POVERTY AND FERTILITY DYNAMICS IN NIGERIA: A MICRO EVIDENCE

BY A.F. ODUSOLA

Abstract

This paper examines the role of poverty in Nigeria's fertility transition using household survey data from Nigeria – Kaduna and Lagos states – of which 2425 respondents were sampled. In Nigeria, much attention has not been paid to the link between poverty and fertility preferences. This paper is aimed at filling this research gap. It uses univariate and bivariate analyses in examining the proximate determinants of fertility dynamics with particular emphasis on the role of income poverty. One of the variants of fertility preferences used is the number of children respondents desired after their experiences with economic hardship- declining standard of living.

Evidence from the study shows that majority of the respondents from the northern part desired more children than their southern counterparts, which partly conforms to spatial distribution of poverty. Due to higher incidence of poverty among rural dwellers, they now prefer lower fertility formation. In the absence of poverty, however, fertility rate is lower in urban areas due to education and exposure to family planning services. Generally, respondents who agreed that poverty had affected their economic expectations and attitude about large family size and now desire lower fertility rate compared to those that were indifferent or held opposing views. Other proximate determinants of fertility dynamics are women education, religion, spousal communication and spousal approval of contraceptive usage, male dominance, spousal age difference, polygyny and early marriages.

In addition to investing in basic education and health care delivery that offer substantial synergies for empowerment and economic opportunities thereby promoting lasting growth and reducing poverty, the following also deserves attention. Special family planning programmes should be targeted at men, particularly in the northern part of the country. Promotion of high level female education because of its synergy with better living conditions contraceptive usage, spousal communication, and low fertility preference. Promotion of peer-wise marital union, monogamy, and late marriages is also important. The need for committed and pro-active promotion of a culture of low fertility preference using the above methods, among others, is fundamental to maintaining this transition to low fertility. Otherwise, the emergence of better economic conditions in the future would reverse the fertility trend.

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By

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INTRODUCTION

Since the pioneering work of Thomas Malthus in 1798, the interactions between demographic trend and economic wellbeing have generated some heated debates. Malthus posited that given the centrality of food in human existence and the necessity of continuous conjugal passion, population growth would inevitably lead to an imbalance between people and available resources. His prediction was premised on the fact that agriculture grows in arithmetic progression while population grows geometrically. The improvement in technology, particularly from the 19th century, has proved Malthus' prediction otherwise, with per capita incomes increasing in greater multiples than population growth. In contrast, many studies have shown that as countries become richer, both fertility and mortality decline on average, with reduction in mortality preceding reductions in fertility (e.g., Livi-Bacci, 1997). As noted by World Bank (2001a), two major factors are important for this linkage: the effects of changes in age structure of the population, particularly increases in the working-age share of the population, and the effects of investment in health and education on contraceptive use and lower fertility. The linkage is considered to be virtuous.

The linkage between economic conditions and fertility behaviour can be complex. The relationship between them can only be determined by the net effects of both income and structural changes (Boserup, 1985). He argued that changes in income have positive effects on family size formation while structural changes in the economy have negative effects. The structural changes connote situation where people enter into occupation or move to an area that is more conducive to lower fertility. Movement of full housewives into paid employment and economic changes that render children's utilities less influential in family formation are other examples of structural changes. This posits that the relationship could be ambiguous depending on the net effects of income and structural changes. For instance, if the income effect outweighs the structural effect fertility increases, otherwise the opposite holds.

Conversely, poor economic conditions have strong impacts on fertility behaviour. Salaff (1985) observes that couples tend to reduce their family size because of economic pressures. The

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quest for children is weighted against the changing costs and the utility of offspring to parents. In addition, poverty influence child mortality negatively because of restricted access to health facilities and the possibility of first marriage, timing of first birth and weakening of gender responsibilities positively. One of the main indicators of poverty, besides low income, is lack of access to social services such as education that promotes the tendencies for early marriages and limited knowledge of family planning practices.

In Nigeria, the incidence of poverty increased from 28.1 percent in 1980 to 46.3 and 65.6 percent in 1985 and 1996 while the proportion of the core poor rose from 6.2 percent to 12.1 and 29.3 percent over the same period (Obadan and Odusola, 2001). World Bank (2001b) also shows that population surviving under less than $1.0 and $2.0 per day to be 70.2 and 90.8 percent of the population. While the literature is replete with studies differently addressing the issues on poverty and demographic behaviours in Nigeria, not much has been done in linking the two. This paper is, therefore, aimed at bridging this research gap using household data from the northern and southern parts of the country – Kaduna and Lagos states. To achieve this objective, the rest of this paper is organized thus. Following this introduction is section II and it examines Poverty and Fertility Profile while section III addresses the Literature Review and Methodology. Section IV contains the Analysis of Empirical Results while section V concludes.

II   POVERTY AND FERTILITY PROFILE

2.1   Poverty Profile

Over the past one and a half decades, the declining quality of life in Nigeria has received considerable attention in the literature. Such studies as Ogunmike (1991), World Bank (1996), Obadan (1996), Odusola (1997), CBN and World Bank (1999), and Kayode and Odusola (2000), have examined the incidence and dimension of poverty in Nigeria. The major conclusion from these studies is that poverty is intense and widespread in the country.

As shown in Tables 1 and 2, the dynamics and incidence of poverty in Nigeria. Poverty level rose from 28.1 per cent of the population in 1980 to 46.3 and 65.6 percent in 1985 and 1996. This, therefore, shows that poverty incidence rose from 17.7 million in 1980 to 34.7 million and 67.1 million people in 1985 and 1996. The incidence of poverty is better appreciated when the population is classified into the following three groups: the non-poor, moderately poor and core poor. While the non-poor declined from 72.8 per cent of the population in 1980 to 34.0 per cent in 1996, the proportion of the moderately poor rose from 21.0 to 36.3 per cent during the same period (Table 2), representing an increase of 72.8 per cent. The core poor, on the other

hand, rose from 6.2 per cent in 1980 to 29.3 per cent in 1996 – indicating an increase of 380.3 per cent.

Table 1: Incidence of Poverty in Nigeria (1980 -1996)

Year	Poverty Level (%)	Estimated Total Population (Million)	Population affected by poverty (Million)
1980	28.1	65.0	17.7
1985	46.3	75.0	34.7
1992	42.7	91.5	39.2
1996	65.6	102.3	67.1

Source: FOS (1999); *Poverty Profile for Nigeria 1980-96,* Lagos.

