22 years. Given a continuation of high birth rates, Nigeria would have a population of almost 281 million by the end of year 2015. This is essentially due to persistently high fertility in the face of declining mortality.

Demographic Transition: Nigerian Experience

The history of most nations that achieved successes in social and economic developments indicates that they experienced transition in both fertility and mortality. The transition usually started initially with high fertility and mortality regimes. It progressed to a high fertility regime with a declining mortality rates, and is often completed with the attainment of low fertility and even sometimes below replacement level with a lowered mortality rate. This transition is often referred to as the Demographic Transition. The standard demographic transition scenario indicates that infant mortality declines and fertility falls with a lag only after the mortality decline has begun. The demographic transition first leads to a demographic "burden" because population growth is faster than the growth of the working age population. Later, as fertility declines, the demographic transition leads to a demographic "dividend" because the growth of the working age population is faster than the growth of the total population (Bloom et al. 2003). In addition, as argued in Mason (2005), the working age

population increases also due to lower mortality. However, as shown in figure 1, once the mortality further declines at higher ages and fertility stays at low levels, the demographic dividend turns into a demographic burden again as the retired population increases. The countries of Western Europe and North America experienced this transition towards the end of the 19th century.

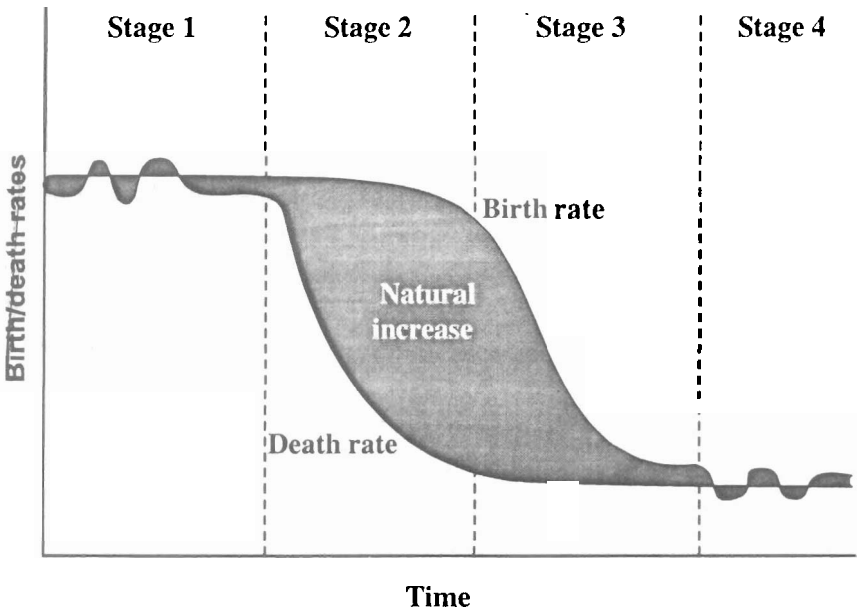


Figure 1: Showing Demographic Gap
Source: Population Reference Bureau, 2006

The transition has occurred or is occurring in most Asian and North African countries. However, the majority of the sub-Saharan African countries show little or no sign of the commencement of the transition. Fertility transition has started in Nigeria but has not been completed.

Nigeria had a population of 56 million people in 1963. It grew to 88 million in 1991, and almost more than doubled the 1963 figures in just 38 years reaching 119 million in 2001 (FGN, 2004). Within

just a span of another five years i.e. in 2006 the country's population reached 140 million (NPC, 2006) and is currently estimated at over 170 million (NPC, 2013). It is also expected to double its size in the next two decades if the prevailing fertility rate persists.

Table 1: Percentage Distribution of Nigeria Population

Year	North (Million)	Southwest (Million)	Southeast (Million)	Total (Million)
1952/53	16.8	6.4	7.2	30.4
1963	29.7	13.5	12.4	55.6
1991	47.2	17.6	23.7	88.5
2006	72.8	27.3	39.9	140

Source: NPC, Abuja

As observed by Sani-Zakirai (2014), the five successive Demographic and Health Surveys (1990, 1999, 2003, 2008 and 2013) reveal that fertility transition has commenced at the national level in Nigeria (Table 2). However, regional variations in the levels of declines exist. The socio-cultural practices in the Northern region that favour high fertility are keeping the national average at high level. Infant mortality is very high and is among the factors that are keeping fertility at high levels. Low contraceptive utilization is also exacerbating the situation. About 2 out of every 3 women in the region that want to delay pregnancy for the next two years are not using any method of modern contraception (NPC & ICF Macro, 2008). The average age of marriage for girls is still between 15 and 17 years in many Northern states. Generally in the country, the boys had more advantages than the girls in school enrollment, thus causing the widening of the socio-economic status disparity between the sexes at adult ages. All these factors exert significant influences on the level of fertility.

Table 2: Fertility Indicators in Nigeria between 1990 and 2013

NDHS YEAR	TOTAL FERTILITY RATE	DESIRED NUMBER OF CHILDREN	AGE AT FIRST MARRIAGE	CONTRACEPTIVE UTILIZATION (%)	INFANT MORTALITY RATE
1990	6.0	5.8	16.9	6	84.7
1999	4.7	6.2	17.9	10	75
2003	5.7	6.7	16.9	13	100
2008	5.7	6.1	18.6	15	75
2013	5.5	NA	NA	15	69

Sources: Nigeria Demographic and Health Survey (1990, 1999, 2003, 2008, and 2013), National Population Commission, FOS and Macro, and ICF Macro

Determinants of Demographic Change

As indicated above, one major factor that brings about demographic change is fertility, which demographers express as the total fertility rate. Total fertility is the number of births that can be expected to occur to a typical woman in a given society during her childbearing years. Fertility is a function of a woman's fecundity (the physiological ability to conceive and bear children) and social, cultural, economic, and health factors that influence reproductive choices in a country. The most important non-physical factors influencing a country's total fertility rate include relationship status (the fraction of women who are married or in a relationship that exposes them to the possibility of becoming pregnant); use of contraception; and the fraction of women who are infecund (probably because they are breastfeeding a child).

Mortality which is the second major variable that shapes population trends is influenced by population's age structure. Death rates are highest among infants, young children, and the elderly; so societies with many elderly people are likely to have more deaths per 1,000 people than those where most citizens are young adults.

The third factor that drives population trend is migration, which includes geographic population shifts within nations and across borders. Migration is less predictable over a long period than

fertility or mortality, since it happens in sudden waves (e.g refugees) or slowly over many years. So, demographic change occurs through the interaction of the three main components of fertility, mortality and migration.

Based on the available mortality and fertility statistics, Demographers have projected that world's population will reach just over nine billion by 2050, with virtually all growth occurring in developing countries. It is acclaimed that future fertility trends will strongly affect the course of population growth. This estimate assumes that fertility will decline from 2.6 children per woman in 2005 to slightly over 2 children per woman in 2050. If the rate falls more sharply to 1.5 children per woman, world population would be 7.7 billion in 2050, whereas a slower decline to 2.5 children per woman would increase world population to 10.6 billion by 2050 (United Nations, 2004). As indicated in the United Nations (2004) report, many people interpret forecast like this to mean that population growth is out of control. It should be pointed out that the world's population is still rising because of population momentum stemming from large increases that occurred in developing countries in the 1950s and early 1960s. However, due to a number of factors such as lower infant mortality rates, expanding rights (especially for women and girl child), education, and labour market opportunities for women, and increased access to family planning services, fertility rates are falling as many of these developing countries pass through the demographic transition.

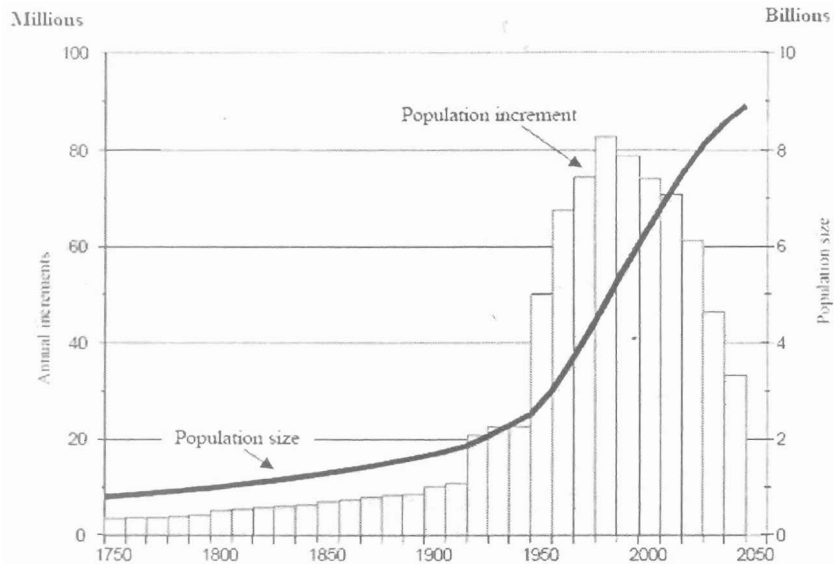


Figure 2: World Population Growth, 1750-2050. Source: United Nations Population Division

One UN study (2010) gave an indication that the world population growth in the 21st century will be different from previous decades in several ways. First, humans are living longer and having fewer children, so there will be more of the older people (aged 60 years and above) than very young people (age 0 – 4). Second, nearly all population growth will take place in urban areas. Third, fertility rates will continue to decline.

