

Human Capital, Institutions and Poverty in Rural Nigeria

by

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Chapter One

Introduction

Poverty is increasingly being recognised as both a policy and economic problem in Nigeria. This is stressed by the Interim Poverty Reduction Strategy Paper in Nigeria as well as the Poverty and Vulnerability Assessment of the country. Although the documents provide trends and profile of poverty and vulnerability in Nigeria, they do not investigate the determinants of poverty. However, understanding the determinants of poverty is critical for policy analysis and the design of effective poverty reduction strategies. In some instances there have been few studies investigating the determinants of poverty in Nigeria (see Omonona, 2000 and Olaniyan, 2002). However, these studies do not explicitly consider capabilities as determinants of poverty despite the fact that capabilities dictate the state of deprivation and poverty among households.

There is also an increasing recognition that poverty reduction should be the overarching goal of development in Nigeria. It is therefore not surprising that in recent time government and the civil society in Nigeria, with the support of the donor agencies have devoted considerable resources at reducing poverty. This gave rise to the 1994 comprehensive poverty assessment of the economy and the populace. The outcome of which led to the formulation of the draft national strategy for poverty alleviation code named "Community Action Programme for Poverty Alleviation" (CAPP) in 1996. Others include the establishment of a national poverty reduction focused Family Economic Advancement Programme (FEAP) in 1997 and the Poverty Alleviation Programme of the present civilian government in 1999, and the National Poverty Eradication Programme in 2000, among others. However, these efforts at poverty reduction have largely remained unfelt by the poor. While the emphasis in most of the interventions is on provision of physical infrastructure to support the poor and the acquisition of human capital, there has been little or no consideration for the institutional development of local level institutions or mechanism to ensure delivery of support to the poor. The absence of such institutions and the weakness of existing ones largely disenfranchised the poor from participating in the decision making process of interventions and issues that affect their welfare. Some recent studies do indicate that local institutional strengthening through the active participation of the poor in project design and implementation is a necessary factor in poverty reduction in Nigeria. This recognition probably explains the promotion of group formation as an important requirement for the poor to benefit from some of the public instituted poverty reduction programme.

One important consensus in the literature on poverty is that, poverty is a rural phenomenon (World Bank, 1990; Fields, 2000). By this, it is acknowledged that rural communities are the worst hit by poverty. Unfortunately, the importance of the rural poor is not always understood, partly because the urban poor are more visible and more vocal than their rural counterparts. Incidentally, the rural sector is the predominant sector in the Nigerian economy. It plays some fundamental roles, which include job creation at relatively low unit costs, and thus remains the most important growth priority of the country. The AERC Collaborative Poverty I research finds that poverty is concentrated among rural population in Nigeria and it is everywhere higher than urban poverty for the period 1980- 1996 (see Okojie et al 2001). This specifically makes it necessary to investigate rural poverty further.

The Poverty situation in Nigeria is quite disturbing. Both the quantitative and qualitative measurements attest to the growing incidence and depth of poverty in the country. This situation however, presents a paradox considering the vast human and physical resources that the country is endowed with. It is even more disturbing that despite the huge human and material resources that have been devoted to poverty reduction by successive governments, no noticeable success has been achieved in this direction. The Human Development Report (UNDP, 1999) reveals that Nigeria is one of the poorest among the poor

countries of the world. Nigeria ranks 54th with respect to the human poverty index (HPI) - making it the 20th poorest country in the world. It is also ranked 30th in gender related development index (GDI) while occupying 40th position from below in its human development index (HDI). In line with the above, the quantitative poverty assessment by the Federal Office of Statistics (FOS, 1999), based on the analysis of a series of national consumer surveys over a 16 year period (1980-1996), shows that the incidence of poverty rose drastically between 1980 and 1985 on one hand and between 1992 and 1996 on the other, but decreased between 1985 and 1992. The 28.1 percent poverty incidence of 1980 translated to 17.7 million poor people in the country, whereas there were 34.7 million poor people in 1985 with an incidence of poverty of 46.3 percent. Despite the drop in the poverty incidence in 1992 to 42.7 percent, the population of the poor was 39.2 million, about 5 million more than 1985 figures. By 1996, 67.1 million people were in poverty with an incidence of poverty of 65.5 percent. The bitter reality of the Nigerian poverty situation according to NISER (2003) is that more than 40 percent of Nigerians live in conditions of extreme poverty, spending less than N320 per capita per month. This expenditure would barely provide a quarter of the nutritional requirements for healthy living. As revealed by the survey, rural poverty increased by 22-percentage point in the period 1980-1985. Although this decreased slightly between 1985 and 1992, it soared in the following four-year period 1992-1996. In any case however, the percentage of the rural poor increased from 28.3% in 1980 to 69.8% in 1996 (FOS, 1999).

As a result of the high incidence of poverty, the contemporary question in Nigeria, however, is to what extent does social capital contribute to poverty reduction? How does membership of a social network assist in improving welfare? What type of social capital is welfare enhancing? Do poor people participate in social networks? Answers to these and other questions will largely assist in fashioning institutional strengthening to complement infrastructure provision and increase human capital development to empower the poor. Grootaert (1999) observes that emerging consensus concerning differences in economic outcomes at the level of the individual household or at the level of the state, cannot be fully explained by differences in traditional inputs such as land, labour and physical and human capital alone. According to him, there is a growing recognition of the roles of "social-capital" in affecting the well being of individuals, households, communities and nations. This recognition, that social capital is an important input in the production function of an individual or household has some implications. It suggests that institutional or social capital must complement human and physical capital before the full benefits of any development programme is derived.

Studies in Nigeria have shown that the poor derive more benefits from their membership of local associations compared with public instituted organisations. Besides, the effectiveness of the different organisations in alleviating poverty is well documented (See World Bank, 1996; Olayemi et al, 1999; Okumnadewa, 1998; and World Bank/DFID, 2000). For instance, the World Bank and DFID in collaboration with the National Planning Commission carried out a National consultative and qualitative poverty assessment, tagged "Voice of the poor" in 1999 to feed into the World Development Report 2000/1. It was revealed from the study that across all the geopolitical zones of Nigeria, there is the absence of competent and responsive non-governmental organisations (NGOs). Instead, the poor refers to local community based organisations (CBOs) as the main safety net for their well being. The diversity of these CBOs testifies to their roles in social support networks for all the communities interviewed. Prominent among these social safety nets are religious groups, traditional leadership, educational institutions, women's group and traditional financial institutions among others. Since a key finding of the study is that poverty is linked to the inability of individuals and households to reciprocate and support other people, to build and

use social capital within the community and the wider environment, the role of local level institutions in providing this opportunity to maintain reciprocity is crucial for the poor to be able to keep a sense of dignity in their lives. (World Bank/DFID, 2000),

The realisation of the potency of the local level institutions and associations in poverty reduction is no longer in doubt in the World as seen in the preceding paragraph. One may even be tempted to claim that the failure of the several interventionist poverty reduction programmes of the Nigerian government can be attributed largely to the neglect of social capital as an important input in poverty reduction. This is because studies such as Narayan and Pritchett (1997) in Tanzania and Grootaert (1999) in Indonesia have shown econometrically that the ownership of social capital by households has strong effects on household welfare. It was found that the magnitude of poverty reduction through social capital exceeds that of education (human capital) and physical capital owned by the households in their independent studies. Glewwe and van der Gaag (1988) and World Bank (1990) have, however, stated that the very first step at helping poor households out of their poverty is to understand the nature and extent of their poverty. This is because, if effective policies to reduce poverty are to be formulated and successfully implemented, more knowledge about the characteristics and correlates of poverty is crucial. Presently, there appears to be a general dearth of study on estimating the impact of demographic, human capital, occupational, locational, and physical capital on poverty among Nigerian households not to talk of the recently identified social capital

Furthermore, there have been numerous studies on poverty in Nigeria, but few on inequality. Incidentally, the importance of unequal access to opportunities, assets, income and expenditure cannot be overemphasised as it plays important roles in reducing poverty and spurring the economy to long-term development. In Nigeria the poor are not just the rich with less money, but are the poorest of the poor. Households are not only poor; they also suffer from vast inequality in incomes, in assets (including education and health status), in control over public resources, and in access to essential services as well as pervasive insecurity (World Bank, 2000). The distributional consequences of economic growth is therefore one of the main policy issues in Nigeria. Although economic growth is important for the success of any economy, it becomes less effective for poverty in the face of massive inequality. Given the depth of inequality in Nigeria, growth may not be enough without giving attention to easing inequality and eliminating barriers that constrain poor people to benefit from a growing economy and to contribute to that growth (Iwayemi et al, 2000). Unless distributional elements are included in developmental programmes and reforms, it will be difficult to solve human development crisis, which might also deter the development of the economy. Rather it has been pointed out that in high inequality countries, up-front actions that are both growth promoting and equity enhancing may be the only realistic option for development to be sustained (Estudilo, 1997).

This study thus attempts to provide an update on household expenditure inequality among different regions in Nigeria and then investigates its factors and forces by decomposing the inequality into within-group and between group components so as to help identify policy directions for the future. Several factors have been identified as having affected income and expenditure inequality in Nigeria. They include the level of education, age distribution of household heads, gender, household size and location (geopolitical zones). All inequality measures reported in this study refers to household per capita expenditure data. The study also presents a decomposition analysis of the overall income inequality into both within-group and between-group components.

