

INTERFACE OF FERTILITY RATE AND HOUSEHOLD POVERTY IN NIGERIA

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Abstract

Nigeria is one of the poorest nations in the world with one of the highest fertility rates. Poverty alleviation programmes have been attempted with little or no result. Implicit population policy adopted in the last two decades has yielded moderate decline in fertility in the southwestern and southeastern parts of the country. But fertility rate remains very high in the northwestern and northeastern regions. Could the persistent high fertility and poverty in the country be explained in terms of the interface between the two phenomena? Studies focusing on in-depth analysis of this interface are rare in the demographic literature. Therefore, it is still a concern that requires intellectual illumination in view of the liberal economic and political policies adopted in the last two decades, which must have impacted on the society. This paper examines this question within the context of a fertility-poverty interactive model. The 1999 Demographic and Health Survey data and the statistical abstract of the Federal Office of Statistics were deployed to demonstrate the model within the Nigerian context. At this preliminary stage, it is suggested that significant interconnections exist between high fertility rate and household poverty. In Nigeria, poorer households are likely to keep large family size and households with large family size are less likely to invest in human capital, so unable to gain access to opportunities, thus perpetuating poverty. This interface suggests the imperativeness of enforcing more explicit and "fairly coercive" family planning programme along with well executed poverty alleviation strategies to improve the well-being of the citizenry.

Introduction

One of the contradictions found in human society is the fact that wealthy countries of the world exhibit below-replacement fertility rates, while the poor nations are still battling with very high fertility levels. In Sub-Saharan Africa where the poorest nations of the world are found, total fertility rates (TFR) are still as high as 7 or more in some countries. Poor households maintain large family sizes while those who are relatively better off opt for few numbers of children. Although globalization of fertility decline has been reported in the literature (Caldwell, 2001), most of the Sub-Saharan African nations are experiencing fertility levels that make it impossible to predict when transition to replacement fertility rate will be completed (Smith, 2004). A compounding dimension of this problem is the ever increasing rate at which greater proportion of the populations of the region are dropping below the World Bank set poverty line. Christiaensen et al. (2003) in a review of living standards during the 1990s reported that by the close of the decade, no African country enjoyed annual per capita consumption higher than \$500. They indicated that in Nigeria, Zambia, and Zimbabwe, real consumption fell sharply. Sub-Saharan Africa is the region "with the highest incidence of extreme poverty and the greatest depth of poverty" (Chen and Ravallion, 2004). Indeed the Structural Adjustment Programme (SAP) that most of the countries adopted appears to have deepened the level of poverty among the citizenry, especially among rural populations.

In Nigeria, the most populous black nation, TFR remains as high as 5.7 (Population Reference Bureau (PRB), 2004) and the poverty situation has not improved either—per capita consumption remains very low, under five and child mortality is still relatively very high (Christiaensen et al., 2003). Though a fair level of fertility decline has been reported for southwestern part of the country (Orubuloye, 1995; Wusu and Ahiadu, 2004) and the momentum for the commencement of decline in southeast (Smith, 2004), the national population growth rate is still about 2.9 owing to the high TFR prevailing in the country, especially in the northwest and northeast. This growth rate is persisting in spite of economic hardships the country has been experiencing since the late 1980s. Various poverty reduction programmes have been mounted in the country under different regimes, yet the proportion of the population categorized as being poor is not declining significantly, even with the advent of democratic governance. It appears the military government initiated implicit population policy adopted in 1988—before the new policy that is yet to be widely publicized—has not impacted substantially on the reproductive attitude of the population. Could this predicament confronting the country not be

explained in terms of the interface of fertility rate and household poverty?

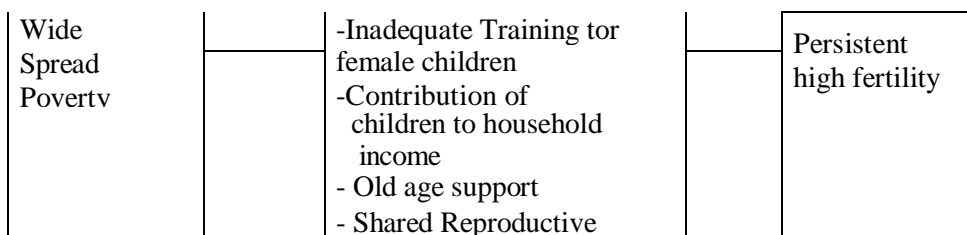
Most of the studies that have considered the relationship between fertility and poverty examined it either by highlighting poverty as an implicit determinant of high fertility rate (for instance, Caldwell, 1991; Orubuloye, 1995) or painting the picture that rapid population growth slows socio-economic development (Bloom and Williamson, 1998). Some other studies have considered economic hardship as having suppressive effect on fertility through delayed marriage (Aassve and Altankhuyag, 2002; Capo-chichi and Juarez, 2001). Studies interfacing fertility and poverty as crucial to persistent high fertility and poverty are rare, and lately, demographic variables are seldom mentioned in theoretical explanations on poverty. For instance, in the analyses carried out on the pillars of escaping poverty—economic reform, health and education, technology and structural adjustment—at the 2000 Session of the World Bank Conference on Economic Development, demographic variables were conspicuously omitted (Sachs, 2000).