Is Population Growth Desirable?

The relationship between population, development and quality of life has been a subject of debate by demographers, economists and other concerned disciplines. Malthus and other population pessimists believe that rapid population growth is problematic because it tends to overwhelm any induced response by technological progress and capital accumulation (Coale and Hoover, 1958; Olusanya and Ebigbola, 1985). Malthus opined that

"Population when unchecked increases in a geometrical ratio". So the world's human population increases five-fold from 1.2 billion to 6.1 billion during the 20th century. However, contrary to this position, the population optimists are of the opinion that rapid population growth promotes technological and institutional innovation and allows economies of scale to be captured (Boserup, 1981; Simon, 1981 and Kuznets, 1967). The third group, usually referred to as population neutralists, contends that population growth in isolation from other factors has neither a significant positive nor a significant negative impact on economic growth (Bloom and Freeman, 1986; Kelley, 1988).

Nigeria is a high fertility country and there is evidence that its large population inhibits government's efforts in meeting the basic needs of the people. With a population that already exceeds 150 million people and growing at roughly 3 percent annually (Rosenthal, 2012), a considerable proportion of the country's resources is consumed instead of being accumulated as capital for development purposes (Onwuka, 2006). Fashola, laying credence to Malthus' postulation, therefore noted that:

> *"there was no way quality of life could be enhanced now or beyond today if there is no conscious effort to stem the increase in the population of the people, arguing that if life is difficult for those already here, there was no guarantee of a better life for those coming in future* (Business day of September 7, 2014)".

The call for population management is therefore necessary.

Some researchers however, criticize Malthus and blame the population pessimists for relying on the theory formulated by Malthus that population grows geometrically (2, 4, 8, 16...) and food production arithmetically (1, 2, 3, 4...) and that soon the human population will outstrip food production and we will all starve. They claimed that none of his predictions has come true. Many of the optimists disagree with the claim that population growth retards economic growth since that assertion contradicts all

known facts and figures. The case of the United States, China, India, Japan, Indonesia, which are a force to reckon with was cited as an example. According to Ayodele and Sotola (2012), globally highly populated countries are important to the world economy. They provide the market which drive entrepreneurship and exchange of goods and services. According to Nwachukwu (2013):

> *"It is an act of insincerity and cowardice to say that the cause of poverty, unemployment, insecurity, shortage of resources, lack of housing is overpopulation and the cure is population control".*

However, today's events have vindicated Malthus and his group. For instance, while it is widely acclaimed that Nigeria is presently experiencing growing economies, yet majority of the citizens are living in abject poverty. The large scale poverty that pervade this country subject its citizens to lack of access to improved health services, suffer from hunger, starvation and experience mental and physical problems that make it difficult to improve their situation (Figures 3-6). Coale and Hover (1958) posited that:

> *"A higher rate of growth of population implies a higher dependency rate, with greater need of housing and other demographic capital that is provided at the expense of productive capital".*

Kuznets (1966) also observed that high rate of population growth impedes generation of adequate employment, income and personal freedom. Huge investments are, therefore, required on a sustained basis in health, education and nutrition.

Impact of unchecked population growth

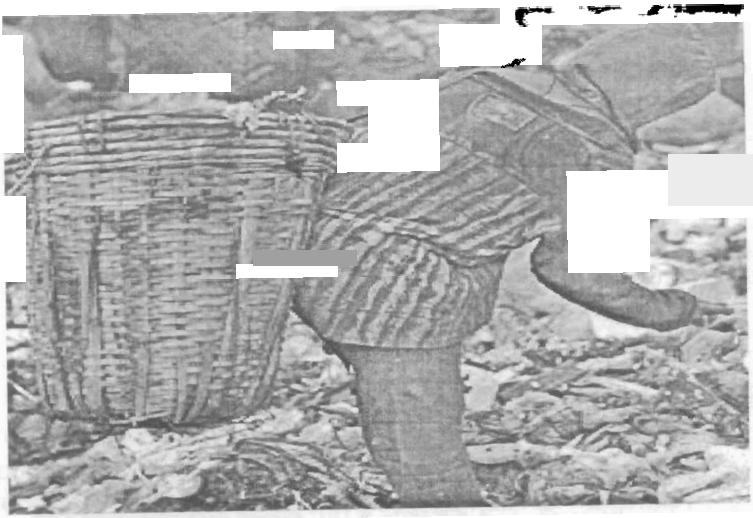


Figure 3: one of the outcomes of excessive population growth.
Source: en.wikipedia.org. Accessed 14th October, 2014

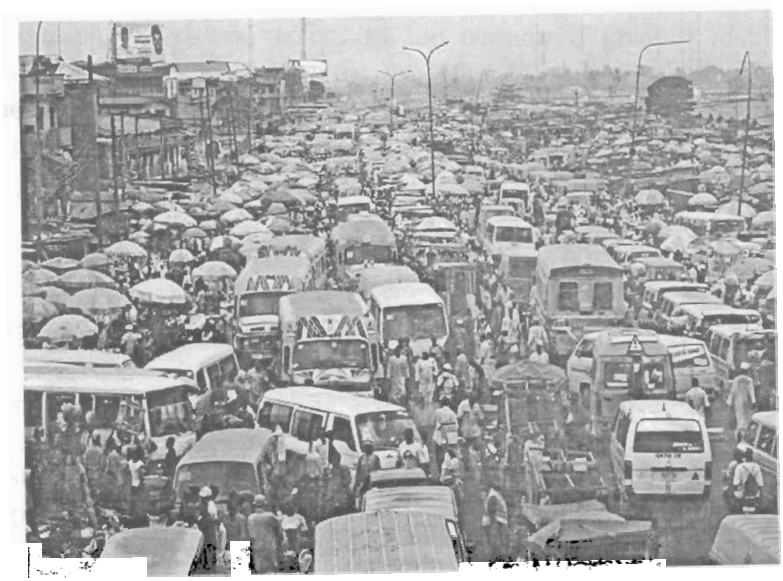


Figure 4: People struggling for space in public transport buses and trucks in Lagos);
Source: Vanguard Online: Accessed February 23, 2015)

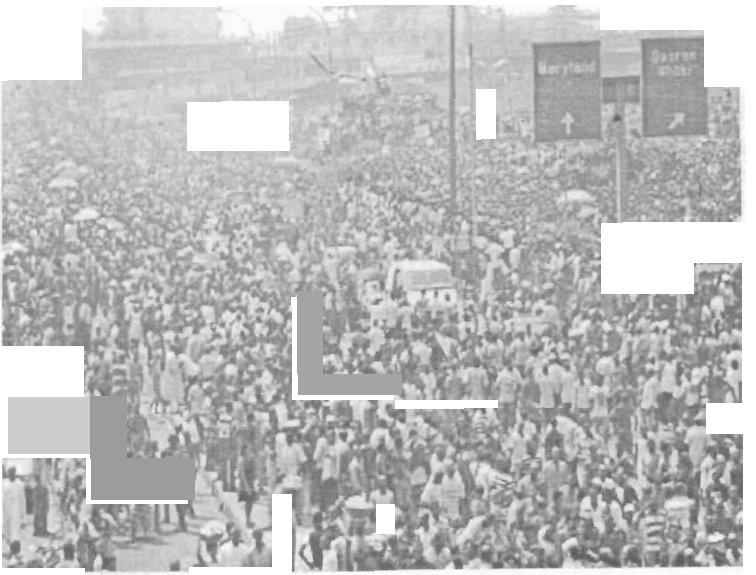


Figure 5: Subsidy Protest: Protesters at the Gani Fawehinmi Park Ojota, Lagos Source: en.wikipedia. Accessed 14th October, 2014

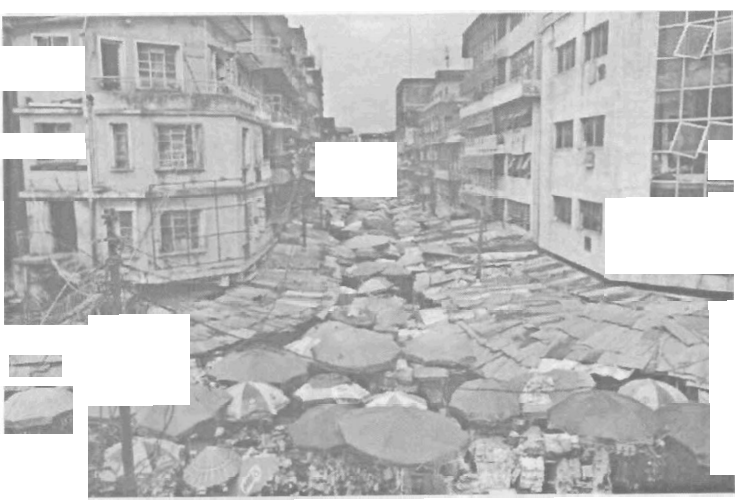


Figure 6: A market in Lagos (Source: The New York Times, April 14, 2012)

The current rate of population growth (3.2% per annum) suggests that Nigeria would have to double its entire infrastructure for food production, health services, education, water supply, housing, energy and services in the next 20 years just to maintain today's low standard of living (FGN, 2004). There is no doubt that doubling infrastructure in the next two decades in Nigeria with the current GDP per capita (which is still low) and coupled with wide scale corruption and other development challenges will be a highly challenging task.