1.2 OBJECTIVES OF THE STUDY

The broad objective of this study is to examine the links between human capital, institutions and poverty in rural Nigeria. Since the understanding of this issue is broad, the research took a comprehensive look, by specifically examining the following specifics:

- The nature of rural poverty in Nigeria. This include presenting the trend and profile of rural poverty in Nigeria
- The effects of human capital and capabilities on poverty in rural Nigeria. This includes analysis of the impact of human capital factors on income inequality trends and poverty in rural Nigeria during the 1980 – 1996 period.
- The linkages between, rural institutions, social capital and rural development in Nigeria. This include characterising the various dimensions of social capital and rural institutions and analysing the influence of institutional capital and other variables on poverty and welfare in the rural area.
- Undertaking an inventory and evaluation of policies, programmes and projects for rural development and poverty reduction in Nigeria

1.3 Plan of Report.

The rest of this report presents the summary of research findings in series of largely independent studies aimed at achieving the four objectives stated above. The full papers of the independent studies include

1. Inequality in the Distribution of Household Expenditure in Rural Nigeria: A Decomposition Analysis
2. Policies and programmes for poverty reduction in rural Nigeria
3. Social capital and poverty reduction in Nigeria
4. Human Capital, Capabilities and Poverty in Rural Nigeria

Full copies of the independent research are also available and submitted herewith to the African Economic Research Consortium

For the purpose of this report, the next chapter presents the literature review followed by the description of the various methodological frameworks utilised for the study. We present the summary of the results of the four studies in Chapter four, while the Review of different Policies that have been initiated for Poverty Reduction in Nigeria is presented in Chapter Five. The report is concluded in Chapter Five

Chapter Two

Literature review

2.1 Poverty

There is no concise way of defining the concept of poverty, as it is a multi-dimensional issue that affects many aspects of human condition ranging from physical to moral and psychological (Ogwumike, 2002). As a result, different forms of conceiving poverty have emerged over the years. Some analysts have used the convention of regarding poverty as a function of insufficient income levels for securing basic goods and services. Poverty has also been viewed as inability of individuals to subsist and to produce for themselves as well as inability to command resources to achieve these (Sen, 1981; Amis and Rakodi, 1994). Some researchers have denoted poverty with the inability to meet basic nutritional needs (see Dreze and Sen, 1990 among others). Others such as Musgrave and Ferber (1976) have used the levels of consumption and expenditures to qualify the poor, while some like Singer (1975) view poverty in part, as a function of education and /or health: life expectancy at birth, child mortality, etc. Other development analysts see poverty in very broad terms such as being unable to meet “basic needs” – physical (food, health care, education, shelter, etc.) and non-physical (participation, identity, etc) requirement for a “meaningful life” (Streeten, 1979; Blackwood and Lynch, 1994).

The common practice is to conceptualise poverty in absolute or relative terms (Fields, 2000). **Absolute poverty** is the lack of adequate resources to obtain and consume a certain bundle of goods and services deemed basic. Such a bundle of goods and services would contain an objective minimum of basic necessities such as food, shelter and clothing (see Ogwumike and Odubogun, 1989; Odusola, 1997). In this regard, absolute poverty characterized by low calorie intake, poor housing conditions, inadequate health facilities, poor quality of educational facilities, low life expectancy, high infant mortality, low income, unemployment and underemployment. Using consumption as the base line, any household that spends more than a specified maximum of its income on basic needs such as food, housing, health care etc are considered as poor (see FOS, 1999; Obadan, 1997; Odusola, 1997; Afonja and Ogwumike, 1995). According to Gordon et al (2003), poverty is also regarded as a condition characterised by severe deprivation of basic human needs, including food, safe water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to social services.

In **relative** terms, poverty is conceptualised in terms of the standard of living that prevails in a given society. Thus, relative poverty exists where households within a given country have per capita income of less than one-third of the average per capita of such country (World Bank, 1997). Relative poverty would occur where certain sections of a society do not have adequate income to enable them have access some basic needs being enjoyed by other sections of such society. Poverty can also be subjective. Subjective poverty concept requires the individuals (including the poor) to specify what they consider to be a minimally adequate standard of living or an income or expenditure level they personally considered to be absolute minimal (Ogwumike, 2002). There is also **material poverty**, which is taken to imply lack of ownership and control of physical assets such as land and animal husbandry (UNDP, 1997). This is similar to the concept of **exchange entitlement and capabilities** propounded by Sen (1981) and Dreze and Sen (1990). Other concepts of poverty that have evolved over time include transitory and chronic poverty. Transitory poverty is temporary, transient and short-term in nature while chronic poverty is a long-term, persistent poverty, the causes of which are structural (Haddad and Ahmed, 2003).

Given the array of definition of poverty, it is essential that a broad and wide definition that include both economic and non-economic factor would be a useful means of dealing with all the facets of poverty.

2.2 Social Capital

Social capital has been given many definitions arising from lack of conceptual clarity. Woolcock suggests that the concept of social capital "risks trying to explain too much with too little (and) is being adopted indiscriminately, adopted uncritically, and applied imprecisely"... (Lynch et al. 2000). Coleman (1990) defined it by its function, "it is not a single entity, but a variety of different entities having characteristics in common, they all consist of some aspect of a social structure, and they facilitate certain actions of individuals who are within the structure. On the other hand, Portes (1998) indicates that social capital stands for the ability of actions to secure benefits by virtue of membership in social network or other social structures. However, the commonly used definition is the one put forward by Robert Putnam who defines social capital as feature of social life, trust that enable participants to act together more effectively to pursue shared objectives (Baron et al. 2000).

Coleman (1990) opines that social capital can take three forms; firstly obligations and expectations which depend on the trustworthiness of the social environment, secondly the capacity of information to flow through the social structure in order to provide a basis for action and thirdly the presence of norms accompanied by effective sanction. Grootaert (1997) and Collier (1998) also gave sharing of information among association members, the reduction of opportunistic behaviour (which is related to Coleman's sanction), and the facilitation of collective decision-making. Trust has been found to be the most important of the three because information flow and sanctions cannot work alone to ensure that benefits of social capital is reaped by members of an association or a community. Halpern (1999) in his work "making democracy work" submits that areas with low social capital were ruled by the most unsuccessful governments and demonstrated greater inefficiency and corruption. However, successful regional governments ruled areas with high levels of social trust. In addition, Pretty and Ward (2001) suggests that trust is reinforced by sanctions, which may be applied to those who flout social norms or fail in their social responsibility.

Social capital operates at the macro, meso and micro levels. At the macro level, social capital includes institutions such as government, the rule of law, civil and political liberties e.t.c. There is overwhelming evidence that such macro level social capital has a measurable impact on national economic performance (Knack, 1999). At the micro and meso levels, social capital refers to the networks and norms that govern interactions among individuals, households and communities. Such networks are often given structure through the creation of local associations or local institutions. This study examines social capital at the micro level. Putman (1993) discusses micro-level social capital in which individuals or households relate horizontally guided by associated norms and values to create externalities for the community. The externalities created are not always positive. James Coleman considers relations among groups, rather than individuals, which is characterized by both vertical and horizontal dealings within and among other entities. Vertical associations are characterized by hierarchical relationships and an unequal power distribution among members. An encompassing view of social capital is that of North (1990) who identified the social and political macro environment that shapes social structure and enables norms to develop. In addition to the largely informal and often local, horizontal and hierarchical relationships of the first two views, North focuses on institutions and argued that such institutions (e.g. the rule of law, political regime e.t.c) have a critical effect on the rate and pattern of economic development. A strong degree of complementarity is believed to exist between horizontal and

hierarchical associations and macro institutions, and that their co-existence maximizes the impact of social capital on economic and social outcomes. Moreover, a certain degree of substitution is also inherent to the interlocking aspect of the levels of social capital.

Putnam, (2000) and Grootaert (1999) believe that social capital has quantifiable effects on many different aspects of human. Citing several authors, the duo argue that the effects on different aspects of life include; lower crime rates (Halpern, 1999; Putnam, 2000; Hermine, 2002), better health (Wilkinson, 1996), improved longevity (Putnam, 2000), better educational achievement (Coleman, 1988), greater levels of income equality (Wilkinson, 1996; Kawachi et al., 1997), improved child welfare and low rate of child abuse (Cote and Healy, 2001), less corrupt and more effective government (Putnam, 1995; Knack, 1999), dispute resolution in Albania (De soto et al, 2002) and enhanced economic achievement through increased trust and lower transaction cost (Fukuyama, 1995).

The channels through which social capital affects development includes several related elements such as information sharing, collective action and decision making, and reduction of opportunistic behaviour. Following from this, Grootaert and Bastelaar (2002) submit that:

- participation by individuals in social networks increases the availability of information and lowers its cost;
- participation in local networks and attitudes of mutual trust make it easier for any group to reach collective action and implement collective action; and
- networks and attitudes reduce opportunistic behaviour by community members. (Grootaert and Bastelaar 2002).

Social capital links together natural capital, physical capital and human capital. Unlike physical capital, social capital can accumulate as a result of its use and also, social capital has public good characteristics that have direct implications for the optimality of its production level. The common attributes which social capital shares with other forms of capital is that, it is costly to produce (e.g. requires investment in terms of time and effort and at times money) and an accumulated stock from which a stream of benefits flows. The nature of these benefits can differ. In Krishna and Uphoff's (1999) analysis of the watersheds in Rajasthan, the benefit is collective action to manage a common resource effectively. In Fafchamps and Minten's (1999) observation of traders in Madagascar, social capital reduces transactions costs and acts on an informal channel for acquiring insurance against liquidity risk. Reid and Salmen (2000) find that, in Mali, trust is the key factor in making agricultural extension successful. In Isham and Kahkonen's (1999) study of water projects in Indonesia, social capital increases the ability of villagers to organize to design and manage water supply systems. Pargal, Huq and Gilligan's (year) study of solid waste removal in urban neighbourhoods, in Bangladesh finds a similar organizational benefit. Rose (1995) finds that, in Russia, social capital networks are the most important source of income security. Another example is the work of Maluccio et al (1999) in South Africa where the incidence of crime was found to be of direct relevance to the accumulation and erosion of social capital. These case studies make it clear that the benefits from the stock of social capital can flow either to communities or to individuals and households (Grootaert and Bastelaar; 2002).

Furthermore, distinction has been established between bridging, bonding and linking social capital. Bonding (which is exclusive) refers to relations amongst relatively homogenous groups such as family members and close friends and is similar to the notion of strong ties. Putnam (2000) lists examples of bonding social capital to include ethnic fraternal organisations and church based women's reading groups. Bridging (inclusive) social capital refers to relations with distant friends, associates and colleagues. Examples include civil rights movements and ecumenical religious organizations. These ties tend to be weaker and more diverse but more important in "getting ahead". Linking social capital refers to relations

between individuals and groups in different social strata in a hierarchy where social status differs and Woolcock (2001) extends this to include the capacity to leverage resources, ideas and information from formal institutions beyond the community.