Table 2:   Poverty Headcount: Aggregate and Sectoral (1980-96)

	Non-Poor	Moderately Poor	Core Poor
Aggregate			
1980	72.8	21.0	6.2
1985	53.7	34.2	12.1
1992	57.3	28.9	13.9
1996	34.4	36.3	29.3
Urban			
1980	82.8	14.2	3.0
1985	62.2	30.3	7.5
1992	62.5	26.8	10.7
1996	41.8	33.3	25.2
Rural			
1980	71.7	21.8	6.5
1985	48.6	36.6	14.8
1992	54.0	30.2	15.8
1996	30.7	38.2	31.6

Source: FOS (1999); *Poverty Profile for Nigeria 1980-96*, pp 25 – 26, Lagos.

World Bank (1998: 64-65), that 59.9 per cent of Nigerians live below $2.0 per day, as opposed to Malaysia (26.6%), Morocco (19.6%) and Algeria (17.6%) also brought the endemic nature of poverty to the fore. World Bank (2001b) further presents a gloomy picture. Arising from the 1997 survey conducted on Nigeria and using international poverty lines, population surviving on less than $1 per day was calculated to be 70.2 per cent, with a poverty gap of 34.9 per cent. When the scope was extended to less than $2 a day, 90.8 per cent of the population was categorized as being poor, with a poverty gap of 59.0 per cent.

This development further subjects many Nigerians to dehumanization as depicted by Human Development Index of 0.393, which ranked the country as number 144 out of 175 countries sampled by UNDP in 1994. In 1996, the country had been declared the 13th poorest nation in the world. In 1999, her human development index worsenedthereby pushing her backward to number 146. Today, this status is yet to be reversed. Critical among the factors responsible for this development include: poor growth prospect arising from poor economic management, high population growth, weak employment capacity, poor access to market and agricultural development, limited participation of women in development process, political instability and human immuno-deficiency virus scourge.

2.1   Fertility Trend

The measurement of total fertility rate (TFR) has always been based on the retrospective reproductive histories of women within the ages of 15 and 49 years. As defined by NPC (1998), TFR is the average number of children that would be born alive to a woman at the end of her reproductive period given the current specific fertility rate. In Nigeria, evidence from the past demographic surveys has shown that the TFR has been declining. It declined from 6.3 in 1981/82 to 5.9 in 1991. This later fell to 5.4 and 5.2 in 1994 and 1999 (NPC, 1998 and 2000). The data suggest that, on average, a Nigerian woman has one child less in 1999 than she would have had in 1981/82. The rate of decline is better appreciated in percentage changes. For instance, between

1981 and 1991, the TFR declined by 6.3 percent, which further fell by 11.9 between 1991 and 1999. Thus within a period of about two decades, fertility rate in the country fell by 17.5 percent. A reflection of this development is the declining trend in the annual population growth from 3.0 percent during 1980-1990 to 2.8 between 1990 and 1999 (World Bank, 2001a: 279).

Fertility trend by region, however, brings out some elements of peculiarity. Between 1990 and 1999, fertility rate rose from 5.9 in 1990 to 6.8 in 1999 in the northeast region, representing 0.9 percentage point increase (i.e., a percentage change of 15.3). The trends in other regions follow the national pattern. As shown in Table 3, a remarkable decline of 2.6 percentage points- 36.6 percentage change- was recorded in central part of the country. While the trends in the southeast and southwest are lower than the national average that of the northwest is higher (see Table 3 for details). Observers of the country's fertility trend have, however, shown that given the level of contraceptive use in the central part of the country the recorded sharp decline may be due to serious under-reporting. This notwithstanding, across all the regions the total wanted fertility rates are lower than the actual fertility rates by between 0.3 and 0.5 percentage points. On average, the gap between the two is 0.4 percentage point (NPC, 2000: 98).

The state by state analysis can also be gleaned from the five-year average preceding the post enumeration survey of 1991. States with the highest fertility rates are Adamawa (7.82), Abia (7.21), Kogi (7.07), Bauchi (7.03) and Yobe (7.02). In contrast, those with the lowest rates are Ogun (5.11), Oyo (5.31), Ondo (5.33), Lagos (5.41), Benue (5.44) and Anambra (5.53) (See NPC, 1998: 230 for details). A comparison of Lagos and Kaduna states, where the household survey data for this paper were derived, may provide an insight to what should be expected in the empirical analysis later. While Lagos had a fertility rate of 5.41, Kaduna had 6.86. This represents a difference of over one child between the two states.

Several studies have tried to examine the proximate determinants of current fertility and possibly fertility dynamics. Factors that have been linked to the current fertility behaviours are low level of literacy and early marriage (e.g., Adeokun, 1987; Bankole 1995), low level of contraceptive use (Feyisetan and Ainsworth, 1996; NPC, 2000), residential location and level of income (Boserup 1985; Odusola, et al, 1998a and b). Much effort has not been made on the possible linkage between the poverty level and the current fertility transition in Nigeria. This paper is geared towards this effort.

Table 3: Trend in Fertility Rate by Region

Region	1990 NDHS	1999NDHS	Percentage Point Change	Percentage Change
Northeast	5.9	6.8	+ 0.9	+ 15.3
Northwest	7.0	6.5	- 0.5	- 7.1
Southeast	5.8	4.6	- 1.2	- 20.7
Southwest	5.9	4.5	- 1.4	- 23.7
Central	7.1	4.5	- 2.6	- 36.6
Nigeria	6.3	5.2	- 1.1	- 17.5

Note: Total fertility rates refer to the five-year period preceding the survey.

Source: Compiled and computed by the author from National Population Commission (NPC) (200): *Nigeria Demographic and Health Survey 1999*, December, Abuja.

LITERATURE REVIEW AND METHODOLOGY

3.1: Literature Review

Since the pioneering work of Thomas Malthus in 1798, the link between population growth and economic conditions has remained controversial. He put forward a theory of the relationship between population growth and economic development that still survives today. Thomas Malthus argued that since "food is necessary to existence of men" and "the passion between the sexes is necessary and will remain nearly in its present state", population growth would invariably lead to imbalance between people and available resources (World Bank, 2001a). That is, if the growth of population continues to outstrip that of agricultural production, it will depress savings per capita and retard the growth of physical capital per worker as well as the growth of per capita income. This consequently generates unemployment and the distribution of income becomes more unequal, thereby truncating the well being of the people. To avoid this condition of chronic low levels of living or 'absolute poverty', as posited by Malthus, there was a need for people to engage in preventive checks such as celibacy, late marriage and 'moral restraint' in order to limit the numbers of their progeny. This is why Malthus is often referred to as the 'father' of the modern birth control method (Odusola, et al, 1998a and b). In the absence of these preventive checks, however, positive checks of nature (such as starvation, epidemic and wars) will eventually provide the restraining force. Malthusian proposition has generated a

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development paradigm that is often credited with increasing the fertility of the soil and reducing the fertility of human beings. The proponents of this thinking see family planning as a conscious effort towards checking rapid population growth.