This paper, however, is arguing that the interface of fertility and household poverty is cardinal to the persistence of high fertility and the ever worsening poverty situation in less developed nations (with emphasis on Nigeria). The paper is an attempt to contribute to the general discourse on the determinants of fertility and poverty. First, the interface is analyzed theoretically, presenting a fertility-poverty interactive model. The model is later illustrated with data from National Demographic Health Survey (NDHS) and the Federal Office of Statistics (FOS).

Fertility-Poverty Interactive Model

The interaction between fertility and poverty has long been recognized. Demographic Transition Theory (DTT) identifies this interaction that every society transits from high fertility and mortality at the agrarian (pre-modern) stage to low fertility and mortality at the industrial (modern) stage. It implies that poor societies exhibit high fertility and mortality rates while wealthy ones are characterized by low fertility and mortality rates. Although this general model has been subjected to intense criticisms, nevertheless, it remains a central theoretical explanation in the field of demography (Hirschman and Young, 2000). The submission here is an elaboration of the first segment of the DTT—that when societies are poor, factors that sustain high fertility and mortality rates predominate. In almost all societies, mortality rate has declined—with the exception of infant and child mortality, and conflict induced mortality in parts of the less developed world (especially in Africa)—owing to, in part, the importation of the advancement in medical technology and the adoption of the principles of hygiene. However, in most of the poor regions fertility remains persistently high. The position we are articulating here is that high incidence of poverty and fertility rate are persisting in such regions because of the interface of the two phenomena.

In Figure 1, four factors are identified—this list is certainly not exhaustive—to illustrate the interface. First, a general characteristic of poor nations that are largely traditional is that greater proportion of the population engaged in subsistent agricultural and agro-allied activities which yield limited income, thus, makes it difficult to give gender balanced quality training to children in the household, As a result, female children are generally denied education, thus blocking their access to opportunities. This accounts for why the majority of women in traditional societies are characterized by very low socio-economic status. (Though in some societies, such as in eastern Nigeria female children are better educated than their male counterparts who prefer commercial activities to schooling). Consequently, they take to active reproductive activity early in life, and coupled with the fact that African men are "reasonably" more pronatalist (Caldwell, 1991), poor women who do not have firm control over their reproductive life are seen only as reproductive tools by their husbands at the household level (Isiugo-Abanihe, 1994). In traditional settings, women are made reproductive martyrs, supported by various superstitious beliefs and limiting childbearing is quite unpopular (Adedokun, 2000; Bankole, 2000). This is fundamental to the prevalence of large family size in very poor societies. The preponderance of large family size in the face of wide-spread poverty results in continuous rationalization of child training in the households which is often in favour of male children. Their female counterparts are mostly abandoned to early marriage and childbearing with serious implications for fertility rate.



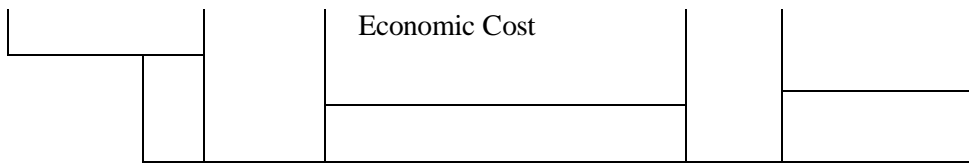


Figure 1: Fertility-Poverty Model

It is natural for parents to provide for the needs of their children. This is the practice, almost in absolute sense, in developed nations. This is because in such economies wealth is evenly distributed, parents can conveniently cater for their children and social security allowances are available to make up for any inadequacies on the part of parents. So the need for children to contribute to household income does not arise, so people prefer having one or two children (Aassive, 2002). Low fertility selection is the most appropriate in such settings since large family size is unacceptable in economic sense. However, owing to the high level of poverty in developing countries, in most households it is imperative that every member makes concerted effort towards making ends meet. Children are made to contribute to household income because parents' effort cannot adequately satisfy the basic needs of their homes. This is a common phenomenon in the poor countries of the world, where per capita income is less than one-seventh that of the wealthy nations. In such countries where children are seen as economic entities couples opt for large family size to maximize such benefit (Isiugo-Abanihe, 1994); thus at the national level TFR is relatively high—the average TFR for developed countries is 1.6 while less developed nations have average of 3.5 (PRB, 2004). Of course, large family size to poor parents tends to perpetuate poverty because the children are rarely given quality training, especially in the area of qualitative education. Hence such children cannot have access to opportunities that are capable of transforming their fortune, most are only able to sustain the socio-economic status of their parents, and some even fall below that of their parents. By this process, high fertility and poverty are sustained for a long time.