Already the country's educational sector cannot cope with the teeming potential intakes at all levels. Health facilities are overstretched. High fertility has created huge dependency ratio of 80 dependents per 100 persons in the productive age range 15 - 64. This is posing a great development challenge for the country's leadership (World Bank, 2012).

Prospects of Demographic Dividend

Demographic dividend refers to the economic growth resulting from a change in the age structure of a country's population. A demographic dividend arises when a falling birth rate changes the age distribution of a population. This indicates that demographic change will bring about demographic dividend. The reduction in birth and death rates, result in the changing of the age structure in a population, which invariably affects the proportion of the working population over the entire population (Table 3). The demographic change has implication for resource allocation and utilization at both the family and national levels. The fewer the population becomes the less is the resources required to provide for social services such as health and education. This means that fewer investments are needed to meet the needs of the youngest age groups, facilitate their skill development and that there are relatively more adults in the population of the productive labour force. This creates an opportunity for more rapid economic growth and human development for a country as more resources are available for investment in economic development and family welfare. This opens a window of opportunity for a nation to invest

the resources in other areas that will generate economic growth. The opportunity avails itself more prominently if the appropriate social and economic policies are put in place. This opportunity, if well harnessed, is referred to as Demographic Dividend.

Table 3: Proportional Increase in Persons in the Productive Years 1963, 1991, 2006

Age	1963		1991		2006	
	Total	%	Total	%	Total	%
15-19	5,251,184	9.4	9,335,788	10.5	14,899,419	10.6
20-24	6,923,188	12.4	7,671,570	8.6	13,435,079	9.6
25-29	5,50,585	10.0	7,311,671	8.2	12,211,426	8.7
30-34	4,325,578	7.8	5,913,927	6.6	9,467,538	6.7
35-39	2,478,446	4.8	4,214,933	4.7	7,331,755	5.2
40-44	2,410,144	4.3	3,845,918	4.3	6,456,470	4.6
45-49	1,168,048	2.1	2,416,703	2.7	4,591,293	3.3
50-54	1,216,899	2.2	2,570,799	2.9	4,249,219	3.0
55-59	463,476	0.8	1,119,769	1.3	2,066,247	1.5
60-64	785,792	1.4	1,690,374	1.9	2,450,286	1.7
65+	1,151,109	2.0	2,907,40	3.3	4,536,761	3.2

Source: Federal Office of Statistics (1989), Digest of Statistics, Lagos, Federal Office of Statistics; National Population Commission (1998), 1991 Population Census of the Federal Republic of Nigeria: Analytical Report at the National Level, Abuja, National Population Commission; National Population Commission, Abuja, 2006.

It is important to emphasise that Demographic Dividends can only be achieved by reduction in fertility in conjunction with sound social and economic policies such as expansion of family planning programme and services, improvement in child health outcomes, promotion of girl-child education, creation of labour-intensive industries and promotion of technical and vocational education.

MY MAJOR CONTRIBUTION TO KNOWLEDGE

Mr Vice Chancellor sir, ladies and gentlemen, the main thrust of my publications and the areas of Demography in which I have

made contributions to knowledge have been in the areas of reproductive health decision making, women's and child's health and gender as they relate to population dynamics. My empirical studies in these areas have investigated issues highlighting the prospects of demographic dividend in Nigeria and have considered issues pertaining to male involvement in family planning, women's right to contraceptive use, adolescent sexuality and reproductive health, childhood diseases and mortality.

I. Gender power dynamics and reproductive health

In many cultures, misunderstandings and myths about female sexuality and reproductive systems persist. One myth is that men do not care either about what their female partners do or believe with regard to reproductive health issues such as family planning, contraception, disease prevention, or even their partner's participation in programmes related to any of these behaviours. Though there are indications that male attitudes toward a range of taboos are changing, a woman still needs to get her husband's consent before she can receive any contraceptive services in many parts of Nigeria (Adewuyi and Ogunjuyigbe, 2003). Traditional societies often invest power and authority in males to make decisions and to control valued resources, especially in the case of patriarchal societies (Caldwell, 1983). A personal opinion of males within their familial context becomes the overriding factor in decisions pertaining to reproductive health. This indicates that men's attitude and behaviours can either impede or promote sexual and reproductive health and consequently influence fertility.

Even though women's and men's social roles and power relations have serious implications for reproductive health outcomes, it is not yet clear through which mechanism gender affects reproductive health, especially contraceptive decision-making in the country. Studies conducted among many ethnic groups in Nigeria also confirm the generally held view that as husbands and household

heads, men control their wives' sexuality and reproductive health (Isiugo-Abanihe, 1994; Ogunjuyigbe and Ebigbola, 2004).

The gender gap in reproductive health may also result from gender differences in perception of who should be responsible for appropriate reproductive health practices (Oni, Ogunjuyigbe and Ojofeitimi *et al.*, 2008). A large number of men in Nigeria still consider sexual and reproductive health to be exclusively women's concern. Traditionally, most reproductive health services offered around the world are geared almost exclusively to women. Men are generally the forgotten reproductive health care clients and their involvement often stops at the clinic door, if at all they follow their wives. In many parts of the world, men often act in ways that contribute to a variety of public health problems such as domestic and sexual violence, sexually transmitted infections, and high rates of HIV/AIDS.

There is now an increasing acceptance of the fact that men have a key role to play in tackling gender issues, which have for long been viewed as women's issues. Despite this, the overall field of engaging men in promoting gender equality is still largely under-researched due to lack of adequate funding for engaging men, lack of technical skills to implement strategic, conceptually and theoretically grounded interventions and lack of concerted advocacy efforts to create a favourable policy and societal environment for engaging men in gender equality issue.

Our studies have found that if actively involved, men can play a critical role in promoting gender equity, preventing violence and fostering positive sexual and reproductive health outcomes for themselves, their partners and their families (Ogunjuygbe and Adeyemi, 2005; Oni, Ogunjuyigbe and Ojofeitimi *et al.*, 2008b). Men will get more involved in sexual and reproductive health if they are strategically engaged in well-constructed and theoretically-oriented interventions that include group education and group discussion sessions, campaigns and outreach activities to change community norms, and advocacy efforts at the macro-

level (Barker, 2004). Addressing gender-based violence should therefore be a priority social issue that affects men and women's sexual and reproductive health, relationships, their self-esteem and the ability to harness their potentials.

Although violence, as a concept, is not included in the conventional definition of reproductive health, it has adverse health consequences for women ranging from injury, sexually transmitted infections and unwanted pregnancies. Hence, issues of gender and power relations deserve attention. Under these circumstances, male participation is vital in enabling them to seek reproductive health knowledge and services for themselves and to come forward to extend support to women and also to undergo changes in their negative attitudes towards sex, gender and power.

(a) Men's attitude to women status

The expectation is that couples who had ever had discussion on issues such as pregnancy matters, when to have another child and taking decision on family planning were better able to predict partner's position than a spouse who did not have such discussion. Our studies on couples' decision making indicated that some prevailing socio-cultural and institutional factors still play significant impact on couple's reproductive behaviour and contraceptive decision making (Ogunjuyigbe, 1999; Adewuyi and Ogunjuyigbe, 2003). For instance, a number of cultural factors were identified to have favoured men in matters related to marriage and family life. Since men do not have to depend on the status of their wives for their families to survive, their attitudes to their wives' status can be seen as unbiased and independent, providing useful pointers for fertility-related behaviour. The general support given to wives by husbands nowadays and the fairly positive attitude to women' economic status seems to neglect traditionally held views in sex-role ideology. Even though men, obviously still want to be breadwinners and maintain authority in the home, but gradually, expression of greater opportunities for women (and daughters) to improve their positions and to have a better independent standing (not dictated by number of children and

number of sons) are now emerging. Such changes are welcome, not only because they make for greater possibilities in improving the status of women, but because, it has implication for fertility reduction (Table 4). In a related study, Ogunjuyigbe (2001) observed that men's positive attitudes to women's improved status, especially in an atmosphere of fairly close conjugal relationships, are likely to result in less independent, and thus more egalitarian decision making, greater approval and use of family planning and hence, grater reduction in fertility.

Table 4: Correlation Coefficients Showing Relationships between Attitudes of Husband to Wives' Status and Decision Making Variables among the Yorubas

Decision Making Variables	Influence by relatives	Independent decision by wife	Independent decision by husband	Protest by wife if not consulted
Happy that wife works	-.2823**	0.0108	-.1846**	.2009**
Prefer wife to work	.2499**	-.0129	.1086**	-.1187**
Approval of women working	-.0709*	.0648	-.0994*	-.0426
Wife does not have account	.0160	-.1838**	-.1347**	-.0254

**Significant at .05 Level ** Significant at .01 Level*
Source: Ogunjuyigbe, 1999

Our findings therefore suggested that male partners could play a considerable role in the reduction of excess fertility among couples in Nigeria. This is so because men strongly appear to control important decisions, including fertility and contraceptive decision in the family. And this is irrespective of the background characteristics of the couple. Therefore, while men's actual influence on birth control decisions may be less than would appear

from their verbal statement, there seems to be no good basis for excluding them altogether from family planning activities as currently practiced in Nigeria.