The premise of Malthus grim prediction rests on the fact that agriculture grows at arithmetic progression while population grows geometrically - population out-grows agriculture. Evidence from innovative and technological development since the 19th century has proved this alarming prediction unwarranted. The industrial and technological revolutions of the past two centuries have reversed the rate of progression between population and production in favour of the latter. With this, growth in production (e.g., per capita income) outstripped population growth in several multiples.

Empirical evidences have shown that the linkage could be more complex than the simplistic of Malthus. Many countries have documented that as many countries become richer, both fertility and mortality decline on average, with reduction in mortality typically preceding the decline in fertility (Livi-Bacci, 1979 and World Bank, 2001a). On the other hand poor countries might also be forced to reduce their fertility desires if childbearing costs are increasingly becoming unbearable and prospect of economic opportunities are bleak (Ekouevi and Adepoju, 1995).

The literature is replete with the evidence that the link between demographic trend and economic development is more subtle than Malthus thought. Several issues combine to foster the linkage. The linking factors are categorized as population countervailing forces – productivity of labour force, rapid technical progress, high rate of capital accumulation, to mention a few. Young (1995) and World Bank (2001a) provide illuminating arguments to show the effects of changes in age structure of population- increases in the working, age share of the population and the synergistic effects of investment in health and education on contraceptive use and fertility. For instance, countries with sharp decline in fertility, notably East Asia, have been accompanied by sharp increase in labour force. This increases labour productivity, higher workers per capita, and was followed by higher per capita income. The growing productivity of the workforce was due to a variety of factors, such as strong educational attainment and supportive policy and institutional environment. The linking factors are the increasing trend of the working age share of the population and the associated rising productiveness of the workforce. In Latin America where the increase in working age share of the population was temporary and workers' productivity waned, higher old dependency rates ensue. This placed greater pressure on social security institutions that provide support for the old people (Young, 1995). Increased national wealth also foster better education and access to educational services, the synergy of which

promotes higher contraceptive use and lower fertility (e.g., Feyisetan and Ainsworth, 1996; Odusola, et al, 1998).

In a similar vein, Boserup (1985) observed that changes in income have a positive effect on family size formation; structural changes in the economy have a negative effect. The structural aspect refers to a situation where people enter an occupation or move to an area that is more conducive to lower fertility. In this circumstance, they may begin to restrict their family size, despite the better income associated with the new situation. In contrast, an increased income in their usual occupation and a better residence may now influence them to have a larger family than before. The net effects of income and structural changes determine the outcome. For instance, if the income effect on fertility outweighs the structural effect then population growth is enhanced (Boserup, 1985). The finding of Lindert (1980) also indicates a positive correlation between family formation and per capita income in developing countries, although in the rural areas, the utility of offspring seems predominant. Caldwell (1981) noted that the emerging industrialization process now renders children's utilities less influential in family formation and parents now consider large family size as drain pipes to the family's economic resources. As a defensive mechanism, they now plan for smaller family size. To foster greater effects of structural changes, Hansen (1996) emphasized the need to educate and train women with a view to making them autonomous income earners and better informed people.

Several other studies have also examined other proximate determinants of fertility in developing countries. Appleton (1995) found that female education which prolonged the age at first marriage and shortened the duration of breast feeding accounted for lower fertility rate in Cote d'ivoire. Fapohunda and Todaro (1988), have also observed that the African traditional family structure shapes individual spousal perception of child-related processes and affects individual reproductive decision making and actual fertility behaviour. For instance, patrilineality and male dominance confer on Nigerian men profound authority in family decisions. Male dominance is particularly profound in matters of reproduction (Isiugo-Abanihe, 1994). Olusanya (1989) also emphasized the importance of lineage and family name in perpetuating desire for many children. He argued that men's perceived need to preserve the continuity of the patrilineal names is a crucial determinant of persistently high fertility.

The continuous indication of both tacit and explicit preference for large family size in traditional African system, the ideology of male supremacy in reproductive decision-making, among others, creates powerful impediments to fertility reduction. Other cultural institutions encouraging high fertility arise from spreading the costs and benefits of children beyond their parents, e.g., spreading of child costs across the extended family through child fostering.

Caldwell, 1987 and Caldwell et al, 1992 observed that fertility rates are always high where these institutions are very strong. The institutions serve as impediments to demographic change. This suggests that high fertility regimes are highly resistance to change in Africa.

Since the adoption of structural adjustment programme (SAP) in SSA in the early 1980s, however, Caldwell's (1987) thesis has attracted considerable attention. Evidence abounds in the literature that SAP has really worsened the living condition of the people in Africa. This is reflected in low per capita income (Obadan and Odusola, 2001), low level of human capital (e.g. low school enrolment rates) and low quality of life of the poor (Obadan, 2001; ECA2001 and Odusola, 1997). The conclusion of Abel et al (1997:1) best describes the situation: "the profile that results from the data analysis is quite beak and reveals the significantly greater, income inequality and agricultural stagnation in Sub-Saharan Africa as compared with Asia and other parts of the developing world". This period of pervasive poverty coincided with the time of fertility decline in Africa- adjustment induced fertility transition (Lesthaeghe and Jolly, 1995; Ekouevi and Adepoju, 1995).

There are limited empirical studies on the impact of economic conditions on fertility in Africa. Attempt by the Economic Commission for Africa (ECA) in 1991 to examine the impact of adjustment on demographic parameters in 28 countries was however in this direction. The study showed no changes in demographic pattern during economic reform in the continent. The reasons for this has been traced to the possibility of delay in response to the effect of adjustment (ECA, 1991). Indication from National Research Council findings in 1993, however, revealed that economic reversals in SSA as depicted by poor economic conditions have strong impact on fertility behaviour. Poor economic conditions are found to influence child mortality negatively and the possibility of first marriage and timing of first birth positively (NRC, 1993). Evidence from Singapore shows that couples reduced their intended family size because of economic pressures. It apparently became glaring that the quest for children had to be weighted against the changing costs and utility of offspring to parents (Salaff, 1985). He found that while the short term direct costs of childbearing and childrearing influenced the demand for children among the average working class, the indirect or long-term costs of raising children, such as higher education, which require some savings, influenced the demand for children amongst the affluent working class. Empirical evidence from India also showed that although fertility decreases with an increase in per capita monthly household expenditure, the extent to which this relationship reflects the effect of poverty on family formation at the microlevel cannot be ascertained (Jain, 1985: 195).

The findings of Easternling and Crimmins and Lockwood (1995) also observed that in response to the current low standard of living, and given people's consumption aspirations in the future, family opted for smaller size of offspring. As a result of the increasing cost of maintaining an average family size, there is a growing trend that is clearly observable and can provide us with a framework for understanding the analysis of poverty-led transition. These are the responses of women to gainful employment and demand for contraceptives. In the first instance, due to the declining welfare and social deprivation generated by economic hardship, women (as managers of household consumption) now play crucial role in mitigating the impact of poverty through high level of participation in income generating activities (Stewart, 1992). With women in employment and as income earner, it is expected that the traditional role of women in family power structure would change. Namely, men 'oligarchy' in reproductive decision will change and women will be seen as reproductive partners.