Bonding social capital may have adverse effect of exclusion when it is strong. Elliot suggests, it creates a context for the growth of reactionary ideology such as sectarianism. This is a downside of the concept and is one of the many criticisms of Putnam's conceptualization of social capital. Another downside to social capital as against Putnam's assumption that it is a societal good lies in Halpern (1999) suggestion that organized crime or gangs involve a social work, which entails shared norms but do not constitute a societal good. Portes (1998) lists the downside of social capital as the exclusion of outsiders, restriction on individual freedom and a downward leveling of norms – a situation in which group solidarity is cemented by a common experience of adversity and opposition to mainstream society.

2.3 Inequality

There are several factors identified in the literature to be responsible for inequality in many countries. These include urban-rural disparity, education attainment level of household members, age distribution, gender and regional differences among others (Akita et al, 1999). Kuznet's seminal works of 1955 and 1963 on the relationship between economic development and income distribution aroused the interest on the sources of inequality in developing countries. This relationship has been studied in two directions. The traditional line of research is how growth and development affect income distributions. At the core of this debate was the Kuznets (1955) hypothesis that inequality rises in the process of economic development and then falls again (inverted U-curve). The more recent empirical evidence tends to reject this hypothesis (Bruno et al., 1998). Studies have shown that high degree of inequality in income distribution can have a negative effect on growth and increase poverty. A study by Person and Tabellini (1980) found a strong negative relationship between initial income inequality and future growth and poverty reduction in both developing and developed countries. Alesina and Perroti, 1996 argued that political instability in a highly heterogeneous and polarized society will enhance unequal income distribution and a low increase in economic well-being. In his review of poverty studies in Africa, Gary 1997, reports that Sub-Saharan Africa has the second-highest income inequality in the world, after Latin America and attributes change in poverty to economic growth and changing dispersion. He further asserts that for any given growth rate, the more disperse the distribution is becoming the smaller is the reduction in poverty.

Canagarajah, et al., 1997, reported increased level of poverty over the period spanning the 1980s and 1990s in Nigeria. The study further reported increased income inequality over the same period. This was established by an increase in the Gini coefficient from 38.1% in 1985 to 44.9% in 1992. In a similar vein, Okojie, et al., 2001 used relative poverty lines based on some percentage of mean per capita consumption expenditure to identify the poor and found that between 1992 and 1996 poverty in Nigeria increased from 43% to 69%. Against this negative impact of and unequal income distribution on economic growth and poverty, we have to consider a positive mechanism, that is, the hypothesis that a more unequal income distribution is instrumental in a Shumpeterian sense to bring about a higher level of entrepreneurial effort, work effort, and a higher level of capital accumulation financed by higher savings. Thus, taking all arguments together, from a theoretical point of view, the sign of relationship between inequality and growth is not determined.

Most of the early studies on income distribution was captured in the 1975 NES conference proceedings that devoted a whole section to various aspects of income distribution

(NES, 1975). The major shortcoming of most of the earlier studies is that they suffer a great deal from the paucity of data. Table 2.1 however presents some of the earlier estimates of inequality in Nigeria using Gini ratio. In Nigeria as in many developing countries, the Gini coefficient is commonly used measurements of income inequality (Aighoikhan, 2000). One of the findings is some form of gender disparity in income distribution. At the root of gender dimension of inequality and poverty is unequal access and control of productive resources by men and women (Awoyemi, 2000). For instance, in Nigeria fewer women compared to men own land because of certain socio-economic constraints, particularly, subordination of women within marriages and the lack of economic power to purchase land at the market price. So, the core aspect of income inequality is its relationship with economic growth and development. However, most studies have used income as the basis of welfare and further have not used other measures of inequality for comparison and sensitivity purposes.

Table 2.1: Gini Ratio From Various Studies

	1960	1963	1965	1970
Adelman and Morris	0.45			
Vielrose		0.474		
Aboyade			0.5-0.6	0.492
Vielrose				

Source: NES (1975)

Although there is widespread literature on inequality, there appears to be no consensus on how best to measure inequality Cavendish (1999) identified that measures of inequality can be broadly classified in to two which are normative measures and positive measures. Normative measures are derived by imposing restrictions on the inequality function derived from explicitly stated ethical beliefs underlying the societies' concern for inequality (Cavendish, 1999) while in the case of positive measures, the indices summarise features of statistical dispersion in income distribution, but they all fail basic ethical criteria for use as inequality indices. They have been widely used in many studies (see Kanbur, 1984) Examples of normative measures include the generalised entropy class of inequality index and the Atkinson index while examples of positive measures include relative mean deviation, coefficient of variation variance of logarithms and Gini coefficients among others.

There are several conditions that an inequality measure has to satisfy. Following Shorrocks (1980) and others, the chosen measure for decomposition should have five basic properties. They are: (1) Pigou-Dalton transfer sensitivity; (2) symmetry; (3) mean independence; (4) population homogeneity; (5) decomposability and (6) statistical testability.

Mean independence criterion means that if all incomes were doubled, the measure would not change. While *Population size independence* assumes that if the population were to change, the measure of inequality should not change, ceteris paribus. In the case of *symmetry*, if two households or individuals swap incomes, there should be no change in the measure of inequality. And the *Pigou-Dalton Transfer sensitivity* indicates that the transfer of income from rich to poor reduces measured inequality. Furthermore, inequality may be broken down by population groups or income sources or in other dimensions (*Decomposability criterion*) and finally, One should be able to test for the significance of changes in the index over time. This is less of a problem than it used to be because confidence intervals can typically be generated using bootstrap techniques (Cavendish, 1999).

The inequality measures that meet all this criteria are the general entropy class ($GE_{\alpha}(x)$) (see Cowell and Kuga, 1981 and Shorrocks, 1984) and the Atkinson measure.

However, the two measures are not significantly different as the Atkinson index is simply an increasing transform of the GE_α measures. Hence both GE_α and Atkinson rank income identically (see Cowell and Kuga, 1981). In addition to the above measures, the Gini index is also a widely used measure because it satisfies all the basic characteristics of a good measure except the decomposability criteria.

It has been identified in the literature that measures of inequality from the GE class are sensitive to changes at the lower end of the distribution for α close to zero, equally sensitive to changes across the distribution for α equal to one (which is the Theil index), and sensitive to changes at the higher end of the distribution for higher values (Cavendish 1999). In estimating inequality, there are various definitional problems. The first is on the definition of income that is used together with the reliability of income data. The reporting of income usually includes both earned and unearned income. There is also the problem of under reporting income in survey data as it has been found out that many households fail to disclose their actual income. This is one of the reasons why most recent studies have preferred expenditure data to income data (see Akita et al, 1999). It is in this line that this study will use the inequality measures that satisfy the criteria for good measures of inequality while using per capita expenditure as the welfare indicator instead of the household income.

Chapter Three

Methodology

3.1 Introduction

The central theme of this research is to examine the effects of human capital and capabilities on poverty in rural Nigeria. In order to achieve the assigned objectives of this study, the research methodology and analysis is hinged on the following procedure.

- The definition of an indicator of good living (welfare) so as to identify the poor.
- Choice of poverty index
- The econometric procedure to better understand the effects of human capital and institutions on rural poverty in Nigeria

The starting point for our analysis is to define a poverty measure for rural Nigeria based on our data. There are arguments in the literature on the appropriate measure of good living¹. In this study, we shall not enter into the debate on the best measure, however, we shall utilise per capita expenditure as our measure of household economic welfare. This is preferred to income because literature has shown that income as a measure of welfare especially in Sub-Saharan Africa has many flaws (see Datt and Jolliffe, 1999). One of the basic reasons is that individuals are often reluctant to declare their true income. The approach of using per capita expenditure has been used in many studies on poverty in Nigeria (see Canagarajah and Thomas, 2001).

The next thing to do is to determine the poverty line. A poverty line is often defined as a predetermined or well-defined standard of income or consumption, which is deemed to represent the minimum, required for a productive and active life or even survival (Okunmadewa, 1999). There is no official poverty line in Nigeria and as such many earlier studies have used poverty lines, which are proportions of the average per capital expenditure (see Canagarajah and Thomas, 2001 and FOS 1999). In this study, we also follow the approach to determine poverty line. Using the per capita expenditure, we define the poverty line as the two-thirds of the mean value of per capital consumption expenditures in the rural areas. This poverty line helps us in classifying the poor and non poor before we go on to calculate the poverty indices for rural households in Nigeria. We shall then use the Forster-Greer-Thorbecke (FGT) indices to measure the magnitude, depth and severity of rural poverty.

The general class of the FGT ($P\alpha$) class of poverty measures is given by

$$P\alpha = \int \{(z-y)/z\}^\alpha f(y)dy \quad 1.$$

Where z is the poverty line, $f(y)$ is the population density function of income. The 3 indices that we intend to use are the $P0$, which is the headcount ratio, $P1$, which is the poverty gap index and the poverty severity index, $P2$. These indices shall thereafter be decomposed according to the characteristics of the household including human capital and capabilities variables. After identifying the rural poor and characterising them, the next issue is to examine the determinants of poverty in rural Nigeria with special emphasis on variables related to human capital and capabilities.

3.2 Models Specification

¹ See studies such as Lipton and Ravallion (1995), Khan (2000) and Sahn and Stifel (2000) for some arguments for and against different measures.

There are two main approaches in modelling the determinant of poverty. The first is to model the determinants of the indicator of welfare usually income, consumption or expenditure using the ordinary least square estimation technique. The second is to group the non-poor and the poor separately and utilise a limited dependent variable framework. This may include the use of probit, logit or tobit estimation techniques. The approach in this study is to combine different approaches in achieving our objectives.