(b) Violence against women and family planning adoption

Within the last three decades, there have been increased pressures toward family limitation in Nigeria due mainly to rapid growth of large towns, the very great extension of educational facilities, and among the elite, the far greater difficulty of securing top jobs. It has been realized by the government that making family planning services available or easily accessible was an important, if not the principal ingredient in the adoption and widespread use of family planning. However, while knowledge of family planning has increased over the years, use of modern methods is still very low among married women (NPC & ICF Macro, 2013). Much of the knowledge of contraception is primarily through ordinary news and discussion columns of newspapers and radios. The secondary spread has been largely effected by discussion between friends of the same sex, which is still much more common than that between husband and wife (Ogunjuyigbe and Omideyi, 1996; Ebigbola and Ogunjuyigbe, 1998).

Mr Vice Chancellor sir, despite the concerted efforts to make family planning services accessible and affordable, patronage is still low and fertility levels remain high (Ogunjuyigbe, 2003). Wives' fear of their husbands is a factor identified as militating against women's use of contraceptives, even when they want to delay or limit birth. Sometimes, these fears stem from the women's perceptions of their husbands' reactions to the use of contraceptives, as a study has shown that many women have not discussed family planning with their husbands (Ogunjuyigbe, Akinlo and Oni, 2010). However, some of these fears may be genuine as this statement by an old woman in Northern Ghana clearly demonstrates:

> *"I cannot even speak of family planning in passing to my husband, not to mention trying to discuss it with him. Every morning whenever he hears people discussing family planning over the radio, he gets so angry and even wishes he could lay a hand on the person speaking. He fumes and shouts, cursing... if he can threaten a wireless... what would he do to me if I open the topic?* (Bawah, Akwenogo, Simons and Philips, 1999)".

Men's opposition to contraception is predicated on some beliefs such as "encouraging irresponsible sexual behaviours" (Ogunjuyigbe, Ojofeitimi and Liasu, 2009). Olusanya (1969) also observed that some men control their wives' use of contraception because of the belief that women are sexually weak and that a little freedom for them invariably leads to extra-marital intercourse. Our findings and some other recent ones not only support Olusanya's earlier finding, but also show that some men still hold this idea. For instance, it has been reported that men's control of their daughters' and wives' activities is reinforced by local and biblical interpretations, whereby 'Eve' is characterized as morally weak and unable to control her appetite, and implicitly her body and sexuality (Renne, 1993). Similarly, Bawah *et al.* (1999) reported an opinion expressed by a man that "*no matter who and how a woman is, her intellect is very small*" and as such, her use of family planning should be subjected to the husband's control. Women are even perceived as their husbands' property, or that of their husbands' families, and that their role is to 'hatch children like birds' (Bawah *et al.*, 1999). The payment of dowry and bride wealth in many African cultures reinforces the belief that women become the property of their husbands once the bride wealth is paid. Among the Yorubas of southwest Nigeria, husbands are referred to as '*olowo ori mi*' (the one who owns me) by their wives. This is evident from the submission of Yomi Osewa in the *Saturday Punch* of September 21, 2014 where he said:

> *"I got home one evening and she (his wife) was cooking yam and it was burning. I told her the yam was burning and she said: I shouldn't mind the yam; she wanted to greet her '**olowoori mi**' first (Punch Newspaper,* September 21, 2014*)".*

Among the Igbos of southeast Nigeria, until a husband pays the bride price on his wife, the children whom the woman gives birth to belong to her father. The likely reason underlying this practice is that the husband is yet to acquire the ownership of the 'machine for producing children'; the transfer of ownership is effected through the payment of the bride price (Isiugo-Abanihe, 1994). Also, the social acceptance of violence against women as a justifiable means for a man to assert his authority over the wife worsens the situation. These factors constitute the impediments to the acceptance and use of contraception by women, even when they do not want to have more children.

These observations informed our decision to embark on researches to ascertain the authenticity of some of the assertions made by scholars concerning the issue of violence, couples' relationship and reproductive health. In one of these studies Ogunjuyigbe *et al*, (2005) observed that a common claim among Nigeria women is that their husbands prevent them from using contraceptive. Consequently, some of them who may have interest in using methods may be doing so without the husband's knowledge. However, it was shown that most of the men interviewed in another study by Ogunjuyigbe *et al*, (2008a), frown at any covert use of family planning by their wives (Table 5). Some said they would be annoyed and may sanction their wives (32.9 percent); almost 30 percent said they would be embarrassed if they find out that their wives had been using methods without their knowledge. Some said 'the woman would bear the responsibility all alone'. However, about 10 percent did not find the action objectionable either because they believed it is the responsibility of the woman to use contraceptive or that she is helping the family by so doing.

Table 5: Percentage distribution of married men by their reaction to wives' covert use of contraceptives

Reaction to contraceptive use	Rural	Urban	Total
Would be annoyed/sanction	34.1	31.8	32.9
Would be embarrassed	19.5	38.6	29.4
She bears anv attendant risk alone	7.3	4.5	5.9
Indifferent	12.2	48.1	11.8
Happy/she is helping the family/it is her responsibility	4.9	13.6	9.4
Suggest Infidelity	22.0	0.0	10.6

Source: Ogunjuyigbe et al, 2008a

Gender role ideologies place men in a dominant position in household decision-making, which includes decisions on contraceptive use. Our studies showed that the majority of the couples favoured the use of contraceptives by a woman only when it is approved by their husbands (Ogunjuyigbe *et al*, 2005; Ogunjuyigbe *et al*, 2008a). The studies also showed that a woman is expected to humble herself so that she is not seen to be above her husband, as most of the respondents agree that a woman cannot acquire certain socially valued properties, like a house, before her husband. Because of the socio-economic and political dominance of men in the household, the findings in these studies signify serious challenges to the implementation of the various efforts of family planning programmes.

(c) Women Sexual Control within Conjugal Union

In a survey carried out in metropolitan Lagos to determine the extent to which women have control over their sexuality within marriage and the implication this would have for the spread of HIV/AIDS, Ogunjuyigbe and Adeyemi (2005) observed that 65.6 percent of the respondents believed that a woman has a right to refuse sex with a partner, while 34.4 percent believed that a woman does not have such right. These two positions were supported by participants in the focus group discussions. For instance, a 35 year old married female discussant expressed her

concern on whether a woman can reject sexual advances from her husband or not. She said:

> *"A woman has the right to reject sex from her husband if she does not want to have it. Women are not log of wood that men can just mount at will".*

Another 43 years old religious woman however opined that:

> *"It is not the will of God for a woman to reject sex or deny her husband sexual approach. Our husbands are the owners of our bodies".*

The circumstances under which a woman can reject her husband sexual advances as reported by these women include "when the woman is breastfeeding" (29.5 percent), "menstruating" (28.6 percent), "when sick" (27.7 percent) and on some other occasions such as a punishment for husband's bad behaviour or when the woman is not happy (14.3 percent). However, a 32 year old woman said:

> *"I can only reject sex from my husband when I am menstruating. Even if I am sick I will still allow him to have sex with me. I don't want to lose him to another woman"*

Wives are expected to comply with their husband's sexual demands as refusal is a major source of strife, the taking of other wives or the keeping of 'outside wives'. For instance, Hollander (1997) in a study conducted in the districts of Masaka and Lira in Uganda observed that approximately 50% of men and 25% of women respondents respectively feel that a woman has no right to

refuse sexual intercourse with their husbands either to avoid pregnancy or because she knows that he has AIDS. This clearly shows the extent to which women are free to refuse sexual advances from their husbands.

However, Ogunjuyigbe and Adeyemi (2005) observed a positive relationship between the level of education and women's ability to say no to sex (Table 6). About 39 percent of respondents with secondary education and 43 percent of those with post secondary education respectively believed that they had some sexual control compared with only 17.2 percent of respondents with primary education.

Table 6: Bivariate analysis of socioeconomic characteristics of respondents by whether women can reject sexual intercourse

Characteristics	**Can woman reject sex?**			
	Yes (%)	**No (%)**	**Number**	**P**
Age				
15-24	13.6	86.4	59	
25-34	30.0	70.0	70	
35-44	39.6	60.4	48	
45 and above	61.7	38.3	47	0.000
Marital status				
Married	25.5	74.5	153	
Divorced	40.5	59.5	37	
Separated	67.6	32.4	34	0.089
Level of Education				
Primary	17.2	82.8	64	
Secondary	42.7	57.3	96	
Post secondary	39.1	60.9	64	0.007
Occupation				
Trading	31.3	68.7	131	

Housewife	9.5	90.5	21	
Clerical	36.1	63.9	36	
Professional	58.3	41.7	36	0.602
Religion				
Christianity (non Catholic)	-	100.0	32	
Christianity (Catholic)	53.1	46.9	64	
Islam	8.6	91.4	128	0.024
Ethnic Group				
Yoruba	42.9	57.1	128	
Ibo	26.2	73.8	42	
Hausa	27.3	72.7	22	
Others	15.6	84.4	32	0.989

Source: Ogunjuyigbe and Adeyemi, 2005

On whether women can demand for sex from their husbands, three out of every five respondents interviewed agreed that women could demand for sex if they are in mood to do so. A little more than half (53.4 percent) believed it is natural, while the rest thought it is right to demand for sex when another child is needed (46.6 percent). A participant in one of the focus group discussions, however, pointed out that "*often times, women are not courageous enough to ask for sex for fear of being accused of promiscuity*".