Because the impacts of poverty on demographic behaviours vary from country to country, generalization therefore becomes inappropriate. The need for specific country case analysis becomes appealing. Thus, given the endemic nature of poverty and the current fertility decline in Nigeria as illuminated above, the appropriate question to ask is: what is the impact of poverty on fertility trend in the country? The answer to this question constitutes the primary focus of this paper.

3.2   Methodology

The survey was conducted in Lagos and Kaduna States, with the former representing the Southern Nigeria and the latter the northern part. Lagos, the former administrative centre of Nigeria is the most industrialized and populous state in the country. By the 1991 census, it had 5,685,781 people. Kaduna, the economic nerve centre of the northern Nigeria also had a population of 3,969,252 according to 1991 census. Although the two states draw population from all other parts of the country, their major ethnic groups are: Lagos (Yoruba and Egun) and Kaduna (Hausa, Fulani, Gbari and Kaje).

Data were collected through structured questionnaire and Focus Group Discussions (FGDs) from male and female respondents in the urban and rural areas. For the two instruments, married men between the ages of 15 - 69 years and women of reproductive age 15 - 49 years were interviewed. In each of the states, five local governments (LGs) were randomly selected after they had been stratified into rural or urban representation and senatorial zones.

A multi-stage probability-sampling frame was adopted to select eligible respondents. To ensure that all segments of the population are covered, each urban local government is divided into three zones that reflect the socio-economic classes: high, middle and low-income groups. Two enumeration areas were randomly selected from the 1991 enumeration maps of the National Population Commission while households were systematically chosen using an appropriate sampling interval.

The National Population Policy of 4 children to a woman provides the basis for classifying low and large family sizes.

VI   EMPIRICAL ANALYSIS

4.1   Background Characteristics

Such respondents' background characteristics as sex, age, place of residence, educational attainment, religion, ethnic groups, type of marriage, age at marriage, time of marriage and job classification are presented in this section. A total of 2,425 respondents were sampled, which comprised 1,220 men (i.e. 50.4 percent) and 1205 women respondents (i.e. 49.6 percent). Respondents' age distribution shows an inverted U-shaped pattern, with age 44 as the peak for male and 34 for female. As evident in Table 4, a larger proportion of male respondents is older than their female counterparts. While 28.1 percent of male respondents fall into age-group 45 years and above, the corresponding figure for women is 13.7 percent. More than 76 percent of the sampled respondents are urban dwellers, with males being in the larger part.

Religion has been found to be a major determinant of fertility in most societies. Majority of respondents is Christians with 28.7 and 21.7 percent being Protestants and Catholics. While Islamic faithful represents 45 percent of the sample, 4.6 percent belong to the traditional religious group with a larger part coming from the female group.

The role of education in shaping the pattern of fertility in any society has long been acknowledged. As shown in Table 4, respondents were distributed across all educational categories. Those with adult literacy are 2.8 per cent while respondents with secondary school education represent 23.2 per cent. The dominance of this group has the tendency of supporting the U-shaped fertility preference curve postulated by the theory. The distribution of other educational levels are as shown in the table.

When respondents are classified into their respective job categories, traders constitute the majority (42.7%) – with a larger concentration among females (56.0%). Farmers have the least representation because of urban bias of the survey, while others were nearly equally represented.

Table 4: Percentage Distribution of Respondents by Background Characteristics

Background Characteristics	Total	Male	Female
Sample Size	2,425	1220	1,205
Proportion by Sex		50.4	49.6
Age			
15-24	6.0	27	10.6
25-34	35.0	30.1	41.9
35-44	37.6	39.1	33.8
45 years and above	21.4	28.1	13.7
Place of Residence			
Rural	23.9	16.1	29.0
Urban	76.1	83.9	71.0
Religion			
Muslim	45.0	44.7	43.1
Catholic	21.7	25.2	20.2
Protestant	28.7	26.2	31.6
Others	4.6	3.9	5.1
Type of Marriage			
Monogamy	80.2	79.7	80.3
Polygamy	19.8	20.3	19.7
Education			
No Schooling	8.4	7.1	13.9*
Adult Literacy	2.8	-	
Quranic	13.6	13.4	14.2
Primary	16.5	13.1	18.8
Secondary	33.2	32.5	34.8
Tertiary	25.5	33.9	18.3
Age at Marriage			
15-19	16.3	6.5	29.5
20-24	32.6	23.2	37.8
25-29	34.01	42.3	24.6
30 & Above	16.2	28.0	8.1
Respondents' Job classification			
Farmers	3.1	4.1	1.3
Traders	42.7	31.7	56.0
Artisan/Labourers	12.5	16.7	7.0
Low-level Professionals	14.2	14.9	11.8
Middle-Level Professionals	12.0	12.6	10.3
High-level Professionals	15.5	20.0	13.6
Time of Marriage			
Before SAP	52.9	51.0	52.2
After SAP	47.1	49.0	47.8

Note: asterisked figures are for both No-education and adult literacy.
Source: Field Survey

Age at first marriage is an important determinant of fertility trend. Though disposition to early marriage is more prevalent in Kaduna State than Lagos, 16.3 percent got married between the ages of 15-19 years with majority falling to the age group of 25-29 (i.e. 34.9%). While 67.3 percent of females got married before age 25, about 70.0 percent of their male counterparts started raising family after that age.

Respondents with monogamous marriages are about 80 percent while 52.9 percent of them were got married before the introduction of Structural Adjustment Programme (SAP) – a policy package they considered to have brought deep-rooted economic hardship on them. Though most respondents acknowledged that SAP really weakened their socio-economic power, about two-thirds of them claimed that the hardship that accompanied SAP made them powerless to influence factors affecting their lives. With such necessities of live as feeding, shelter and clothing going out of their reach, living is not only expensive but also becoming miserable. In what ways have these experiences affected the fertility preference of the respondents? What other factors influence their fertility behaviours? These constitute the main focus of this paper.

4.2: Analysis of Factors Influencing Family Formation

The literature is replete with variants of proxies for fertility behaviours. The commonly mentioned ones are Children ever born, numbers of living children and desired family size at marriage. Based on the focus of this paper one other proxy is added - economic crisis induced family size. Thus, this paper makes use of two proxies: numbers of children desired at marriage and poverty induced family size. A number of considerations informed the choice of these proxies. First, in Nigeria people are always averse to mentioning the number of their dead children. Thus, obtaining quality information from them on this issue forecloses any reference to the dead ones. And when such an information is asked, they quickly refer to their living children. Second, since many respondents are still at their reproductive life cycle, comparing crisis-induced fertility with the numbers of living children seems inappropriate. Their desire at marriage, is therefore, benchmarked with the one imposed on them by the economic crisis.