For the first objective of examining the effects of human capital on poverty, we specify two models, we model per capita expenditure as the indicator of standard of living and for the second approach, we classify all households into the poor and non-poor groups using the relative poverty line of two third of mean per capita expenditure (PCE). We then estimate probit to examine the determinant of the probability of a household being poor in rural Nigeria. In the case of the per capita expenditure we specify our model as follows

$$\ln PCE = a_i X_i + u_i \quad \dots \quad 2$$

Where $\ln PCE$ = log of per capita expenditure
 X is a set of household characteristics and other determinants, and
 u is a random error term.

The parameters of equation 2 are estimated using the ordinary Least Square (OLS) estimation technique.

PCE is used because it measures ability to obtain goods and services. There are four main reasons that are identified in the literature why consumption or expenditure is preferred to income. (Datt et al 2000). First, according to Atkinson, 1981, income is only a measure of welfare opportunity and not welfare achievement. This is because not all income is consumed and not all consumption is financed out of income. Second, It has been found that expenditure fluctuates less than income and thus provides more accurate and stable measure of welfare. Third, respondents to survey instrument are more willing to give their expenditure information than income information, and finally, where there is a large proportion of self employed and own consumption, measurement of income is often fraught with difficulties.

The second approach used in modelling the determinants of poverty in this paper is the probit model with binary response in analysing the determinants of the probability of households being poor. The probit specification is designed to analyse qualitative data reflecting a choice between two alternatives, which in our case are the poor, and the non-poor. The probit model thus represents a convenient way of quantifying the relationship between the characteristics of the households/individuals and their poverty status. The dependent variable takes the value of zero or one where one represent being poor and zero otherwise. The choice of the probit model is premised on the fact that ordinary least squares assume a continuous dependent variable while in the case of poverty, the response is a binomial process taking the values of 1 for poor and 0 for non-poor. In addition, level regression imposes constant parameters over the entire distribution. This assumes that the poor are not fundamentally different from the rich may not be a plausible assumption (see Grootaert, 1997 and Bekouin, 2000)

We therefore transform our dependent variable which is the household per capita expenditure into a dichotomous response variable y_h with binary outcomes taking two values ($y_h \in \{0,1\}$), with $y_h = 1$ if per capita expenditure is greater than the poverty line, and 0 otherwise. Based on the above, the probability of poor which corresponds to $y_h = 1$, is derived using the following probit equation

$$Pr(y_h = 1) = \Phi[\sum \beta_k x_k] \quad \dots 3$$

In the same vein, since the response is a binary outcome, the probability associated with alternative event of being non-poor is represented by

$$Pr(y_h = 0) = 1 - \Phi[\sum \beta_k x_k] \quad \dots \quad 4$$

Where Pr is the likelihood of being poor and where

y_h = poverty status of household i ($Y_i = 1$ if the household is poor, and zero if the household is non-poor)

x_{ik} = k-th explanatory variable of the likelihood of poverty of household i

β_k = parameter associated with x_k

The estimation of equations 3 and 4 yields predicted probabilities given the set of values taken by the explanatory variables. However, our analysis will be based on the marginal effect of each variable on the probability of the effect. This is because probit coefficients do not represent the standard marginal effects represented by linear regression coefficients. However, the marginal effects combine the predicted probability of being poor with the estimated probit coefficients.

The marginal effect is derived by taking the partial derivative of equation 3 with respect to an independent variable. This is given as

$$\frac{\partial \text{Prob}(Y=1)}{\partial x_k} = \Phi[\sum \beta_k x_k] * \beta_k \quad \dots \quad 5$$

Equation 4 represents the marginal changes in the probability that a household is poor due to changes in the underlying regressors. It should be noted that the changes are evaluated at the mean values of the data.

The parameters of the probit model are then estimated using the maximum likelihood estimation method. The assumption is that the response variable has a sample of N observations, which are independent.

In examining the effects of social capital on welfare, we have followed the analytical framework earlier applied by Narayan and Prichett (1997) and Grootaert (1999). Essentially, the customary or conventional model of household economic behaviour under constrained utility maximization was used to relate the level of household expenditure (as money – metric indicator of welfare) directly to the exogenous asset endowments of the household and variables describing the social and economic environment in which the household makes decision. The model is as follows:

$$\ln E_i = a + \beta SC_i + \gamma HC_i + \delta OC_i + \epsilon X_i + \eta Z_i + u_i$$

Where E_i = Household expenditure per capita of household i

SC_i = Household endowment of social capital

HC_i = Household endowment of other assets

X_i = a vector of household characteristics

U_i = error term

The key feature of the model is the assumption that social capital is truly “capital” i.e. a stock, which generates a measurable return (flow of income) to the household. Social capital has many “capital features: it requires resources (especially time) to be produced and it is subject to accumulation and destruction. The effect of destruction of social capital is evident in the work of Rose (1995) on Russia and former Yugoslavia.

Much social capital is built during interactions, which occur for social, religious, or cultural reasons. The key assumption is that the network built through these interactions has

measurable benefits to the participating individuals, and lead, directly or indirectly, to a higher level of well-being. There is an impact assumption that social capital is embodied in the members of the household. This conforms to the position advocated by Portes (1998), which highlights that, although the source of social capital is the relationship among a group of individuals, the capital itself is an individual asset. This is in contrast to the position of Putnam (1993), who sees social capital as a collective asset.

The SC_i was arrived at through the construction of a multiplicative index of the three social capital dimensions which the literature has always shown to be: density of association, internal heterogeneity and active participation in decision making (Grootaert, 1999; and Grootaert et al 2002). In order to test whether social capital is truly capital, the method of instrumental variable was used. In this instance, we identified those variables that are determinants of social capital but not household welfare (nor are they determined by household welfare. Following Grootaert (1999) and Narayan and Prichett (1997), the instrumental variable used is the index of trust. Though this may not be a perfect instrument, it at the least provides the direction of causality between social capital and household welfare. If social capital is truly capital, the coefficient of the instrumental variable (trust) should be higher than what is obtained for the actual social capital variable in the OLS estimation.

In addition, we also estimated the Tobit regression, which is a hybrid of the discrete and continuous dependent variable in order to determine the impact of the explanatory variables on the probability of being poor.

The model is expressed following Tobin (1958) as adopted by Omonona (2001) below:

$$\begin{aligned}
 q_i &= P_1 = f(sc, he, oc, hh, re) + e_i && \text{if } P_1 > P_1^* && 2.1 \\
 &= 0 = f(sc, he, oc, hh, re) + e_i && \text{if } P_1 \leq P_1^* \\
 i &= 1,2,3 \dots\dots\dots 582
 \end{aligned}$$

Where q_i is the dependent variable. It is discrete when the households are not poor and continuous when they are poor. P_1 is the poverty depth/intensity defined as $(Z - Y_i)/Z$ where Z is the poverty line, and Y_i is per capita household expenditure (PCE). The poverty line (Z) is the two-thirds of the mean per capita household expenditure ($2/3$ MPCE). P_1^* is the poverty depth when the poverty line (Z) equals the expenditure per capita (here $P_1^* = 0$).

Variables Definition

The key social capital variables that were used in the regression analysis in include

1. **Density of membership:** this is captured by the summation of the total number of associations to which each household belongs. In other words, the membership of associations by individuals in the household is summed up.
2. **Heterogeneity index:** this is an aggregation of the responses of each household to the questions on the diversity of members of the three most important institutions to the households. On each of the three associations, each household answered questions on whether members live in same neighbourhood, are same kin group, same occupation, are of same economic status, are of same religion, same gender, same age group and same occupation. Hence, for each of the factors a yes response is coded 0 while no response is coded 1. A maximum score of 10 for each association represents the highest level of heterogeneity. The scores by the three associations for each household are then divided by the maximum score of 30 to obtain an index. This index is then multiplied by hundred (a zero value represents complete homogeneity while 100 represents complete heterogeneity).

3. **Meeting attendance index:** this is obtained by summing up the attendance of household members at meetings and relating it to the number of scheduled meetings by the associations they belong to. This value was then multiplied by 100.
4. **Cash contribution:** This was obtained by the summation of the total cash contributed to the various associations which the household belong. The actual cash contribution for each household is rescaled by dividing this amount by the maximum fee amount in the data and multiplying the resultant fraction by 100.
5. **Labour contribution:** this is the number of days that household members belonging to institutions claimed to have worked for their institutions. This represents total number of days worked by household members. This is also rescaled to 100 using the same process as for cash contribution.
6. **Decision making index:** this was calculated by summation of the subjective responses of households on their rating in the participation in the decision making of the three most important institutions to them. The responses were averaged across the three groups and multiplied by 100 for each household.
7. **Aggregate social capital index:** this is obtained by the multiplication of density of membership, heterogeneity index and decision making index (herewise)

Inequality

The generalised entropy measures and the Gini are the measures of inequality that are utilised in this study. While the general entropy indices satisfy all the suitable properties of a distribution index as identified in our literature review, the Gini index fail in one property of being able to be written as the sum of between- and within-group inequality components. Despite this shortcoming we have also utilise Gini index since it is sensitive to changes in the middle income range. The equation for the measures are presented as follows

Gini

$$(1/2n^2) \sum \sum |x_i - x_j|$$

Ge(0) = Mean log deviation

$$(1/n) \sum \ln (0/x_i)$$

GE(1) = Theil Entropy index

$$(1/n) \sum (x_i/0) \ln (x_i/0)$$

GE(2) = generalised Entropy index

$$(1/2)(1/n) [\sum (x_i/0)^2 - 1]$$

Where n is the number of units in the sample, x_i is the per capita expenditure of household i. The parameter α is the GE class of measures range from 0 to ∞ with 0 representing an equal distribution and higher levels representing higher levels of inequality. For this study we have used only two values (1 and 2) for α .

Decomposition of Inequality

The generalised entropy measures employed in this paper have the appealing property of additive decomposability, such that the degree of measured inequality of the distribution of an income variable can be decomposed into a component of inequality between the population groups I_b and the remaining within-group inequality I_w . The decomposition by population subgroups of the GE class is defined as:

Inequality = within-group inequality + between-group inequality

Different characteristics of the households in terms of sizes, age and sex distribution, occupational distribution, educational distribution and socio-economic status often strongly influence their food security status.