Finding in one of our studies on sexual violence further indicated that only few women could negotiate with their husbands especially by insisting on safe sexual practices (Ogunjuyigbe, Akinlo and Ebigbola, 2005). This study however showed that women with improved socio-economic status tend to exhibit some sort of control within their union. For instance, it is discovered that women with higher education are likely to exercise their reproductive rights than their counterpart with lower education. Occupation and religion are other important variables that can influence women's sexual control and reproductive rights.

Women's economic participation, even in low-skilled, low-salary positions, confers a sense of worth on women themselves and to their own families. Through this, women will obtain greater negotiating power within their homes and ultimately re-define gender roles.

II. Number and sex of Children

Mr Vice Chancellor sir, despite the substantial amount of resources and efforts made in fertility regulation programmes, the desire for a large family size continues to be the accepted norm in many Nigerian societies. Many of the traditional couples still believe that "*children are gifts from God*". Among major ethnic groups in Nigeria, socio-cultural differences play an important role in reproductive behaviour (Caldwell, 1983; Orubuloye, 1987; Isiugo-Abanihe, 2004; Ogunjuyigbe and Ebigbola, 2004). This very important observation informed our decision to embark on a study on the influence of couple's decision-making on family size. Consequently, a survey was conducted among 500 couples in three selected communities of Oyo State, Southwestern Nigeria to examine the impact of couple's decision making on number and sex of their children (Ogunjuyigbe, 2001). In this study, it was indicated that while significant number of traditional couples would not take any position on desired number of children, many of the 'modern day couples' however, believe that decision on number of children must be jointly taken by both husband and wife (Table 7).

Table 7: Husband and wife's responses on who takes decisions on reproductive issues

Husband	Wife			
	Husband only	Wife only	Husband and wife	Other
When to have another child				
Husband only	15.1	2.7	19.5	2.1
Wife only	0.6	0.9	1.4	0.2
Husband and wife	12.8	3.5	37.2	-
Other	1.1	0.2	2.2	0.5
Whether to stop childbearing				
Husband only	10.7	3.4	16.4	1.8
Wife only	1.1	0.9	0.6	0.1
Husband and wife	11.8	2.5	40.8	0.6
Other	4.0	0.6	3.7	1.0
What to do to stop childbearing				
Husband only	7.4	7.7	15.8	1.5
Wife only	0.5	2.1	3.6	0.2
Husband and wife	4.6	4.4	44.0	0.3
Other	1.7	0.9	0.9	1.5

The marginal frequencies show the strength of joint decision-making among the couples
Source: Ogunjuyigbe, Ojofeitimi and Liasu, 2009

However, Ogunjuyigbe *et al.* (2009) observed that, there are times when couples' decision on the number of children desired has to change. While, in some instances, this may be due to economic reasons, other factors such as the couple's preference for a particular sex may be responsible for the change in the decision as shown by the following comments:

> ***"Before our marriage, both my wife and I agreed to have three children. At present we have four and the reason being that we have only one boy out of the first three children"*** *(A Male respondent)*

"Initially, both of us decided to have four children, we now have four. But they are all boys and I love to have at least one girl" (A Female respondent)

The above quotations indicate that some families have exceeded preferred size because the sex composition of children was not right for them.

Though fertility desires of both married partners are important predictors of the couple's fertility, the results of our study showed that the husband's fertility preference exerts a stronger influence on the couples' contraceptive behaviour (Ogunjuyigbe, 2001). So apart from focusing on women alone in reproductive matters, efforts should be made to also encourage men to be involved.

Studies have shown that among the Yoruba of South Western Nigeria, men wanted more children than their wives; that women reproductive preference and behaviour are strongly influenced by their husbands' reproductive motive; the influence men have over women is a function of both men's dominance and women's financial dependence on their husbands (Olusanya, 1969; Orubuloye, 1989; Isiugo-Abanihe, 1991 and Kritz et al, 1992).

One thing noticed in the literature concerning family relationship however was that, sex of children is an important determinant of couple's fertility behaviour. In many parts of Nigeria, the presence of at least a male child is regarded as necessary since to have a son is, first, a sign of social completeness and second, a sign of economic investment. It is not that daughters are not important, but as Orubuloye (1987) observed, sons are traditionally expected to maintain the family "tree" and make financial contribution towards the support of their parents. Ogunjuyigbe (1998) concluded that, irrespective of the level of education, the desire for more children seems to be influenced by the preference for son. Several other studies have noted the tendency for son preference to influence family size (Nsudoh, 1994; Raimi, 1994; Ware, 1975; Olusanya, 1967). In another related study by Ogunjuyigbe *et al.*, (2008b), it

was indicated that, when parents already have one son or more among their offspring, they are more likely to use contraceptives in order to delay or stop childbearing. Not only does the number of surviving sons trigger contraceptive use among non-users, it also reinforces continuation among contraceptive users (see also Gadalla *et al.*, 1985).

III. Women's Health and Childhood Mortality

Mr Vice Chancellor sir, two important cases arouse my interest in matters pertaining to women's health, maternal mortality and infant/under-five mortality. One was the menace of maternal mortality in Nigeria. The second reason accounting for my interest was the case of a woman living in the same village where I grew up. This woman had thirteen deliveries but only three survivors. Unfortunately, two of the three children later died before age five. At that time, the story circulating was that there was an aged woman in that woman's household who was responsible for her predicament. We all believed the story then. However, after attaining some levels of education and based on what I was taught and read about maternal, infant and under-five mortality, I decided to embark on academic review of that woman's experience and other women in similar situation.

(a) Infant and under-five mortality

The ultimate goal of governments all over the world is to postpone the inevitable 'life ends' by reducing mortality to low levels and ensure the good health of all citizens. But in spite of a general decline in infant and child mortality in developing world, the rates are still high by world standard. The persistently high infant and child mortality level in Nigeria continues to be disturbing to both planners and policy makers (Ojofeitimi, Ogunjuyigbe *et al.*, 2006). Despite the fact that the Nigeria Health Policy recognizes the need to reduce the current high childhood mortality, the people's belief and behavioural practices have not been adequately integrated into health intervention programmes. It is disturbing to find out that people are still holding on to their wrong perceptions and attitude

towards the etiology of certain childhood diseases and deaths despite the positive effect that modernization and education are having on people's behaviour. As Morrison (1988) noted, a mother who sees her child gradually wasting away without apparent cause, concludes that an *abiku* (Children from spirit world) has entered it, or, as the natives frequently express it, that she has given birth to an *abiku*, and that it is being starved because the *abiku* is stealing all its nourishment (Ogunjuyigbe, 2004).

Despite the fact that the major childhood diseases have been identified and modern medicine to combat them developed, yet, children from African countries (Nigeria inclusive) die in large number as a result of these diseases. The adduced reason is deeply rooted in people's beliefs and attitudes concerning childcare and behavioural practices (Parry, 1984; Uboma-Jaswa, 1988; Feyisetan, 1988; 1990; Feyisetan and Adeokun, 1989).

Ogunjuyigbe (2004) observed that one of the non-disease specific beliefs among the Yorubas, is the existence of "*Abiku*" (children from the spirit world who can die at will). The Yorubas believe that, some children are from the spirit world and they will eventually return to the spirit world after a short period of time on earth unless certain rituals are performed. *Abikus* are described as spirit children whose mercurial treatment, even rejection, of their parents (mothers especially) leave the mothers in most pitiable state (Soyinka, 1989; Okri, 1995 and Ogunyemi, 1996). *Abiku* children inflict a lot of pain and agony on their mothers. The pain suffered by the mothers of *abiku* and the efforts made by *abiku* mothers to placate their obviously mischievous, pain-causing offspring were succinctly displayed in Soyinka's (1981), Achebe's (1986) and Okri's (1993) works. The Igbo of Southeastern Nigeria call the living icon '*Ogbanje*' (Achebe, 1958 and Achebe, 1986). The *Ogbanje* child also emerges as a frequent traveler between the world of the living and the place of the friendly dead (Achebe, 1958, Quayson, 1997). The notion of *abiku* or *ogbanje* is a common phenomenon in West African countries.

Recognising the implication of this belief for child health and its survival and upon the recognition of the fact that children under-five constitute an important segment of the Nigerian population, Ogunjuyigbe (2004) examined the perception and attitudes of the Yorubas about the phenomenon called "*Abiku*" and did a critical review of *abiku* syndrome among this major ethnic group in Nigeria. My findings indicated that some of the mothers do not have clear perception of illness and treatment of infant and under-five children; while some attached the death of under-five to '*abiku*' spirit. This has serious implication for under-five morbidity and mortality in Nigeria. Some mothers still believe in the efficacy of traditional healing for a child that is sick, though some combined traditional healing with orthodox healing. Some of our mothers have not realized that infant morbidity and child mortality result from the combined effects of nutritional deficiencies, infections, parasitic and respiratory diseases. My study therefore suggested that there is need to integrate the people's beliefs, attitudes and behavioural practices into health promotion programmes to achieve a maximum reduction in child and infant morbidity and mortality (Ogunjuyigbe, 2004). Unless this is done, there might not be too much progress as regards curtailment of infant and childhood morbidity and mortality in Nigeria.

This study, which generated a lot of debates, especially in many institutions in developed countries has now become an important mortality issue that Demographers, Public Health Practitioners and specialists in related discipline are now ruminating over. The concept of *abiku*, even though not a new concept, has suddenly become an important demographic issue especially when cases of infant and under-five children are being considered.