The use of mean values in analyzing fertility preference abounds in the literature. It is, however, recognized that this approach has its limitation. Issues relating to fertility preference is still considered being a personal reserve by some Nigerians. To avoid questions relating to it, they sometimes give responses that are outliers. This, in most cases, makes nonsense of mean values. Is spite of this, the mean value is used as a guide to the possible direction of fertility preference in the sampled areas.

Table 5 presents the mean values for fertility preferences at marriage and during period of economic hardship. Evidence from the table shows that based on all socio-economic and cultural factors considered, poverty-induced fertility is much lower than the one desired at marriage. Fertility desired at marriage using educational factor ranged between 5.9 for secondary school certificate holders and 14.6 for those with Quranic education. The result for Quranic education is not surprising given the view of an Islamic scholar from Kaduna, which seems to represent position of many Islamic faithful:

> *Whatever happens to us is from Allah. Whether the economy is*
> *good or bad, we don't care about the number of children we have,*
> *after all Allah provides everything.*

In spite of this, the results show a U-shaped fertility preference curve as against the downward sloping one for poverty-induced one. Although family size preference declined across all educational strata, an inverse relationship between fertility preference and level of education is evident (Table 5). This is even given credence to in Table 6. As shown in the first row of the table, at the point of marriage, between 19.6 and 59.5 percent of the respondents desired lower children (i.e., between 0 and 4 children) as opposed to between 48 and 80.4 percent during the period of entrenched poverty. Based on their experience with economic hardship, the proportion of those that desired lower fertility ranged from 17.8 to 32.8 percent across the educational strata. By implication, the percentage of those previously desiring 5 children and above declined proportionately.

The desire for family size formation also varies according to religious groups. At the point of marriage, fertility rate was very high among the Muslims (12.2) compared to the Catholics (6.8), Traditionalists (6.3), and Protestants (5.1) (Table 5). The desire for large family size declined significantly when poverty became endemic. The decline rates vary from 0.9 to 5.8 children. Though the highest rate of decline is observed among Muslims, the extant fertility rate is considered high. Among this group, the percentage distribution of those preferring 5 children fell from 62.5 to 43.9 percent (Table 6). More than any other religious groups, however, the Protestants have the largest proportion of respondents needing lower family size after their experiences with economic hardship (Table 6).

Age is a cultural factor that has direct bearing on fertility preference (Lesthaeghe and Jolly, 1995). Evidence from Table 5 reveals a U-shaped fertility curve for graduated age groups in ascending order. The mean number of children at marriage is higher among 15-24 (9.8) and

45 years and above (11.6), and lower among 25-34 (8.6) and 34-44 years (7.6). These desires waned during the period of economic crisis to between 5.1 and 6.4 children. In contrast to the U-shaped curve experienced at the point of marriage, a kinked-curve is experienced during the period of economic hardship, with the preference flattening out between the ages 15 to 34 years. Table 6, however, reveals that the distribution of those desiring less than 5 children is positively related to age groups- substantial proportion of elderly people now preferred lower number of children. Their exposure to two opposing extremes of good and bad living conditions might have informed the present desire.

The age at first marriage is another important cultural factor influencing fertility dynamics in Africa (Ekouevi and Adepoju, 1995). Although evidence from Table 6 reveals that a larger portion of those with early marriages, whose fertility preferences were out of tune with reality at the point of marriage, now long for lower family size. This notwithstanding, the mean value of 5.8 still remain high. Respondents with late marriages now prefer lower fertility rate (Table 5) thereby supporting Malthus proposition of late marriages as an important way of checking population pressure.

Due to poverty associated with harsh economic conditions, and irrespective of the type of marriage, about 25 percent of the respondents changed from higher fertility preferences to lower ones. Polygamous marriages, however, still have predilection for relatively large family size with 49.3 percent of them now desiring 5 children and above (Table 6).

Evidence from marriage duration further shows that between 11.5 and 36.8 percent of respondents changed their preferences from large to small family size. Because of exposure to poverty, as mentioned in the focus group discussions (FGDs), less than 30 percent of respondents with less than twenty years of marriage experience now crave for large family size. In contrast with the expectation, about 42 percent of those with marriage duration of 25 years and above still prefer large family size. Evidence from FGDs provides some reasons to support this. While some of them still believe that only God controls the number of children a person could have, others see children as security against old age. These perceptions are most common among very old but mostly uneducated people.

A larger proportion of rural dwellers, relative to their urban counterparts, now has a change of mind about keeping large families (Table 6). In addition to having lower mean values, a lower proportion of rural dwellers tends to long for 5 children and above as opposed to their urban counterparts (Table 5). This development has been linked to higher incidence of poverty in rural areas as indicated above. The result is confirmed by the view of an educated rural dweller thus:

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In the past, people gave birth to many children but due to the present level of poverty, people are now trying to have between three and four.

In the absence of poverty, however, fertility rate is lower in urban areas due to education and exposure to family planning services.

An important cultural determinant of fertility preference in Nigeria is male dominance (Makinwa-Adebusuyi and Ebigbola, 1992).The prevalence of this connotes an "oligarchy" power of men in reproductive decisions. Evidence from Tables 5 and 6 show that respondents that claimed the absence of male dominance in their families tend to have urge for small family size as opposed to those affirming its presence. Those with "don't know" responses are even worse – their appetites for large family sizes remain relatively higher than the other groups. Even with their experiences with worsening economic conditions, 39.4 percent of them desire fertility rate of 5 and above as opposed to those confirming (29.4%) and non-existence (18.8%) (Table 6). When respondents were asked about whether they discussed the number of children to have with their spouses, the results are similar to what obtained under male dominance.

Bankole (1995) and Odusola et al (1998a & b) bring out in clear terms that gender plays crucial role in fertility behaviour in Nigeria. This finding tends to support this view. The gaps between fertility preferences of male and female at the point of marriage and during the period of intense poverty are 4 and 1 (Table 5), with the female showing predilection for lower fertility. Despite their experience with harsh living conditions, 17.2 and 27.5 percent of male and female now prefer to have 5 children and above. The response of one-group discussant from Lagos tends to provide reasons for lower fertility desire among women:

We bear the biological, physical and sometimes financial burden of child bearing and rearing. And to reduce the overall burden and increase our longevity, we must go for small number of children.