In poor countries not many people can conveniently take care of themselves at old age owing to wide-spread poverty. It is traditionally expected of children to offer mandatory economic support to their aged parents (Wusu, 2001). This practice is rooted in traditions such that children are even full of guilt where they fail on this obligation (Caldwell, 1991). It is more economical for parents in such environment to keep large family size because the more the number the higher the probability of having a blissful old age. This old age support consideration justifies pronatalist reproductive practices sustaining high fertility in poor countries, where highly corrupt and poor governments cannot provide reliable social security (Bankole, 2000; Fapohunda and Todaro, 1988). As pointed out earlier, large number of children makes it difficult for younger generations to break the chain of poverty. However, in wealthy nations the majority of their populations are rich enough to cater for their needs at old age, so the need to have large number of children does not arise (Aassive, 2002).

Though family transformation is on course in most less developed countries, to a large extent, the extended family cord is still supporting the norm of spreading the cost of reproductive burden, especially in sub-Saharan Africa. The fact that poverty is wide-spread in such societies makes it difficult for people to break up completely from the extended family. It is a norm for members to contribute to the training of the offspring of members of the larger family. Also the beneficiaries of such support are expected to make returns that benefit the whole extended family (Caldwell and Caldwell, 2000; Ocholla-Ayayo, 1997). As good as this norm is in certain respects, it makes it quite impossible for successive generations to save and invest to facilitate individual economic progress,

especially in view of the high fertility level it encourages, thus sustaining the poverty chain. Such practice does not allow people who take reproductive decisions to bear the full economic cost solely; thus the expected constraining effect of the high cost of rearing large family on reproductive attitude is obliterated (Fapohunda and Todaro, 1988).

To conclude this section, global reality of the interface could be illustrated by a survey conducted in selected countries between 1999 and 2001. As shown in Table 1, women were categorized into wealthiest and poorest on the basis of household assets possession (those at the top of the continuum referred to as wealthiest and those at the bottom classified as poorest). In the table, wealthiest women reported lower TFR while their poorest counterparts indicated higher TFR; this is consistent in the six countries. For instance, in Uganda while the poorest women reported TFR of 8.5, those classified as wealthiest indicated 4.1 TFR. In Columbia wealthiest and poorest women reported TFR of 1.8 and 4.4 respectively; there is a significant difference of 2.6 between the two groups of women. In sum, the table suggests the reality of the fertility-poverty model and its general applicability to the demographic situation in high fertility, less developed countries. As a result, high

fertility regions of the world—especially sub-Saharan Africa—are not likely to participate significantly in the global fertility transition. Table 1: Fertility for the Poorest and Wealthiest Women in Selected Countries, around 2000

Country	Total Fertility Rate (TFR)	
	Poorest	Wealthiest
Bangladesh, 1999-2000	4.6	
Cambodia, 2000	4.7	2.2
Colombia, 2000	4.4	
Egypt, 2000	4.0	2.2
Ethiopia, 2000	6.3	
Uganda, 2000/01	8.5	1.8
		2.9
		3.6
		4.1

Source: Population Reference Bureau, Transition of (2004)

The Nigerian Situation

The main objective in this section is to examine the major hypothesis of the model empirically using the Nigerian 1999 (NDHS) and Statistics extracted from FOS Statistical Abstract (FOS, 2001). Since the NDHS data do not usually include data on poverty indicators such as per capita household income and expenditure by socio-demographic variables, the FOS statistics on these indicators of poverty for 1998/1999 were combined with fertility measures—Total Fertility Rate (TFR)—reported in 1999 (the 2003 DHS data could not be used because the 2003 edition of the FOS statistical abstract is not yet published). Suffice to state here that while fertility is measured by TFR to facilitate comparison, per capita household income and average household expenditure (measure of consumption) are used to capture poverty level.

Table 2 shows TFR and per capita household income by education and place of residence. It is apparent from the table that the respondents with no education are of the lowest per capita household income category (N 812) and they reported the highest TFR (5.6). Respondents with at least secondary education who also possess the highest per capita household income (N2, 318) indicated the lowest TFR (4.0). Similarly, respondents who are of urban residence and having the highest per capita household income (N2, 006) reported lower TFR (4.2) while their rural counterparts who are of lower per capita household income (N970) category indicated higher TFR (4.9). On a general note, therefore, respondents who are relatively better off in terms of per capita household income possess lower TFR relative to their counterparts with lower per capita income. These data suggest that an inverse relationship exist between TFR and poverty (per capita household income).