(b) Women in Pregnancy and Childbirth

Prior to the advent of orthodox medical practice, there were some ways of taking care of women in pregnancy and labour. However, some of these practices have been proved to be dangerous by civilization and level of development. For instance, it is common knowledge that 60-80 percent of births in developing countries,

including Nigeria, take place outside modern health care facilities. The delivery system in developing nations is even very critical because of the ailing economy that made the procurement of modern health services too outrageous for the masses (Ojofeitimi, Ogunjuyigbe and Oni *et al.*, 2006). This is in spite of the efforts of governments and non-governmental organizations as well as the efforts of health care workers. Many of the deliveries, especially in the rural areas, are attended by untrained person, usually elderly people in society, untrained traditional birth attendants (TBA) and some through the healing homes (Starrs, 1987; Ojofeitimi, Ogunjuyigbe *et al.*, 2008a; Ogunjuyigbe *et al.*, 2008b). In Nigeria, pregnancy and childbirth are accompanied by very high maternal deaths and disabilities.

Findings in our study on pregnant women's vulnerability when maternal nutrition does not supply the essential nutrients required at the critical gestational periods confirm earlier findings in the literature (Keen, 2003; Sanusi and Oredipe, 2002). Ojofeitimi *et al.* (2008b) observed that adequate nutrient intakes through food supplementations could reduce poor maternal weight gain during pregnancy, and low birth weight rates and its associated morbidity and mortality rates.

Our study on the impact of nutritional intervention on pregnancy outcomes (Ojofeitimi, Ogunjuyigbe *et al.*, 2006; 2008b) highlighted the two of the important determinants of birth weight i.e maternal height and weight gained during pregnancy (Ogunjuyigbe, Ojofeitimi, Sanusi, *et al.*, 2008a). While height cannot be changed during pregnancy, increase in weight is achievable with adequate supplementation. The mean weight gained (9.24kg) by the experimental group was significantly higher than that of the control group (Table 8). The difference was attributable to food supplementation that was high in energy, protein and other essential nutrient.

Table 8: Numerical Summary of Selected Variables by Group

Variable	Control Group		Experimental Group		Control/Experimental		
	Mean	SD	Range	Mean	SD	Range	p-value
Age (yrs)	22.1	3.32	16-30	21	3.13	16-30	0.186
Years in School	9.03	3.01	5-13	7.17	1.93	6-12	0.005*
Height (m)	1.54	0.12	1.01-1.74	1.49	0.06	1.38-1.68	0.015*
Weight at registration (kg)	52.83	6.33	40-72	52.14	4.99	42.0-64.8	0.651
Weight at delivery (kg)	58.93	6.81	46-81	61.47	5.27	51.0-74.5	0.125
Weight gained (kg)	6.13	1.61	3.0-9.24	9.24	1.36	5.5-12.0	0.000*
Body Mass Index (Wt/Ht^2)kg $/m^2$ at registration	23.54	4.33	18.7-44.11	23.13	2.72	18.10-31.66	0.809
Body Mass Index (Wt/Ht^2)kg $/m^2$ at delivery	26.46	4.40	21.58-47.05	27.97	8.71	22.72-35.97	0.064
Energy intake at registration	7.05	0.35	7.6-9.0	7.11	1.01	5.2-9.1	0.787
Baby's Birth Weight (kg)	2.73	0.26	2.0-3.5	3.0	0.18	2.60-3.34	0.000*

**Significant difference*

Most of the pregnant women could afford high energy and protein foodstuff such as milk, fish and meat but avoided these for fear of having big babies that may require caesarean section.

Our findings (Ogunjuyigbe *et al.*, 2008) further highlighted some of the traditional practices among the Yorubas that predispose pregnant women to danger during and after delivery. One of such practices is the imposition of heavy duty like washing of clothes,

scrubbing or pounding when in labour to keep the mind off the pain. This could lead to maternal exhaustion and increased risk of maternal and feotal problems. Some of the traditional ways of handling these problems include: the use of some herbs, application of fundal pressure and other manipulations, scarification and incantation that usually lead to infection, rupture of the uterus, V*esico Vaginal Fistulae (VVF* and R*ecto Vaginal Fistulae (RVF).* In the Northern part of Nigeria, "gishiri" cut, a traditional version of episiotomy, where blind and arbitrary cutting of the genital tract is done to "widen the opening" is another dangerous practice that can lead to complications (Ekwempu, 1988).

For placenta delivery, usually a wait and see approach is adopted and the woman is encouraged to bear down for delivery of the placenta. This takes some time and could be associated with dangerous bleeding. When eventually it is perceived that the placenta is not forthcoming, some methods are then employed. Such methods include: pulling on the cord; introducing unsterile hand into the genital tract to pull placenta out; application of salt, alum or other substances to the genital tract to 'aid' placenta delivery; use of mixing stick (*omoorogun*) to probe the genital tact or stucked down the woman's throat to stimulate powerful contractions of the diaphragm and abdominal muscles in addition to induction of vomiting to force placenta out; tramping on the abdomen in an attempt to expel the placenta; and squeezing the womb. In another paper, Ogunjuyigbe (2000) indicated that most of the traditional methods would lead to varying degree of injury to the mother such as uterine rupture, damage to other abdominal organs, bleeding, infection and even death. In many instances, incantations and scarification employed waste much of the time that could have been used to seek for appropriate medical assistance. In certain situations, the need to seek help is recognized but because of the socio-cultural and religious status of these women, they have to wait for permission to seek modern care. This is common in the Northern part of Nigeria where some women

would rather die than seek unauthorized health care in their husbands' absence (Pittrof and Johanson, 1988).

Ogunjuyigbe, Ojofeitimi and Sanusi *et al.* (2008) noted that some communities have cultural taboos that prevent newly delivered mothers from eating certain types of food items like salt, oil, pepper etc while some are forced to eat some dangerous, unbelievable and obscene items like placenta tissue, toads, lizards, raw meat etc.

IV. Adolescent Sexuality

Survey data have consistently shown that current sexual behaviour of adolescent places them at the risk of early pregnancy, unsafe abortion and sexually transmitted infections (Adepoju and Ogunjuyigbe and Adepoju, 2006). This study indicated that parents have an important role to play in the upbringing of their children. The effectiveness of parents in discharging this onerous duty could to a great extent, help adolescent in delaying first intercourse and protecting themselves if sexually active. However, if parents are hindered by factors such as education, income, and marital instability, the young child might become a victim of neglect and abuse.

In yet another paper, Ogunjuyigbe *et al.* (2006) examined factors associated with adolescent sexuality to aid the design of effective programmes for adolescent reproductive health needs. The results of this study revealed that adolescents whose parents are not living together have more likelihood of engaging in sexual relations. The absence of either the father or mother might lead to lack of care, lack of proper monitoring and education of a child. Such situation might be exploited by older members of the society to persuade and coerce needy adolescents, most especially female adolescents into having unprotected sexual experience. Similar conclusion was reached by Oppong in 1995 that adolescent girls are especially at risk of sexual coercion as well as economic pressure and seduction by males old enough to be their fathers.

Many parents do not discuss family life issues with their adolescent child. This is inimical to current global call that reproductive health information should be made available to adolescents. Our studies and some others on adolescent sexuality have highlighted the reasons for the poor level of parent-teenager communication on family life issues. Adeyemo and Brieger (1995) found that many parents themselves have poor knowledge of sex-related matters; many parents might believe that discussing sex-related issues with young child could encourage the child to want to experiment and experience intercourse. Based on our findings we therefore came up with the following recommendations that: (i) there should be a programme designed to teach parents about reproductive health issues and to encourage parents to give accurate information about sexuality to adolescents. Such a programme would help the adolescents to know what sexual relations entails, the risks involved and the responsibilities they have to take if sexually-active (ii) current programmes intended to reduce pre-marital sex and to modify adolescent sexual behaviour should be re-designed to actively involve parents (iii) family life education should be included in school curriculum etc.

My Contributions to Multi-Country Studies

The relatively high fertility in most of sub-Saharan African countries calls for a closer examination of the mechanisms of fertility decision making among couples in different settings. In recognition of this basic reproductive health issues, our research group in partnership with Bill and Melinda Gates Institute for Population and Reproductive Health, Johns Hopkins Bloomberg School of Public Health, Maryland, USA, decided to put together a team of experts in 2008 to prepare a study protocol for a survey on 'men reproductive health' in six selected African countries of Nigeria, Ghana, Malawi, Ethiopia, Egypt, and Uganda. The Nigeria component of this project which was funded through the Bill and Melinda Gates Foundation was coordinated by the inaugural lecturer. Parts of the activities carried out under this project had earlier been presented by Professor Orji in his inaugural lecture. However, I need to emphasize that this project

and the Family Health and Wealth Study (FHWS) in Ipetumodu contributed to the positive image of Obafemi Awolowo University in Johns Hopkins University and some other institutions across African countries. The news about the project and some other ones sponsored through the Gates Institute of Johns Hopkins Bloomberg University, USA subsequently led to the visitation of a team of researchers from USA to Oriade and Ipetumodu.