A regional analysis of the results reveals that fertility preference is lower in Lagos than in Kaduna State. The gap reduced from 3 during the point at marriage to 1 during period of intense poverty (Table 5). This notwithstanding, while 17.9 percent still has the urge for 5 children and above in Lagos, the proportion for Kaduna is 35.6. Several factors tend to explain the desire for larger family size in Kaduna. Being a Muslim dominated State, the predominance of such factors

as quranic education, polygyny, early marriages, low contraceptive use, etc, explain the fertility behaviour. The results for period of marriage and type of employment are as indicated in Tables 5 and 6.

An overriding conclusion from the foregoing is that the fertility transition is poverty imposed and not a voluntary one. This is a major deviation from the classic Western world and Asian approaches, where continuous fertility decline was experienced during period of economic growth and development. The view of a Lagos discussant, which tends to mirror majority's perception about the fertility trend, could be illuminating:

> *Generally, income is an important determinant of the number of children a family should have. People tend to have more children when the business or the economy is booming. It is the level of income that determines the ability to cater for children even up to the university level.*

This portends danger for the country since the proximate determinants of long term fertility behaviour have not been addressed.

Table 5: Mean Values of Fertility Preferences According to Selected Characteristics

Characteristics	Desired at Marriage (1)	Desired during period of economic crisis (2)	Difference between 1&2 (3)
Education			
Quranic	14.6	8.1	-6.5
No Schooling/Adult Literacy	8.9	6.7	-2.9
Primary	8.2	6.0	-2.2
Secondary	5.9	5.2	-0.7
Post secondary	6.2	4.8	-1.4
Religion			
Traditional	6.3	5.0	-1.3
Catholic	6.8	5.2	-1.6
Protestant	5.1	4.2	-0.9
Islam	12.2	6.4	-5.8
Age Group			
15-24 years	9.8	5.1	-4.7
25-34 years	8.6	5.1	-3.5
35-44 years	7.6	5.4	-2.2
45 years and above	11.6	6.4	-5.4
Period of Marriage			
Pre-SAP	8.6	5.9	-2.7
Post-SAP	8.6	5.4	-3.6
Age at First Marriage			
15-19 years	10.7	5.8	-4.9
20-24 years	7.2	5.1	-2.1
25-29 years	7.9	5.1	-2.8
30 years and above	6.0	5.0	-1.0
Type of Marriage			
Monogamy	8.1	5.2	-2.9
Polygamy	12.1	7.8	-4.3
Place of Residence			
Rural	9.1	5.3	-3.8
Urban	6.6	5.7	-0.9
Respondents' Job Classification			
Farmers	11.2	9.3	-1.9
Traders	11.1	6.1	-5.0
Artisan/Labourers	8.4	5.9	-2.8
Low-Level Professionals	6.8	5.0	-1.8
Middle-level Professionals	4.1	4.5	0.4
High-Level Professionals	6.2	5.1	-1.1

Table 5 continues: Mean Values of Fertility Preferences According to Selected Characteristics

Characteristics	Desired at Marriage (1)	Desired during period of economic crisis (2)	Difference between 1&2 (3)
Spouse's Job (sector)			
Farming	10.0	6.1	-3.9
Trading	9.8	5.9	-3.9
Public Sector	6.6	5.1	-1.5
Organised Private Sector	6.4	5.0	-1.4
Informal Private Sector	9.6	5.5	-4.1
Discuss Number of Children with spouse			
Yes	5.2	4.5	-0.7
No	12.4	6.5	-5.9
Marriage Duration			
0-4 years	8.6	4.7	-3.9
5-9 years	8.8	4.9	-3.9
10-14 years	8.6	5.3	-3.3
15-19 years	8.2	5.8	-2.4
20-24 years	7.3	6.3	-1.0
25 years and above	9.5	7.1	-2.4
Male Dominance			
No	7.1	5.2	-1.9
Yes	8.1	5.4	-2.7
Don't Know	12.1	6.3	-5.8
Sex			
Male	10.6	6.5	-4.1
Female	6.6	5.5	-1.1
Region/State			
Lagos	6.6	5.3	-1.3
Kaduna	9.6	6.4	-3.2

Source: Field Survey

Table 6: Respondents' Fertility Preference According to Selected Characteristics

Characteristics	0-4 Children		5 Children & above		Difference between 1&2
	Desired at Marriage (1)	Desired during period of economic crisis (2)	Desired at Marriage (3)	Desired during period of economic crisis (4)	
Education					
Quranic	19.6	48.0	80.4	52.0	28.4
No Schooling/Adult Literacy	36.4	58.8	63.6	41.2	22.4
Primary	35.2	68.0	64.8	32.0	32.8
Secondary	48.6	76.3	51.4	23.7	27.7
Post secondary	59.5	77.3	40.5	22.7	17.8
Religion					
Traditional	58.9	70.0	41.1	30.0	11.1
Catholic	44.8	78.5	55.2	21.5	33.7
Protestant	53.4	79.8	46.6	20.2	26.4
Islam	37.5	56.1	62.5	43.9	18.6
Age Group					
15-24 years	44.6	58.2	55.4	41.8	13.6
25-34 years	53.6	76.2	46.4	23.8	22.6
35-44 years	45.2	73.9	54.8	26.1	28.7
45 years and above	39.0	64.9	61.0	35.1	25.9
Period of Marriage					
Pre-SAP	37.8	67.1	62.2	32.9	29.3
Post-SAP	56.2	77.2	43.8	22.8	21.0
Age at First Marriage					
15-19 years	34.4	60.3	65.6	39.6	25.9
20-24 years	39.0	69.6	61.0	30.4	30.6
25-29 years	56.2	75.8	43.8	24.2	19.6
30 years and above	56.0	75.4	44.0	24.6	19.4
Type of Marriage					
Monogamy	49.6	74.3	50.4	25.7	24.7
Polygamy	25.8	50.7	74.2	49.3	24.9
Place of Residence					
Rural	44.2	71.5	55.8	28.5	27.3
Urban	48.6	67.9	51.4	32.1	19.3
Respondents' Job Classification					
Farmers	37.2	58.7	62.8	41.3	21.5
Traders	37.6	62.7	62.4	37.3	25.1
Artisan/Labourers	39.9	69.6	60.1	30.4	29.7
Low-Level Professionals	47.4	76.4	52.6	23.6	29.0
Middle-level Professionals	63.1	83.3	36.9	16.7	20.2
High-Level Professionals	54.6	79.2	45.4	20.8	24.6

Table 6 continues: Respondents' Fertility Preference According to Selected Characteristics