Table 2:

Fertility and Per Capita Household Income (PCHI) (In Naira) by Selected Socio-Economic Characteristics

So do-Economic Characteristics	TFR	PCHI
Education		
No education	5.6	812
Primary	5.1	1,367
Secondary +	4.0	2,318
Place of residence		
Urban	4.2	2,006
Rural	4.9	970

Source: <http://www.rncasurcdhs.com> and Federal Office of Statistics (2001)

Table 3 shows the average household expenditure and TFR by educational categories. Similar to the pattern observed above, those with at least secondary education indicated over twice the average household expenditure of their illiterate counterparts. While the TFR of the former category reported 5.6 the latter indicated 4.0. Thus as average household expenditure increases fertility selection tends to decline; household with very low average expenditure keep larger family

size compared with that of those with relatively higher average household expenditure. It implies that the poor keeps larger family size while those who are relatively better off prefer smaller family size. Table 3: Fertility and Average Household Expenditure (AHE) in Naira by Education

Education	TFR	AHE
No Education	5.6	3,994.2
Primary	5.1	5,215.4
Secondary	4.0	8,592.8

Source: <http://www.measuredhs.com> and Federal Office of Statistics (2001)

Table 4 represents headcount of households classified into three categories: extremely poor, moderately poor and non-poor. Though household size is not a reliable fertility indicator because the predominance of the extended family system is likely to have altered family size in the population, it is, however, used here as a near fertility indicator (as used by FOS). The first category of one member household is ignored because such households are likely unmarried. From household size 2-4 and above, it is apparent that the proportion of extremely poor respondents increases with increasing household size. While only 16.8 percent of households with 2-4 membership are extremely poor, 63.3 percent of those with 20 or more members fall within same category. Only 6.4 percent of households having 20 or more membership relative to 48.5 percent of household that is 2-4 in size belong to the no-poor category. Obviously, most large households are of extremely and moderately poor categories.

Table 4: Percentage Poverty Headcount by Household Size

Household Size	Level of Poverty			Total
	Extremely Poor	Moderately Poor	Non Poor	
1	2.4	110	86.6	100
2-4	16.8	34.7	48.5	100
5-9	35.0	39.7	25.2	100
10-20	53.0	35.5	11.5	100
20+	63.3	30.3	6.4	100

Source: Federal Office of Statistics (2001)

Policy Implication of the Interface

Pronatalist reproductive attitude still prevails in Nigeria in view of the wide-spread of extreme poverty. This paper has argued that high fertility selection is still predominant in the population owing to the people's consideration for poverty underlining their reproductive behaviour. The high fertility selection characterizing the society in turn hampers savings and investments that are central to socio-economic development (Hamilton and Clements, 1999). This situation makes it difficult for investment in human capital, especially in the area of qualitative education, the only route to escape abject poverty and improving standard of living. Thus poverty is wide-spread and perpetual in the population. The intention to cushion the effect of excruciating poverty through children's contribution to household income and old age support, among other things, also sustains high fertility selection. Hence the persistence of high fertility rate and high incidence of poverty is accountable for by the interface of the two phenomena.

The question now is what appropriate policy line should be adopted to address this double-faceted problem? Which of the two faces should be addressed first? From the analysis of the interface, it is certainly inappropriate to consider addressing these inter-related issues separately. It is imperative to design specific policy programme that incorporates strategies of reducing fertility as well as raising the level of economic empowerment of the population. The era of implicit laissez-faire policy is no longer acceptable. It is necessary to adopt a population policy that is explicit in all ramifications, targeted towards promoting fertility decline and secures the political will on the part of decision-makers, to actualize realistic implementation. Both population education programmes targeted at the cultural forces sustaining high fertility rate (Oruboloye, 1995) and the "near coercive" family planning strategies, such as the ones being implemented in China and India, should be pursued vigorously.

Along with this, fiscal and monetary policies should be re-evaluated and made sensitive to the necessity of improving the well-being of the population. Fundamental to this is the need for sincere political will to address corruption which is a complementary factor inhibiting the success of various poverty alleviation programmes adopted so

far. Poverty alleviation programmes designed after the bottom-up approach, characterized by disciplined and transparent supervision should be the best option.

In conclusion, the paper has examined the question whether high fertility and poverty persisting in developing countries (with emphasis on Nigeria) could be explained by the interface of the two phenomena? It has been demonstrated that the interface of fertility and poverty in Nigeria accounts for the persistence of high fertility and wide-spread extreme poverty in the population. It is not unlikely that the combination of DHS and FOS data might have affected the observations made here bearing in mind that the two data sets were collected by different organizations with perhaps varied objectives. Also, the cultural milieu of different countries may also exert significant effects on this interface. Therefore, there is the need to carry out further cross-cultural studies on this interface, utilizing primary data, on the basis of which more appropriate ameliorative strategies may be designed.

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