Figure 7: The Inaugural Lecturer with other FHWS Research Coordinators in Blantre Malawi

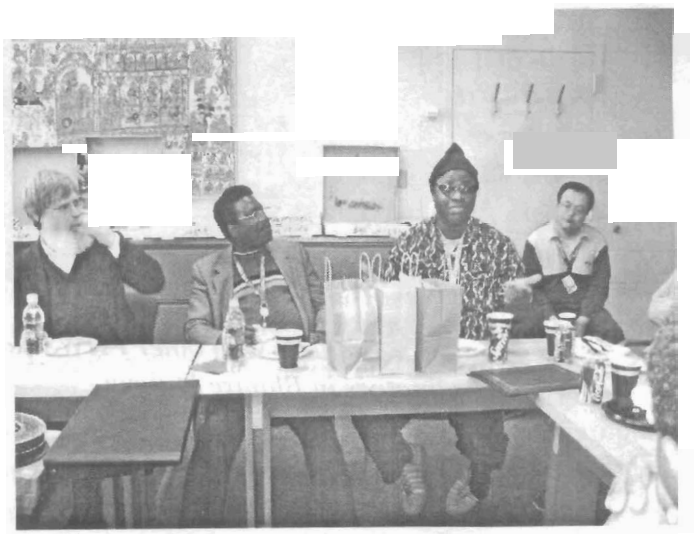
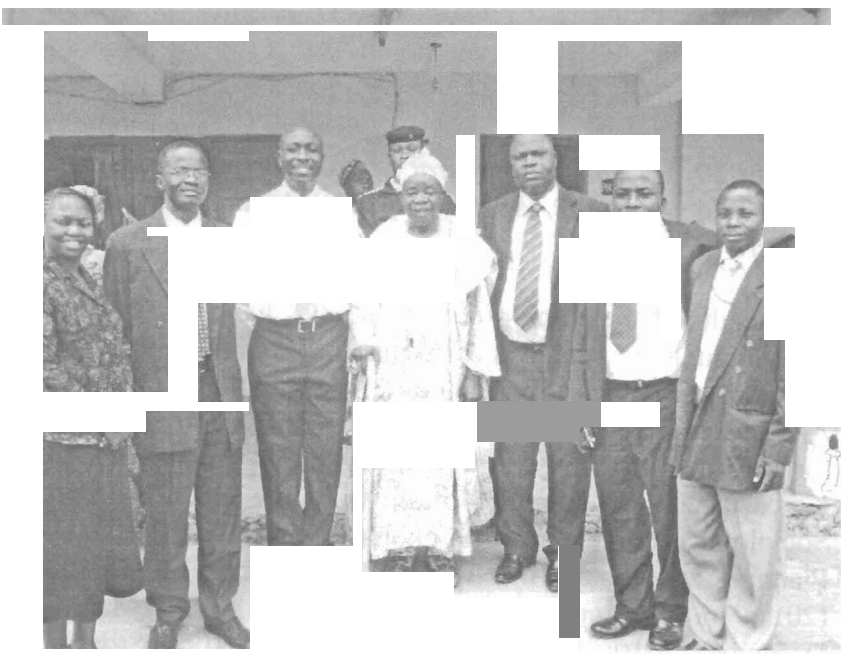


Figure 7 & 8: The Inaugural Lecturer and others at the inception of Male Reproductive Health Study in Johns Hopkins University, Baltimore, USA

Based on my contribution to the family planning sensitization programme in Oriade Local Government Area of Osun State, my role as the coordinator of 'Male Reproductive Health' project in Nigeria, and my efforts to find out how to foster the demographic transition and its attendant economic benefit, I was nominated to lead the Nigeria component of the multi-country study on 'Family Health and Wealth Study'. Just like the male reproductive health project, the study also involved the same six African countries (i.e. Nigeria, Ghana, Malawi, Ethiopia, Egypt, and Uganda) and was also funded through Bill and Melinda Gates Foundation. The goal of this study was to examine the current health and wealth status of families with the sole aim of generating policy-relevant findings to promote an evidence-based approach for improving access to and adoption of family planning. The study involved a door to door survey of selected households in Ipetumodu community, Osun State.



Figures 10 & 11: The Inaugural Lecturer with some of the FHWS Study Team members, Apetu of Ipetumodu and other Community Leaders

The results of these multi-country studies have been published in many reputable national and international journals and presented at various international fora including: the Population Association of America conference in Boston (USA) in 2012, International Union for the Scientific Study of Population (IUSSP) conference in South Korea in 2013, Maternal Mortality Conference in India in 2010, Sociological conference in Yokohama, Japan (2014) and Family Planning conferences in Nigeria (2012), Senegal (2011), Malawi (2011) and Baltimore meetings in Maryland, USA (March, 2009; December 2010; March 2011 and July, 2012). Some of our findings appeared in the New York Times of April 14, 2012. Our findings showed that young adults, particularly educated women, now desire two to four children. But the preferences of men,

particularly older men, have been resistant to change. The perception of many Nigerians (especially men) as regards family size has not changed. Large family is still seen as a sign of prosperity especially among older women. However, in the study, we observed that the shifting economics and lifestyles of middle-class may help turn the tide. In my contribution to the article in New York Times, I pointed out that:

> *As Nigeria urbanizes, children's help is no longer needed in fields and the extended families have broken down. In the past, children were seen as a kind of insurance for the future but now they are a liability for life* (New York Times, April 14, 2012).

One of the major outcomes of the International Conference organized by the Inaugural Lecturer and his colleague Dr A.O. Fadeyi of Lagos State University on behalf of Population Association of Nigeria (PAN) titled "Population, Health and Development" in 2011, was the request to participate in a project on "How countries are coping with expanding populations". The project coordinated by Elisabeth Rosenthal, an editor with New York Times, was to address such questions as: What are the challenges rising population bring? Can infrastructure (school, hospitals and water systems, for example) expand fast enough to accommodate it? What plans are countries/cities making to face the prospect of further growth? What cultural and societal factors sustain high population growth? What ideas are being considered to control population expansion?

The report of this study also featured in the article published in the New York Times titled "Nigeria Tested by Rapid Rise in Population". In the article, it was pointed out that:

> *Across sub-Saharan Africa, alarmed governments have begun to act, often reversing longstanding policies that encouraged or accepted large families. Nigerian government made contraceptives free in*

2011 and promoting smaller families as a key to economic salvation (New York Times, April 2012).

I indicated in the article that to all our problems, "*Population is the key*"; that "*if you don't take care of the population, schools cannot cope, hospitals cannot cope, there is not enough housing, then there is nothing we can do to have economic development*" (Ogunjuyigbe, 2012). So the expected demographic dividend may remain elusive if nothing is done to the prevailing rate of population growth being witnessed in the country.

Many Nigerians in the Diaspora, especially those in USA and European countries sent series of mails acknowledging our efforts and appreciating what we are doing to arouse government interest concerning population issues in Nigeria. On the basis of the article that was published in the New York Times, one Radio Station in United Kingdom and EFE (The Spanish News Agency, which cover sub-Saharan African News and Publish in Spain and Latin America) invited me to participate in life debates on African population issues where I addressed issues bordering on Nigerian population size and its impact on development, employment, education, health services, infrastructures and on a good electoral organization among others.

Is Nigeria's Demographic Dividend A Mirage?

The 2006 Census indicated that over 60% of the population is made up of persons younger than age 25. The preponderance of youths in the population and the strong population momentum that has been built into Nigeria's population suggest that population will continue to grow in the next 40 – 50 years even if fertility is drastically reduced to replacement level. It is even striking to observe that the current desired fertility is still higher than the TFR (5.5), which means Nigerians have desire for more children (NPC & ICF Macro, 2013). High fertility kindles a youth explosion that challenges governments to satisfy the ever increasing demand for food, housing, education, health services and employment. Under this situation, the country can reap either a demographic dividend

with productive young workers or a catastrophe of massive joblessness, overcrowded schools and hospitals, high crime rate and violence civil strife.

Given a continuation of high birth rates, Nigeria would have a population of almost 281 million by the end of year 2015. This kind of population growth, if left unchecked, can squeeze precious resources and lead to all sorts of problems. Even though Mason (2007) postulated that the demographic window in sub-Saharan Africa which opened around year 2000 will remain open until 2050, but available indicators have not shown that Nigeria is prepared to take advantage of this demographic window in the next couple of decades and garner is benefits. Nigerian economy is at the moment unable to cope with the social, infrastructural and environmental demands of the ever growing populations. There are evidences of decay in the critical areas such as education, healthcare services, employment, transportation, energy and power, information and communication technology that are required for the attainment of accelerated economic growth. Majority of the population are living below the poverty line currently put at 72 percent. The large scale poverty that pervade the country subject the citizens to lack of access to improved health services, expose them to hunger, starvation, mental and physical problems that make it difficult to escape from the vicious cycle of poverty. The situation inhibits the ability of the individual family to achieve economic growth that is needed to transform the social fortunes that should have accrued from fertility reduction.

Even though some scholars have argued that population growth helps the economy by stimulating innovation and providing bigger markets (Bloom *et al.*, 2003; Rosental, 2012 and Akinnaso, 2012), however, some of these studies have equally pointed out that high fertility tends to slow economic growth and keep poor families poor. Therefore, to realize a demographic dividend, Nigeria needs to make strategic investments in some key areas. Such include (i) initiating demographic change by investing in family planning, child survival and education of girls (ii) improving people's health

by addressing youth and adult health needs and (iii) implementing economic and governance policies that will foster job creation, support the expansion of infrastructure, create a secured environment and incentives for foreign direct investment.