Characteristics	0-4 Children		5 Children & above		Difference between 1&2
	Desired at Marriage (1)	Desired during period of economic crisis (2)	Desired at Marriage (3)	Desired during period of economic crisis (4)	
Spouse's Job (sector)					
Farming	33.1	58.6	66.9	41.4	25.5
Trading	41.5	68.1	58.5	31.9	26.6
Public Sector	51.9	77.6	48.1	22.4	25.7
Organised Private Sector	56.5	81.1	43.5	18.9	24.6
Informal Private Sector	41.1	73.1	58.9	26.9	32.0
Discuss Number of Children with spouse					
Yes	48.7	81.0	51.3	19.0	32.3
No	37.4	61.0	62.6	39.0	23.9
Marriage Duration					
0-4 years	62.0	73.5	38.0	26.5	11.5
5-9 years	57.6	75.0	42.4	25.0	17.4
10-14 years	40.5	71.3	59.5	28.7	30.8
15-19 years	39.3	76.1	60.7	23.9	36.8
20-24 years	33.6	67.3	66.4	32.7	33.7
25 years and above	30.0	58.4	70.0	41.6	28.4
Male Dominance					
No	49.1	81.2	50.9	18.8	32.1
Yes	48.6	70.6	51.4	29.4	22.0
Don't Know	41.4	60.6	58.6	39.4	19.2
Sex					
Male	41.3	58.5	58.7	41.5	17.2
Female	44.8	72.3	55.2	27.7	27.5
Region					
Lagos	49.9	82.1	50.1	17.9	32.1
Kaduna	37.5	64.4	62.5	35.6	26.9

Source: Field Survey

V CONCLUSION

The linkage between poverty and fertility preference has been the main focus of this paper. Deriving its framework of analysis form Thomas Malthus' proposition of the linkage between population growth and economic development, the paper examined the possible impacts of economic hardships on people's fertility behaviours. The analysis was based on the primary data obtained from Lagos and Kaduna States of Nigeria, representing the southern and northern regions respectively. Both primary and secondary evidence shows that poverty is intense in Nigeria while fertility rate is also declining. It is evident that poverty contributed significantly to the dynamic of fertility in the country, thereby making the transition to be a temporal one.

Evidence from the study shows that majority of the respondents from the northern part desired more children than their southern counterparts, due to prevalence of Quranic education, polygyny, early marriages, to mention a few. This tends to conform to spatial distribution of poverty in the country. Due to higher incidence of poverty among rural dwellers, they now prefer lower fertility formation. In the absence of poverty, however, fertility rate is lower in urban areas due to education and exposure to family planning services. Generally, respondents who agreed that poverty had affected their economic expectations and attitudes about large family size and now desire lower fertility rate compared to those that were indifferent or held opposing views. Female respondents show predilection for lower fertility as opposed to their male counterparts. Because the burden of poverty falls disproportionately on them, they now bear more than ever the biological, physical and financial burden of child bearing and rearing. Other proximate determinants of fertility dynamics are education, religion, spousal communication and spousal approval of contraceptive usage, male dominance, spousal age difference, polygyny, early marriages, to mention a few.

Though fertility decline is a good thing in Nigeria, however, its perceived root-cause is antithetical to overall development. In contrast with the classical Western world and Asian approaches where fertility declines occurred in periods of economic expansion, Nigeria's came during period of economic recession and endemic poverty. This portends a temporal event that is likely to be reversed during period of economic boom. Thus maintaining low fertility rate and alleviating poverty remain a daunting challenge in Nigeria. While investing in basic education and health care delivery offer substantial synergies for empowerment and economic opportunities thereby promoting lasting economic growth and reducing poverty, addressing the proximate determinants of fertility is an area requesting urgent attention.

For the current fertility trend to be maintained, the following demands urgent attention. First, special family planning programmes should be targeted at men, particularly in the northern part of the country. This includes intensive campaign on family planning and contraceptive use. Second, promotion of high level female education because of its synergy with better living conditions, contraceptive usage, spousal communication, late marriages and low fertility preference. Third, promotion of peer-wise marital union, monogamy, late marriages, and other related issues is also vital for ensuring genuine fertility transition. The need for committed and pro-active promotion of a culture of low fertility preference using the above methods, among others, is fundamental to maintaining this transition to low fertility. Otherwise, the emergence of better economic conditions in the future would reverse the fertility trend.

REFERENCES

Abdel, A.G. Ali and E. Thorbecke (1997): The State of Rural Poverty, Income Distribution and Rural Development in SSA", *African Economic Research Consortium (AERC) Working Papers*, No. CR-2-8, Nairobi, AERC

Adeokun, L.A. (1987): "Creole and Yoruba Households and Family Size" in Oppong (ed) *Sex Role's Population and Development in West Africa*, Portmouth, Heinemann.

Appleton, Simon (1995): "Socio-Economic Factors, Fertility and Its Proximate Determinants in Cote d'ivoire', *Working Paper Series No.3 of the Centre for the Study of African Economics.*

Bankole (1995): "Desired Fertility and Fertility Behaviour Among Yoruba of Nigeria: A Study of Couple Preference and Subsequent Fertility*", Population Studies*, 1995, 49 (2): 317-328

Boserup, E. (1985): "Economic and Demographic Interrelationship in Sub-Saharan Africa", *Population and Development Review*, 11 (3)

Cain, M.T., Syeda Prokeya Khanam and Shamsun Nahas (1979): "Class Patriarchy, and Women Work in Bangladesh", *Population and Development Review* 18.

Caldwell, J.C. (1981): *Theory of Fertility Decline*, New York; Academic Press.

Caldwell, J.C. and Pat Caldwell (1987): "The Cultural Context of High Fertility in Sub-Saharan Africa", Population and Development Review, 13(3)

Caldwell, J.C. Orubuloye, I.O. and Caldwell, P. (1992): "Fertility Decline in Africa: A New Type of Trasition?", Population and Development Review 18

Central Bank of Nigeria and World Bank (1999); *Study on Poverty Assessment and Alleviation*, Abuja.

Chesnais, J.C. (1985): "Progress Economique et Transition Demographic Dan Les Pays Pauvres Treute and d'experience (1950-1980)", *Population* 40 No.1 January – February 1985: 11-28

Demery, L. and L. Squire (1996); "Macro-Economic Adjustment and Poverty in Africa: An Emerging Picture", *Research Observer*, Vol. II, No. 1, February, p. 39 - 60.

Demery, L. and T. Addison (1987); *The Alleviation of Poverty Under Structural Adjustment*, The World Bank, Washington, D. C.

Easterlin, R. and E. Crimmins (1985): *The Fertility Revolution: A demand Supply Analysis*, Chicago: University of Chicago Press.

Economic Commission for Africa (ECA) (1991): *Implication of the Apparent Impact of Structural Adjustment Programme (SAP) on Population*, Addis Ababa, UNECA

Economic Commission for Africa (ECA) (2001): *Transforming Africa's Economies: An Overview*, Addis Ababa, ECA

Ekouevi, K and A. Adepoju (1995): "Adjustment, Social Sectors and Demographic Change in Sub-Saharan Africa", *Journal of International Development*, Vol.7 No.1

Fapohunda, Eleanor R. and Michael P. Todaro (1988): "Family Structure, Implicit Contacts and the Demand for Children in Southern Nigeria", *Population and Development Review* 14(4): 571-594

Federal Office of Statistics (FOS) (1999); *Poverty Profile for Nigeria: 1980 - 1996*, The FOS, April.