3.3 Data Requirement and Sources

This study is based on merged data from the 1996 General Household Survey (GHS) and the National consumer survey (NCS) conducted by the Federal Office of Statistics as supplemental modules under the National Integrated Survey of Households (NISH). Both surveys had a national coverage, covering all the 30 states of the federation at the time and the federal capital territory. The sample design for the study was a two stage stratified sample design. The first stage was a cluster of housing units called Enumeration Area (EA), while the second stage was the housing unit. The sampling procedure was such that 120 Enumeration Areas (EAs) were selected and covered annually in each state. However, 10 EAs were randomly allocated to each month of the survey. In each selected EA, a sample of 10 households was covered each month for the GHS while five households were sub-sampled for the NCS. In the final analysis, the merged GHS and NCS data consists of 9,436 households spread across all the states of the federation. The data is rich in providing general information required for an examining the determinants of household poverty in rural Nigeria. Apart from the fact that it provides information on the structure and composition of households, it also provides information on the quality of housing facilities available to the households.

Since the GHS data does not have adequate information to analyse social capital issues, we have also complemented the GHS data with additional data that we collected from the six pilot states of the World Bank assisted Community-based Poverty Reduction Project (CPRP) in Nigeria. The states are Abia, Cross River, Ekiti, Kebbi, Kogi, and Yobe. The data were mainly from primary sources through field survey. Following the Federal Office of Statistics (FOS) framework, and given the available budget, 10 enumeration areas were selected from 3 local government areas (LGAs) in each state. These LGAs are in the rural area of the states. Ten respondents were selected from each enumeration area, making a total of 100 respondents for each state. However, these respondents belonged to at least one social organization. Further, only 582 questionnaires of the total 600 for all the states were processed for the study. This gave a response rate of 97%. The data were collected by trained enumerators who speak local languages in each of the states between the months of July and September 2003.

The instrument used for data collection includes the following items:

- (i) Consumption expenditure - that is the amount spent on food, clothing and foot wear, housing, energy, education, health care, transport and communication by the household;
- (ii) Demographic characteristics of household members;
- (iii) Participation in local level institutions;
- (iv) Perceptions of community trust and collaborations; and,
- (v) Household economy and coping strategies.

Chapter Four

Analysis and Findings

4.1 Poverty Profile in Rural Nigeria

The starting point for our analysis is the characterisation of the poverty profile of rural households in Nigeria. This provides the key correlates of poverty as well as gives important clues underlying the determinants of poverty. Table 4.1 presents the characteristics of the households taking specifically into consideration, the issues of human capital and capabilities. Poverty is distinguished by gender and we found that poverty incidence is higher for male-headed households at 62.8 percent and that of female-headed households is 56.0 percent. However, poverty is more severe among the female-headed households. In terms of the age of the household head, we found that households headed by old people who are 65 years and above have the highest poverty incidence in Nigeria followed by household whose heads fall within the age group 35 to 44 years old. The old age poverty in Nigeria could be traced to the fact that most of the rural dwellers operate in the informal sector where there is no pension cover. Hence when they become too old to engage in farming activities, they find it difficult to generate income and slid into poverty. In addition to household headed by old people, households whose head falls between the age-range of 35 to 44 years old also have a very high poverty incidence of 63.7 per cent. However, the poverty gap and severity is higher for household whose head falls into the age range of below 25 years. This might be due to the fact that these are households that developed after the economic crisis of the eighties and the attendant problems.

In the rural sector of the Nigerian economy, it is common to find male headed households with more than one wife. The most quoted reason for this is that since most of the farming activities are not mechanised, an extra wife is an extra hand in the farm and hence, the more the number of children in the household. We therefore investigate the poverty profile in rural areas by the number of wives of the household head. Our results show that the argument of more cheap labourers with extra wife may not be plausible as the higher the number of wives of the male household head, the higher the poverty incidence in the household. While unmarried household head have the lowest poverty incidence of 34 per cent, household heads, who have at least four wives or more have a poverty incidence of 97 percent.

We distinguish rural households by different indicators of capabilities. The capabilities include access to safe water, good sanitation, shelter and refuse disposal and examine the poverty profile for households in the different categories. Table 4.2 presents the poverty profile by capabilities in rural Nigeria. The results show that Household without safe water are poorer than those who have access to safe water. Despite the fact that more than 58 percent of rural Nigerians have no access to safe water, 62.9 percent of them are also poor by the poverty headcount ration. Poverty is also more severe among those households without access to safe water. The same trend is observed among those who have access to safe sanitation and good refuse disposals. In this case, those with better access have lower proportion of the poor either in headcount, depth or severity. In addition, we found that there is a positive relationship between the number of persons per room and the incidence of poverty. Households with smaller number of people living in the house have a lower poverty index. For example, while only 42.4 percent of persons living in households with less than an average of 1 person per room; the poverty incidence for households with at least 6 persons per room is 66 percent

Nigeria is a federal country with 36 state and 778 local government areas. As a result of the multiple ethnic, locations, tribes, the country is often divided into six geopolitical zones for ease of policy and analysis. We therefore present rural poverty profile among the

six different geopolitical zones of the country. The Table reveals that rural poverty is highest in the Northeast and lowest in the Southeast.

Table 4.1: Poverty Profile by Different Categorisations of the Rural Households

	P0 Headcount	P1 Poverty Gap	P2 Severity	Proportion of population
Capabilities				
Safe water				
Yes	0.622	0.300	0.183	41.10
No	0.629	0.299	0.176	58.90
Safe Sanitation (toilet)				
Yes	0.610	0.286	0.170	42.80
No	0.635	0.309	0.188	57.20
Good refuse disposal				
Yes	0.618	0.303	0.181	23.00
No	0.629	0.297	0.177	77.00
Shelter (persons per Room)				
1 person or below	0.424	0.204	0.119	38.10
1.1 - 3	0.594	0.279	0.165	41.80
3.1 – 6	0.611	0.300	0.185	18.10
Above 6 persons	0.660	0.313	0.187	2.10
Type of house				
Single room	0.639	0.310	0.187	71.82
Duplex	0.627	0.332	0.220	2.03
Whole building	0.678	0.379	0.250	0.71
Flat	0.581	0.267	0.158	24.95
Others	0.556	0.222	0.119	0.49
Geopolitical Zone				
South West	0.552	0.261	0.160	7.10
South East	0.494	0.213	0.121	14.80
South South	0.543	0.255	0.153	15.50
North east	0.732	0.379	0.238	19.40
North West	0.718	0.343	0.205	21.90
North Central	0.603	0.286	0.172	21.30

4.2 Determinants of Rural Poverty

The key socio-economic determinants of rural poverty in Nigeria include human capital variables, household characteristics, economic activity of the household head and the spatial locations of the households. We recognise the potential problems of omitted variables and try to solve them using fixed effects model (i.e. set of enumeration areas dummy variables) that will control for observed and unobserved enumeration area level determinants of living standard. This is based on our belief that including enumeration area fixed effects would control for much of the potential omitted variable bias.

The first model that is estimated is a fixed effect model of the determinant of welfare. Our measure of welfare indicator is the real per capita expenditure of the household. While we recognise that even this indicator excludes some aspect of welfare such as consumption of public goods like schools, health services etc., it is still one of the best representation of

money metric measures of welfare that reflects households preference conditional on prices and incomes. Table 4.4 presents the parameter estimates for rural households in Nigeria. The model is estimated using ordinary least square estimation technique with enumeration area fixed effects. The fit is good with a R^2 of 0.4659 and virtually all the parameter estimates are statistically significant. In terms of the characteristics of the household head, we found that the age of the household head shows the expected life cycle effect. Household welfare increases with age given the positive significant sign of the parameter of age. But the negative sign of the quadratic which is statistically significant shows that welfare declines after some period. This reflect the situation where there is higher earning capacity with greater experience and age thereby leading to consumption smoothing over the life cycle. The magnitude of the quadratic parameter is however very low.

Table 4.2: Determinants of Poverty Among Rural Households in Nigeria: OLS Estimation

Source	SS	df	MS			
Model	978.016428	11	88.9105844	Number of obs =	7374	
Residual	1117.65621	7363	.151793591	F(11, 7363) =	585.73	
				Prob > F =	0.0000	
				R-squared =	0.4667	
				Adj R-squared =	0.4659	
				Root MSE =	.38961	
Total	2095.67264	7374	.284197537			

dev_logpce	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dev_age	.0113486	.0028874	3.93	0.000	.0056885	.0170087
dev_age2	-.0001155	.0000282	-4.09	0.000	-.0001708	-.0000602
dev_gender	-.1387528	.0232984	-5.96	0.000	-.1844244	-.0930812
dev_achild	-.1692214	.0024171	-70.01	0.000	-.1739595	-.1644833
dev_adult	-.0349701	.0054292	-6.44	0.000	-.0456128	-.0243273
dev_sizeofhh	-.0289058	.0064254	-4.50	0.000	.0163102	.0415014
dev_hh2	.001039	.0003686	2.82	0.005	.0003165	.0017615
edu2	.1613294	.0299761	5.38	0.000	.1025674	.2200914
dev_edu3	.0554228	.0280452	1.98	0.048	.0004462	.1103994
dev_edu4	.0541221	.0280565	1.93	0.054	-.0008767	.1091209
dev_farming	-.0285342	.0240799	-1.18	0.236	-.0757376	.0186692

The coefficient for female headed household is significant indicating that the per capita expenditure of female headed households is significantly different from that of the male headed households. Our results indicate that demographic variables are important determinants of welfare. Household size has a significant negative effect on welfare indicating that the larger the household size, the lower the per capita expenditure. It is believed that it is also possible to have economies of scale for large households, but this is not the case with the rural households. Our result confirms many earlier studies on the impact of household size (see (Lipton and Ravallion, 1995). The quadratic of the household size is also significant but negative. We further found that household composition matters. An that an increase in either the number of children or old people in the household will reduce the overall welfare level of the household given the negative significant values of the parameters of the variables. A comparison of the coefficients of the adults and children indicates that an additional adult in the household reduces Per capita expenditure less than an additional child in the household all ceteris paribus. While an extra child reduces per capita expenditure by 16.5 percent, an extra adult in the household reduces per capita expenditure by 3.5 per cent

The educational attainment of the household head is a major factor in the determinant of welfare in the households. Our results show that education attainment has a strong positive effect on the welfare status of the households. We however found that the economic activity

of the household head, whether in the non-farm sector or the farming sector do not have any significant impact on the welfare of the households in rural Nigeria.