Corruption, bad governance, insurgencies and ethnic conflicts are some of the non-demographic factors that combine with high fertility and rapid population growth to militate against economic growth in Nigeria. As recently pointed out by Allison in the July 2012 edition of Journal of Good Governance Africa, "*No matter how much bigger Nigeria's economy is on paper, corruption and lack of infrastructure still plague its economy*" Majority of the citizens are living in abject poverty. The vicious cycle of poverty might be difficult to surmount if corruption is not arrested, thereby derailing the benefits of the demographic dividend even if fertility is reduced.

The spate of urban growth in Nigeria is typical of a developing nation. The proportion of population living in urban areas rose from 39 percent in 2003 to about 50 percent in 2012 (PRB, 2013). The increasing proportion of the population living in urban areas may have a conflicting effect on fertility. The improved infrastructure that is found in urban areas raises the quality and standard of living. Such improvements include health, education, nutrition, access to portable drinking water etc. The combined effects of these factors can have an impact on general health condition; which will invariably influence birth and death rates. However, shortages of housing, cost of child education, urban unemployment, high crime rate and other challenges may make the realization of demographic dividend a mirage.

Conclusion

One thing that is clear from most of my research endeavours is that Nigeria and most of the developing countries are overburdened with problem of overpopulation; the population is rising fast, far more than the wishes of couples, their resources, the local environment's capacity and the public services that are available.

In this regard, the provision of family planning, modern means of contraception and sexual education, give women choices over the number and spacing of children, and in turn help to achieve a more sustainable level of population growth. So by respecting, educating and empowering women in their reproductive rights and choices, we can bring population growth in line with the levels that are required to live in an ecologically and economically sustainable way.

Even though slow, but steady changes are being observed among factors that affect fertility such as infant mortality rate, age at first marriage and stalled contraceptive utilization rate. The effects of these factors could be attributed to other extraneous factors rather than those articulated in the two population policies adopted by the country in 1988 and 2004. For instance, the rise in age at first marriage may not have been caused by the law that prohibits marriage before age 18 but may probably be a function of demand for education by women in their quest to improve their living condition (Ogunjuyigbe, 2012). The demand for women's education which is on the increase will consequently exert strong influence on the number of children they will bear in the future (Ogunjuyigbe, 2004). Also, Ogunjuyigbe *et al.* (2007) noted that the more educated a woman is, the higher the chances of the survival of her child, which is a critical factor in inducing couples to reduce their fertility.

I have not only made invaluable contribution to academic knowledge, I have also helped to build capacity of others. As at 2006, when the remaining two Professors in the Department of Demography and Social Statistics retired from the service of the University, the staffing situation in the Department became so serious; as the only Senior Lecturer remaining, I became entangled with much responsibilities including the supervision of all PhD students in the Department and as the acting Head of the Department. Initially, I became overwhelmed with these responsibilities that at a stage I thought of disengaging from the service of the University to join an international organization that

had already offered me a juicy position. But in order not to be ungrateful to the system that had been so kind to me, I decided to face the challenges and work with other colleagues (most of whom were on training grades) to salvage the very precarious situation. To the glory of God, the Department is stable today; I successfully supervised the PhD theses of seven of my colleagues and I am happy to inform this August gathering that today, most of the lecturers in the Department of Demography and Social Statistics are fully qualified with their PhDs. This achievement was commended by the accreditation team that recently visited the University.

Mr Vice Chancellor sir, before I end this lecture, I want to give honour and glory to God Almighty who has given me the grace to stand before this wonderful audience to deliver the 276th inaugural lecture of Obafemi Awolowo University, Ile-Ife. Whatever I have achieved has been possible because Obafemi Awolowo University provided the necessary impetus.

I am very grateful to my late parents and my numerous relations who continue to support my aspirations. I thank very heartily my elder brother who indeed is my *de facto* father, Mr J.O. Ogunjuyigbe, who lavished his attention on me and our other siblings, oftentimes, at the expense of his own immediate family members. It is my prayer that you will live long to enjoy the fruit of your labour. I remain grateful to my late brother, Mr M.O. Ogunjuyigbe who but for the untimely death should have been with us today to witness this epoch-making event. The contributions of my very senior brother, Mr Amos Makanjuola, my two wonderful sisters, Mrs Gbemisola Babalola and Mrs Olateju Akingbade and our Pharmacist, Mr Oladipupo Ogunjuyigbe, towards my University education are appreciated. High Chief G.O. Ogunjuyigbe, the Agbayewa of Ijesaland and other relatives whose names I cannot all mention here are appreciated. I thank you all for the different roles which you have played and will continue to play in my life.

I appreciate the immense contributions of my colleagues (both academic and non-academic), co-researchers, students in the Department of Demography and Social Statistics, and in the Faculty of Social Sciences as well as those of Federal University Oye Ekiti. The moral and psychological supports I received from my numerous and caring friends and ex-students of my alma mater (Atakumosa High School, Osu) are highly appreciated. I also recognized the contributions of my church leaders and members too numerous to mention. I thank you all for the different roles which you have played and will continue to play in my life.

My special gratitude goes to late Professor Joshua Akinola Ebigbola, my wonderful supervisor, who did a lot to ensure that I completed my M.Sc. and Ph.D degree programmes within record time. Of all the lecturers I have come across, Professor Ebigbola stood out for his love of teaching and dedication. He never condoned laziness and was very interested in making sure that one works diligently. I appreciate him a lot for his contributions to the journey of my life (May his gentle soul rest in perfect peace). I also enjoyed the support I received from all my colleagues in the Department of Demography and Social Statistics, especially my senior colleagues who paved the way and watered the ground to make it easier for me without necessarily going through the same mistakes and challenges they went through. In this regard, I want to express my gratitude to Professor Aderanti Adepoju, Professor A.A. Adewuyi, Professor A.K. Omideyi, Dr B. Feyisetan and Dr M.O. Raimi (of blessed memory).

I want to thank very specially Professor Funmi Togonu-Bickersteth, for her motherly role and contributions to my academic progression and Professor O. Ekanade (under whom I served as Vice Dean). Professor J.A. Fabayo and other senior Professors in the University, most especially those in the Faculty of Social Sciences and College of Health Sciences are appreciated for their Psychological and moral support. The non-teaching staff, especially those who worked with me in the Department for the seven years of my service as Head of Department are highly

appreciated for their unflinching support and for ensuring that I do not become overwhelmed by my numerous responsibilities. I specially appreciate my other colleagues both within and in Diaspora who made frantic efforts to stop the fast-moving train. God had really used you for my elevation.

I want to express my appreciation to Oba Jethro Adejola, The Olosu of Osu, who is physically present here this afternoon with his chiefs to witness the inaugural lecture of one of his sons and the first of its kind in the history of Osu community. I specially thank the Kabiyesi, Oloke of Oke-Bode, Oba Ezekiel Adeniran Agunlejika and his chiefs for the interest you have in me.

I wish to pay special tribute to some of my former Doctoral students, most of whom are now my colleagues in the Department. These are Dr O. A. Fadeyibi, Dr A. Akinlo, Dr A. Titilayo, Dr B.L. Solanke, Dr. J. A. Kupoluyi, Dr S.T. Adedokun and Dr (Mrs) M.O. Obiyan, Dr Halilu Pai (former Director General, National Population Commission), Dr J.B. Abe (Dean, School of Applied Art and Sciences, Yaba College of Technology), and Dr Abolade Surajudeen (Principal Statistician, National Bureau of Statistics) among others. I benefited immensely in the process of supervising them for Ph.D.

I need to appreciate the efforts of Magistrate J.O. Obadare who encouraged me to enroll for a Master degree programme of Obafemi Awolowo University, Ile-Ife. The Chairman and staff of National Population Commission are greatly appreciated for their supportive role. I also take this opportunity to express my profound gratitude to two of my mentors, Professor E.O. Ojofeitimi and Professor Aderanti Adepoju. These two individuals contributed immensely to my research capacity building. Professor Aderanti Adepoju was the first person to involve me in a collaborative research that took me out of this country while Professor Ojofeitimi, who is fond of calling me 'three Ps' (being President of Population Association of Nigeria, Pastor in Christ Apostolic Church of Nigeria, and of course a Professor) introduced me to

OAUIFE/Bill and Melinda Gates Partnership Programme. It was through this partnership that I was offered Visiting Scholarship in Johns Hopkins Bloomberg University, USA, in 2006 and was able to conduct a number of researches. I thank these very hardworking Professors for their fatherly role. My current research team, numerous local and international collaborators and the wider group of academic, both local and international, that I have collaborated with over the years are also appreciated.

I need to place on record that I have enjoyed the comfort and support given by my dutiful, loyal, caring and lovely wife and mother to our children, Oluwayemisi '***omo Olowolagba***'. I certainly have not met anyone who is as sincere and self-sacrificing to me as she is. She has stood by me through thick and thin and prays always for my success. She has been one of the reasons I was able to reach the zenith of my career because of her understanding and the supportive hands she gave me. God in His infinite mercy will continue to bless you. To my four boys, Olasunkanmi, Tolulope, Bukola, and Dolapo, I say thank you for your patience and understanding and for sharing with me the unpleasant moments of my life.

Finally, I thank immensely, the wonderful audience, who spared their time to participate in this inaugural lecture.

Thank you very much for coming.

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