Federal Republic of Nigeria (1988): *National Policy on Population for Development, Unity, Progress and Self Reliance*, Federal Ministry of Health, Department of Population Activities, Lagos.

Federal Republic of Nigeria (1992): *Demographic Health Survey 1990*, Federal Office of Statistic, Lagos.

Feyisetan, B.J. and M. Ainsworth (1996): "Contraceptive Use and the Quality, Price, and Availability of Family Planning in Nigeria", *Economic Review of the World Bank*, Vol.10 No.1 January

Hansen, S. (1996): "Population: Its Challenge to Economic and Social Scientists", *International Social Science Journal* , September Vol.141, 331-42

Isiugo-Abanihe U.C. (1994): "The Socio-Cultural Context of High Fertility Among Igbo Women", *International Sociology* Vol.9 No.2 pp237-258

Jain Anrudh, K. (1985) "The Impact of Development and Population Policies on Fertility in India" , *Studies in Family Planning*, Vol 16, No. 4 July/August, 1985

Kanbur, Ravi (1990); *Poverty and the Social Dimensions of Structural Adjustment in Cote D'Ivoire*, The World Bank, Washington, D. C.

Kankwenda, M., L. Gregoire, H. Legros and H. Quedraogo (2000*); Poverty Eradication: Where Stands Africa?*, United Nations Development Programme, Economica, London.

Kayode, M. O. and A. F. Odusola (2000); "Poverty in the Midst of Plenty", Paper Delivered at the Annual Dialogue of the Obafemi Awolowo Foundation, Nigerian Institute of International Affairs, Lagos, 4 - 5 December.

Lesthaeghe, R. and C. Jolly (1995): "The Start of Sub-Saharan Fertility Transition: Some Answers and Many Questions", *Journal of International Development*, Vol.7, No.1

Lindert, P.H. (1980): "Child Costs and Economic Development" in Ricchard A Esterlin (ed), *Population and Economic Change in Developing Countries*, University of Chicago Press, Chicago.

Livi-Bacci, Massimo (197): "Population, Constraint, and Adaptation: A Historical Outlook", In Robert Dorfman and Peter Rogers, eds. *Science with a Human Face: Festschrift in Honour of Roger Randall Revelle*. Cambridge, Mass: Harvard University Press.

Lockwood, M. (195): "Development Policy and the African Demographic Transition: Issues and Questions", *Journal of International Development*, Vol.7 No.1 January – February

Makinwa-Adebusoye, P. and J. Ebigbola (1992): "Socio-Cultural Factors Affecting Fertility and Contraceptive Use", *Federal Republic of Nigeria: Implementing the National Policy on Population – Volume II Annexes*, Population and Human Resources Corporations Division of the UN West Africa Division, Report No.930 UN, May 15

National Population Commission (NPC) (1998): *1991 Population Census of Federal Republic of Nigeria: Analytical Report at the National Level*, NPC, April, Abuja.

National Population Commission (NPC) (2000): Nigeria Demographic and Health Survey, 1999, December, Abuja

National Research Council, Committee on Population (1993): *Factors Affecting Contraceptive Use in Sub-Saharan Africa*, Washington, D.C. National Academy Press.

Obadan, M. I. (1996); "Poverty in Nigeria: Characteristics, Alleviation Strategies and Programmes*", NCEMA Policy Analysis Series*, Vol. 2.

Obadan, M. I. (1998); "The State, Leadership, Governance and Economic Development", *A Presidential Address Delivered at the Annual Conference of the Nigerian Economic Society*, Kano, 22 - 24, July.

Obadan, M. I. and A. F. Odusola (1999); "Savings, Investment and Growth Connections in Nigeria: Empirical Evidence and Policy Implications", *NCEMA Policy Analysis Series*, Vol. 5, No. 2.

Obadan, M.I. and A.F. Odusola (2001): "The Economy and Poverty in Nigeria". A Paper Presented at the National Conference on Law and Poverty. Organised by the Nigerian Institute of Advanced Legal Studies, 26-28, June, Kaduna.

Odusola, A. F. (1997); "Poverty in Nigeria: An Eclectic Appraisal", *Poverty Alleviation in Nigeria*, Selected Papers for the 1997 Annual Conference.

Odusola, A.F. K.A. Oyediran, J.O. Bogunjoko and J.A. Adeyemo (1998a): *Adjustment Policies, Gender Dynamics and Family Size Reduction in Nigeria: A Case Study of Lagos State,* A Publication of Population Research Fund Management Unit, NISER, Ibadan

Odusola, A.F. K.A. Oyediran, J.O. Bogunjoko and J.A. Adeyemo (1998b): *Adjustment Policies, Gender Dynamics and Family Size Reduction in Nigeria: A Case Study of Kaduna State,* A Publication of Population Research Fund Management Unit, NISER, Ibadan

Ogunmike F. O. and Ekpenyong, D. B. (1995); Impact of Structural Adjustment Policies on Poverty and Income Distribution in Nigeria. *Final Report to the African Economic Research Consortium (AERC)*, Kenya.

Ogunmike, F. O. (1991); "A Basic Needs Oriented Approach to the Measurement of Poverty in Nigeria", *Nigerian Journal of Economic and Social Studies*, 33(2).

Olusanya, P.O. (1989): "Human Reproduction in Africa: Fact, Myth and the Martyr Syndrome", *Research for Development* 6, p.69-97

Salaff, J.W. (1985): "Family Size Intentions and Socio-Economic Status in Singapore, 1974-1981" *Studies in Family Planning*, Vol.16 No.4, July/August

Stewart, Francis (1992): "Can Adjustment Programme Incorporate the Interest of Women?" In H Afshar and C Dennis (ed) *Women and Adjustment Policy in the Third World*, London, Macmillan.

UNDP (1995); *Human Development Report 1995*, New York.

UNDP (1999); *Human Development Report 1999*, New York.

World Bank (1996); *Nigeria: Poverty in the Midst of Plenty - The Challenge of Growth with Inclusion*, Washington, D. C.

World Bank (1998); *1998 World Development Indicators*, The World Bank, Washington, D. C.

World Bank (2001); World Development Report, 200/2001: Attacking Poverty; The World Bank, Washington D. C.

World Bank (2001b*): African Development Indicators 2001*, The World Bank, Washington, D.C.

Young, Aliyu (1995): "The Tyrany of Numbers: Confronting the Statistical Realities of East Asian Growth", *Quarterly Journal of Economics*, 110 (3): 641-80