In addition to the OLS estimation, we also present the results of probit regressions for rural households in Table 4.5. The likelihood ratio statistics show that the model is significantly different from the null or intercept only model. We examine the marginal impact of each variable on the likelihood that the household falls into poverty. The results are largely in line with the findings of the OLS estimations. The age of the household head is a significant determinant of the probability of being poor. This is further reinforced by the marginal effects of the probit. The age of the household head initially reduces the probability of being poor while the age squared is positive indicating that at later years, there is the possibility of increase in age increasing the probability of being poor. However, as been found earlier, the life cycle effect is very minimal judging by the value of the marginal effect. The result shows that a unit change in age squared will only reduce the probability of being poor by 0.01 percent only. The results reveal that there is a life cycle effect of age to rural poverty, as the predictors are significantly different from 0.

The positive and significant sign of the coefficient for female-headed households shows that a female headed household has a higher probability of being poor than the male headed households. Household structure also has significant effects on the probability of being poor in the rural areas. It is interesting to note that the presence of more adults and children increases the probability of the household being poor. This is in line with our OLS results. However, while the parameter of the extra child is statistically significant, the parameter of the extra adult is not significant. This findings might reflect the fact that an extra person increases the quantity of individuals relative to the resources available to the household.

Table 4.3: Determinants of Poverty Among Rural Households in Nigeria: Probit Estimation

Probit estimates Number of obs = 7374
LR chi2(11) = 1210.70
Prob > chi2 = 0.0000
Log likelihood = -3413.8044 Pseudo R2 = 0.1506

poora	dF/dx	Std. Err.	z	P> z	x-bar	[95% C.I.]
age	-.002337	.0022478	-1.04	0.299	46.3368	-.002069	.006743	
age2	.0000463	.000022	2.11	0.035	2297.95	-.000089	-3.2e-06	
gender*	.0389786	.0163896	2.47	0.014	.874113	.006856	.071102	
achild	-.0084555	.0019291	-4.38	0.000	3.30703	-.012236	-.004674	
adult	.0036399	.0046898	0.78	0.438	.724706	-.012832	.005552	
sizeofhh	.1201946	.0052021	23.18	0.000	5.97514	.109999	.13039	
hh2	.004585	.0002941	15.73	0.000	44.7902	-.005161	-.004009	
edu2*	-.1904366	.0159167	-13.13	0.000	.168273	-.221633	-.15924	
edu3*	-.1858354	.0257908	-8.08	0.000	.065309	-.236385	-.135286	
edu4*	-.2053233	.042418	-5.47	0.000	.022776	-.288461	-.122186	
farming*	.0165319	.0177713	0.91	0.363	.070877	-.018299	.051363	
obs. P	.7651724							
pred. P	.7982368	(at x-bar)						

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| are the test of the underlying coefficient being 0

All the predictors of human capital variables represented by the educational level of the household head have estimates that are significantly different from 0 as judged by the size of the coefficient relative to the asymptotic standard error, and further by the size of p-values. The results agree totally with the OLS results as they indicate that education reduces the probability of being poor in a household and judging from the marginal effects, the largest impact is for those who have up to post-secondary education, which is followed by those with primary education. Human capital has a decreasing effect on the probability of being poor among all rural households whether they are engaged in farm activities or engaged in non-farm activities. The marginal effects indicate that the effects are significant both in magnitude and sign. For example having up to primary level of education reduces the probability of being poor by the rural households by as much as 19.0 percent while for households with education up to secondary school decreases the probability of being poor by 18.6 percent

In addition, households whose head are engaged in farming activity have a higher probability of being poor and the marginal effect shows that this is as about 4 percent. In all, the results from our estimations reveal that household characteristics including human capital variables have negative significant effect on the probability of rural households being poor in Nigeria.

4.3 Inequality Among Households

Inequality in this paper is conceptualised as the dispersion of the distribution of the attributes of the welfare indicators of the population, like income and consumption. As revealed in the last chapter our welfare indicator is per capita expenditure of the household. Using the decomposition equation, total inequality is decomposed into within and between group components according to several socio-economic variables taken at a time. The variables include the age, gender, and education of the head of the household. Others are the economic activity of the household head as well as the geopolitical zone that the household head belongs. The results of the inequality status as well as the decomposition analysis are presented in this chapter.

We start by presenting the context of rural inequality in Nigeria in relation to urban and national inequality. We found that households in urban areas are generally richer than those in the rural areas. While the mean per capita expenditure of households in the urban areas is N1,519.08 compared to N1,092.63 among rural households. In fact average per capita expenditure among rural households is just 87 percent of national mean expenditure which is N1,265.52. Although inequality among rural households as reflected by the Gini index of 0.51 is very high, it is lower than both urban and national inequality index. While the Gini index for the urban households is 0.56, it is 0.54 among all household both urban and rural. Generally, all inequality indices reveal that inequality is higher among urban households than rural households. The differential inequality reveals that since most of the rural households are poorer, their PCE is not too dispersed compared to what obtains among urban households. However, it is important to investigate the prevalence of inequality among rural households as this will inform policy options of alleviating poverty in the sector without worsening the inequality in the sector of the economy. Table 4.1 decomposes inequality between and within urban and rural sectors of the country and indicate that more than 97 percent of the inequality in the country is accounted for within the groups while less than 3 percent of the inequality is accounted for by the differences in urban and rural locations in the country. Since most of the inequality in the country exists within either rural or urban area, we hereby investigate the factors of inequality focusing specifically on the rural households

Table 4.4 Inequality Decomposition by Residential Location of the Household Head

	GE(0)	GE(1)	GE(2)	Gini
Urban	0.58448	0.65298	1.42681	0.56603
Rural	0.4543	0.52937	1.32753	0.50876
Within Group Inequality				
Within Group Inequality	0.5022	0.58467	1.41748	
Percentage	97.49	97.79	99.05	
Between-group inequality				
Between Group	0.01294	0.01321	0.01354	
Percentage	2.51	2.21	0.95	

Source: Computed by the Authors

Table 4.2 presents the decile population and income shares. The table shows that the top 10 percent of the rural population earns about 34 percent of total income in rural areas. This is more than what the lowest 60 percent of the Rural Nigerians earns. The top 20 percent of the population actually earns more than 50 percent of total income in rural Nigeria. All these have implication for the prevailing inequality level in the rural areas.

Table 4.5 Decile Population and Income shares (percent) of Rural Households

Decile	Mean Income	Income share
1	320.0328	1.68
2	460.8435	2.84
3	559.1400	4.26
4	699.8928	5.42
5	823.2080	6.37
6	862.6003	6.99
7	1072.7290	9.86
8	1194.5690	10.51
9	1483.0280	18.09
10	2614.6480	33.98
	1165.4230	100.00

Source: Computed by the Authors

Decomposition by Education of Household Head

In most developing countries the level of education is low and Nigeria is not an exception. Table 4.5 shows that 67 per cent of the population had no education, 21 per cent had primary school, barely 9 per cent had secondary education while 3 per cent had more than secondary school education. Human capital theory suggests positive correlation between educational level and job opportunities and capacity to earn high income. Hence, employment opportunities tend to vary between individuals depending on the level of educational

attainment. This is because one's labour productivity is affected by the amount of knowledge, information and skills acquired and education can be a major determinant of inequality.

Table 4.6 Mean Expenditure and Proportion of Households by Education of Household Head

	Percentage share of households	Mean Income	Proportion of National mean Income
No education	67.25	954.28	0.87338
Primary education	20.76	1,411.84	1.29215
Secondary education	9.15	1,491.06	1.36466
Beyond secondary	2.83	2,108.79	1.93002

Source: Computed by the Authors

Table 4.5 shows a positive relationship between educational attainment of the household head and the per capita mean expenditure. We found that the higher the educational attainment of the head of the household, the higher the mean income of the household. Hence, mean income is just N954.28 for households whose head has no formal education while households whose head had education beyond secondary school had mean income of N2,108.79 which is 193 per cent of national average expenditure.

Our findings in Table 4.6 reveal that inequality in Nigeria increases with the level of educational attainment. The higher the income, the higher the higher the inequality. In essence, inequality is highest within the households where the head has education beyond secondary schools and lowest in households where the head has no formal education. In fact for households with the highest education attainment, the inequality is as high as 66 percent (the highest for any of the categories that we identified) and the GE(0) index is 80.1 percent.

Decomposing this inequality, we find that inequality is also mainly a within group affairs as within group component of the inequality accounts for more than 95 percent of total inequality while the between group component accounts for more than 4 percent. This is the highest between-group inequality among all the factors of inequality that is considered in this paper. This shows that in addition to inequality within each educational level of household heads, differences in educational level attained by the household head also account for inequality among Nigerian households. The implication is that although, household heads may have attained the same educational level, their incomes are largely determined by their employment activities which further determine the structure of earnings which cause differences in earnings and thus mean average income.

Table 4.7 Inequality Decomposition by Education of Household Head

	GE(0)	GE(1)	GE(2)	Gini
No education	0.41279	0.47934	1.23108	0.48579
Primary education	0.42607	0.43999	0.68468	0.49405
Secondary education	0.53783	0.56487	0.98773	0.54774
Beyond secondary	0.80128	1.08338	3.41079	0.65846
Within-group inequality				
Within Group	0.43204	0.50496	1.3002	
Percentage	95.10	95.39	97.94	

Between-group inequality				
Between Group	0.02227	0.02441	0.02733	
Percentage	4.90	4.61	2.06	

Source: Computed by the Authors

Decomposition by gender

Table 4.7 reveals that 87.4 percent of households in Nigeria are headed by male while only 12.6 percent are headed by the female. However, the mean expenditure of female-headed households are richer as their mean expenditure of N1,169.84 is higher than the mean expenditure of male-headed households with N1,086.74.

Table 4.8 Mean Expenditure and Proportion of Households by Gender of Household Head

	Percentage share of households	Mean	Proportion of National Income	of mean
Male	87.37	1,086.74	0.99461	
Female	12.63	1,169.84	1.07067	

Source: Computed by the Authors

However, inequality index is similar no matter the gender of the household head as the Gini index for both sexes is 50.8. This is further revealed in the decomposition analysis as revealed by Table 4.8 however which indicate that gender inequality is not a prominent factor in overall expenditure inequality as the between group component is less than 1 percent. This tends to support the findings of Alayande (2003) on gender inequality in Nigeria. However, the Theil indices suggest slightly higher inequality among male headed households than female headed households, but these may not be very significant. This means that elimination of gender inequality will not reduce total expenditure inequality significantly. Virtually all the inequality is accounted for either within male headed or within female headed households.

Table 4.9 Inequality Decomposition by Gender of Household Head

	GE(0)	GE(1)	GE(2)	Gini
Male	0.45321	0.53508	1.38309	0.50848
Female	0.46605	0.45737	0.69051	0.5081
Within Group	0.45412	0.52919	1.32734	
Percentage	99.96	99.96	99.99	
Between-group inequality				
Between Group	0.00018	0.00019	0.00019	
Percentage	0.04	0.04	0.01	

Source: Computed by the Authors

Decomposition By Geopolitical Zones

Nigeria is a federal government with three tiers of governance at the national, state and the local government levels. There are 36 states and 778 local governments in the

country. However, for geographical and tribal conveniences, the nation is often subdivided into six geopolitical zones. We therefore assess the impact of geopolitical zones on aggregate living standards, as well as welfare differences between households. We find that location and climate could have large effects on income levels and income distribution, through their effects on transport costs, disease burdens, and agricultural productivity, among other channels.

Table 4.10 Mean Expenditure and Proportion of Households by Geopolitical Zone of Household Head

	Percentage share of households	Mean	Proportion of National mean Income
South west	7.08	1,281.48	1.17284
South east	14.79	1,513.26	1.38498
South south	15.47	1,257.53	1.15093
North east	19.37	851.06	0.77891
North west	21.96	890.79	0.81528
North Central	21.33	1,302.43	1.19202

Source: Computed by the Authors

Table 4.13 shows that South East zone has the highest mean income of N1513 while North east zone accounts for the least mean income of N851.06. However, in spite of differential value of average income across these zones, the inequality index is very high in all the geopolitical zones with the southwest being the zone with the highest level of inequality and the northwest with the lowest level of inequality (Table 4.14). The within-group component of inequality accounts for 95 percent while the between-group component accounts for 5 percent of total inequality in Nigeria. This means that some policies to reduce inter-geopolitical zones might reduce some inequality in the country.

Table 4.11 Inequality Decomposition by Geopolitical Zone of Household Head

Polzone	GE(0)	GE(1)	GE(2)	Gini
South west	0.48632	0.52026	0.95969	0.52099
South east	0.41866	0.42958	0.66801	0.48905
South south	0.44613	0.44709	0.69141	0.5004
North east	0.44261	0.5068	1.1194	0.50353
North west	0.39861	0.5566	2.41266	0.47643
North Central	0.4823	0.51171	0.88455	0.52071
Within Group				
Within Group	0.42923	0.50392	1.30141	
Percentage	94.48	95.19	98.03	
Between-group inequality				
Between Group	0.02507	0.02545	0.02612	
Percentage	5.52	4.81	1.97	

Source: Computed by the Authors

Social capital

Dimensions of Social Capital

Six dimensions of social capital were studied. These are: cash contribution; labour contribution; decision-making index; meeting attendance index; heterogeneity index and percentage of members of household belonging to local level institutions (LLIs). Table 4.3 presents the summary statistics for each of these dimensions. An average household with about 9 individuals belongs to at least 3 associations and has 58.7 percent index of participation. In addition, there is moderate level of heterogeneity in the associations to which households belong at 51.81. Meeting attendance index of 10.27 represents only one sixth of the maximum attendance recorded for the households. There seems to be low cash and labour contribution score. Of the maximum 100 score, the cash and labour contribution scores average 12.3 and 5.9 respectively.

Table 4.12: Summary Statistics of the Social capital dimensions

Social Capital	Mean	Median	Standard Deviation
Household memberships in association	3.11	3.00	3.19
Index of participation	58.71	66.67	27.94
Heterogeneity index	51.81	56.67	34.12
Meeting attendance index	10.27	8.33	8.31
Cash contribution score	12.29	4.55	17.30
Labour contribution score	5.90	0.80	11.39

Source: Field survey, July-September, 2003

These various dimensions of social capital are further presented based on the specific characteristics of the household presented in table 4.1.

4.1.3 Socio-Economic Characteristics and Dimension of Social Capital

Sex of Household head and Dimensions of Social Capital

The table below shows the mean values of the six dimensions of social capital based on the sex of the household heads.

Table 4.13: Sex of Household Head and Social Capital Dimension

Social capital dimension	Sex of Household heads	
	Male	Female
Cash contribution (naira)	15434.48	18059.32
Labour contribution (days)	172.69	36.05
Decision making index (G)	57.76	66.95
Meeting attendance index (%)	59.33	65.18
Heterogeneity index (%)	51.46	54.92
Percent of household members belonging to LLIs.	37.20	40.85
Total	1889.74	2269.50

Source: Computed from Field Survey July - September, 2003.

From table 4.4, the female-headed households have higher values of social capital in all its dimensions with the exception of labour contribution than their male counterpart. The higher labour contribution of male-headed household could be attributed to their higher household size and lower mean per capita expenditure on LLIs. It is surprising that though the female-headed households have lower average years of formal education, they have higher social capital values for almost all the dimensions. This may not be unconnected with the fact that majority of the women are into non-farming activities especially trading which necessitates that they belong to various occupational associations in order to promote their business and protect their interest.

Years of formal education of household head and social Capital Dimensions

All the social capital dimensions seem to increase as the level of education of the household head increases, from no formal education to more than 12 years of formal education. The pattern of cash contribution is due to the fact that ability to earn money from paid employment rises with level of education. Infact most of those households with the head having above 12 years of formal education are engaged in non-farming activities. The ability to make informed decisions in LLIs is directly related to the level of education. Households headed by persons with above 12 years of formal education know the importance of attending meetings. Also the more educated a person heading a household is, the easier it is to get associated with people of other cultures, beliefs, religions etc in a group.

Table 4.14: Years of formal education of household head and social capital dimension

Social capital dimensions	Years of formal education of household head			
	0	1-6	7-12	Above 12
Cash contribution (naira)	14230.02	16672.97	14864.89	15713.91
Labour contribution (days)	32.44	49.32	76.86	117.87
Decision making index (G)	59.59	58.63	55.75	68.84
Meeting attendance index (%)	58.00	61.15	52.75	72.2
Heterogeneity index (%)	51.20	51.17	52.98	58.41
Percent of household members belonging to LLIs.	24.60	41.77	38.75	75.89

Source: Computed from Field Survey Data July - September, 2003

Poverty Profile of Sampled Households

The decomposition of poverty based on several characteristics was done in order to relate poverty to changes in those characteristics. Two types of characteristics were considered. These are socio-economic and social capital factors. The poverty profile on the basis of socio-economic characteristics of the sampled household is shown table 4.11.

The profiling of poverty status of the sampled households based on social capital factors can be seen in table 4.12

Table 4.15: Poverty and Social Capital Variables

					Contributions to
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Variables	N	P ₀	P ₁	P ₂	P ₀	P ₁	P ₂
Cash contribution (N)							
Below 1000	135	0.6148	0.2260	0.1162	0.34	0.40	0.44
1000-9999	216	0.5278	0.1728	0.0716	0.47	0.48	0.46
10000-29999	136	0.1764	0.0316	0.0108	0.10	0.06	0.04
30000-49999	48	0.2708	0.0543	0.0259	0.05	0.03	0.03
50000 and above	47	0.2340	0.0473	0.0201	0.04	0.03	0.03
Labour contribution (days)							
Below 10	355	0.4225	0.1342	0.0607	0.61	0.62	0.60
10-29	119	0.4288	0.1536	0.0771	0.21	0.24	0.26
30-49	54	0.4259	0.1047	0.0481	0.09	0.07	0.07
50-69	25	0.3600	0.0519	0.0105	0.04	0.02	0.01
70 and above	29	0.4138	0.1419	0.0756	0.05	0.05	0.06
Decision making index							
Below 10	39	0.3590	0.0913	0.0349	0.06	0.05	0.04
10-29	35	0.4571	0.1265	0.0502	0.07	0.06	0.05
30-49	67	0.4627	0.1196	0.0429	0.13	0.10	0.08
50-69	271	0.4797	0.1728	0.0846	0.53	0.61	0.64
70 and above	170	0.3176	0.0831	0.0405	0.22	0.18	0.19
Meeting attendance index							
Below 10	7	0.5126	0.1481	0.0628	0.25	0.23	0.21
10-29	32	0.4589	0.1639	0.0819	0.55	0.62	0.66
30-49	119	0.3030	0.0697	0.0261	0.16	0.12	0.10
50-69	292	0.2500	0.469	0.0200	0.03	0.02	0.02
70 and above	119	0.2857	0.1137	0.0453	0.01	0.01	0.01
Heterogeneity index (%)							
Below 10	30	0.3667	0.0994	0.0421	0.04	0.04	0.04
10-29	77	0.6364	0.2551	0.1302	0.20	0.26	0.28
30-49	119	0.3277	0.1083	0.0575	0.16	0.17	0.19
50-69	190	0.3579	0.0913	0.0372	0.28	0.23	0.21
70 and above	166	0.4699	0.1452	0.0638	0.32	0.31	0.29

Source: Computed from Field Survey Data (July - September, 2003).

As can be seen in the table, the extent of poverty is indirectly related to the level of cash contribution. Those households whose cash contribution to their various local level institutions (LLIs) is smallest have the highest poverty incidence, depth and severity. It is those households that have higher levels of income that can make large amount of cash contribution to their LLIs. Hence, those individuals in these households are not likely to be poor.

The decomposition of poverty based on the days of labour contribution to the LLIs does not show much marked difference. One observes that poverty is higher for those households that have fewer days of labour contribution and they contribute much more to poverty than those households contributing 50 or more days of labour.

The decision making index of the households in the LLIs shows that those households with the lowest and highest decision-making index have lower poverty than those households with intermediate (10 to less than 70 percent) index for decision-making. This may be so because those with very high decision-making index are likely to be most-committed to the course of the LLIs. As for those with very low value of decision-making index, they seem not to be committed to the activities of the LLI, and hence, lower social capital, leading to reduction in their welfare.

Being a member of LLIs is a necessary condition for poverty reduction but not a sufficient condition. The table shows that the higher the meeting attendance index by members, the more the participation in the LLI activities, hence an increase in social capital leading to a reduction in poverty. Also, households with lower attendance index at meetings contributed more to poverty than those with higher index for meeting attendance.

The heterogeneity index does not follow a definite pattern. While those households with less than 10 percent of heterogeneity index have low poverty levels, those with 10-29 percent have the highest poverty. Thereafter, there is a drastic drop in poverty levels as the heterogeneity of the members of LLIs increases.

Lastly, households with lower number of members belonging to LLIs have higher poverty incidence and vice versa. Hence, as the number of members of households belonging to LLIs increases, the poverty incidence decreases. The pattern for poverty depth and severity is not clear based on the number of members of households belonging to LLIs. While poverty depth and severity are lowest for households with 5 and more members belonging to LLIs, they are highest for those with less than 3 members. This shows that the higher the number of members belonging to LLIs, the more likely is for such household to have more social capital, thereby reducing poverty.

Social Capital and Household Welfare

Effect of Social Capital on Household Welfare

This section provides the results of the impact of social capital on welfare using the analytical framework proposed in section three. Table 4.13 shows the effect of human capital, multiplicative social capital and the additive social capital variables on household welfare proxied per capita expenditure. The use of both the multiplicative social capital and additive social capital indices is premised on the fact that conceptual and theoretical underpinnings of social capital are not as developed to proffer justification for the use of one method instead of the other. However, Grootaert *et al.*(2002) note that the two approaches are common in literature. For instance, Narayan and Prichett (1997) and Grootaert (2001) used the approaches. These authors conclude that additive and interactive variables are valid approaches for introducing social capital in household behavioural model.

In the first column of table 4.13 is presented the basic model which captures household behaviour. This model reveals that about 18.9 percent of the variations in household expenditure per capita are accounted for by the specified human capital and demographic factors. Both types of factors have significant impact on the welfare status of households as typified by per capita expenditure. In particular, while larger household size reduces the welfare status, being a female, engaging in farming and being educated significantly improves the welfare status of the of the households.

The second column of the table indicates the situation with the introduction of a multiplicative social capital variable. This index is arrived at through the combination of the number of households' memberships of association, heterogeneity index and the active participation index. The resultant index is renormalized to maximum value of 100. The

inclusion of the multiplicative variable increases the explanatory power of the model to 19.1 percent or 0.2 percentage points. The social capital index has significant effect on household welfare. At mean social capital index of 12.90, the coefficient of the variable shows that a one unit increase in social capital (i.e. 7.8 percent rise) would increase household per capita expenditure by 0.57 percent. On the other hand, a one unit increase in the level of education i.e. additional year of education (which corresponds to 22.1 percent increase in the average years of education of households) would lead to 8.1 percent increase in per capita expenditure. This result suggests that being educated and accumulating social capital would improve the welfare status of households.

In the third column of table 4.13, the additive social capital variables are included. These variables are: number of membership, index of participation, heterogeneity index, meeting attendance, cash contribution score and labour contribution score. The heterogeneity index also include its squared form to capture the fact that heterogeneity of association can be a source of information for improved welfare status and can also be a source of conflict between members within the groups. The new model improves the explanatory power of the model from 19.1 percent to 30.4 percent. The result indicates that major effects of social capital are attributable to heterogeneity and meeting attendance. In departure from Grootaert et al. (2002), additional membership of household in a local institution does not lead to improvement in welfare. Cash contribution score and labour contribution score also have significant effect on the welfare status of households. Following from the above, a one unit increase in the heterogeneity index would lead to 0.27 percentage increase in household welfare while similar increase in meeting attendance would lead to 0.24 percentage increase in welfare. By and large, it would appear these two variables are complimentary. This is because as pointed out by some authors, heterogeneity can enhance flow of information as people of diverse background come together in group. Further, the dissemination of information to members can only be easier when members of associations attend meetings. A unit rise in both cash contribution score and labour contribution score would induce a very low (0.9 and 0.7 respectively) but significant improvement in per capital expenditure.

In order to guard against the likelihood of the cash contribution being endogenous to the system, this variable was removed from the dimensions of social capital. The results are indicated in column 4 of table 4.13. In addition to the significant variables in column three, the index of participation becomes significant. This suggests that cash contribution score may be masking the effect of active participation in activities of the local level institutions. The results also indicate that the coefficients of most of the variables increased from their initial level when cash contribution score is included as one of the explanatory variables. However, the explanatory power of the model declined to about 24 percent.

Table 4.16: Social capital and Household Welfare

	Basic Model	With Multiplicative social capital index	With additive social capital variables	With additive social capital Variables*
Intercept	7.4005 (23.35)	7.3645 (23.18)	6.8535 (21.67)	6.8152 (20.69)
Sex of Household Head	0.6009 (5.40)	0.6181 (5.57)	0.6903 (6.65)	0.6872 (6.49)
Age of Household Head	0.2867 (52.62)	0.2832 (50.35)	0.2406 (33.31)	0.2372 (32.35)
Squared age of Household head	-0.0027(-38.50)	-0.0027(-37.56)	-0.0023(28.45)	-0.0023(-27.52)
Household size	-0.0553 (-7.54)	-0.0548 (-7.40)	-0.0547 (-7.58)	-0.0567 (-7.72)
Occupation	0.2636 (3.47)	0.2573 (3.40)	0.2377 (3.37)	0.2410 (3.34)
Years of Education of Household Head	0.1008 (2.27)	0.0814 (1.81)	0.0836 (2.02)	0.0888 (2.10)

Social capital index	-	0.0057 (2.36)	-	-
Household memberships in association	-	-	0.0114 (0.96)	0.0139 (1.16)
Index of participation	-	-	0.0012 (0.97)	0.0027 (2.31)
Heterogeneity index	-	-	0.0278 (5.10)	0.0305 (5.49)
Squared Heterogeneity index	-	-	-0.0003 (-4.33)	-0.0003 (-4.67)
Meeting attendance index	-	-	0.0241 (5.85)	0.0256 (6.11)
Cash contribution score	-	-	0.0093 (4.91)	-
Labour contribution score	-	-	0.0070 (2.36)	0.0081 (2.71)
Number of observation	582	582	582	582
R ²	0.1885	0.1914	0.3038	0.2437
F-statistics	22.26	19.40	19.06	15.28

Figures in parenthesis are t- values

Source: Computed from field survey data

* Cash contribution score was removed because of its dependence on income and by extension the per capita expenditure.

4.3.2 Social Capital and Household Welfare: Any Reverse Causality?

According to Grootaert (1999), social capital like human capital variable can be, at least partly, consumption good. However, the model in chapter three of this paper is based on the assumption that social capital is truly an input in the household's production function. In order to validate this assumption, this study tested for existence of two-way causality with the aid of instrumental variable. The instrument chosen is a multiplicative index of whether the members of the three most important LLIs that a household belongs to are of the same religion, culture or trust. This is arrived at upon testing each of the indices separately as instruments. And as indicated in chapter three, the instrument is expected to determine social capital but not household welfare (nor is it to be determined by household welfare).

Using the aggregate social capital model as indicated in Table 4.14, the original social capital index was replaced by the instrumental variable. The choice of the instrument used for social capital is guided by available information and submissions by Narayan and Pricett (1997), Grootaert (2001) and Grootaert et al. (2002). In this context, trust is used as instrumental variable. However, as noted by Grootaert et al. (2002) 'generalised trust' not tied to specific known individuals, such as friends is built over time and is a function of village cohesion and norms. Such trust is said to be independent of the income level of a specific household. But, one recognizes the limitation to the use of trust as instrument. Putnam (2000) notes that richer individuals in the US may have a higher propensity to trust. Hence, the result of this exercise must be treated with some cautions bearing in mind the limitation above. Notwithstanding, the analysis provides the basis for determining the direction of causality between social capital and welfare. Table 4.14 presents the result.

Table 4.17: Social capital: Instrumental Variable estimation

	Without Instrumental variable (OLS)	With instrumental Variables (2SLS)
Intercept	7.3645 (23.18)	7.3954 (23.32)
Sex of Household Head	0.6181 (5.57)	0.6392 (5.75)
Age of Household Head	0.2832 (50.35)	0.2854 (52.11)
Squared age of Household head	-0.0027(-37.56)	-0.0027(-38.48)
Household size	-0.0548 (-7.40)	-0.0554 (-7.46)
Occupation	0.2573 (3.40)	0.0062 (3.16)
Years of Education of Household Head	0.0814 (1.81)	0.0806 (2.73)
Social capital index	0.0057 (2.36)	0.0063 (2.58)
Number of observation	582	582

R ²	0.1914	0.1923
F-statistics	19.40	19.52

Figures in parenthesis are t- values

Source: Computed from field survey data

The result is indicated in Table 4.14. From the table, it is evident that the use of the instrumental variable leads to slightly higher R² (0.1923) compared with (0.1914) obtained with the use of the actual social capital index. In addition, the instrumental variable method leads to higher coefficient (0.0063) for the social capital index than in the OLS method where it was 0.0057. Thus, implying absence of significant reverse causality since the coefficient of the social capital index in the instrumental variable method is higher than the OLS coefficient. Hence, one can infer that there is exogeneity of social capital index. This result is in agreement with Narayan and Prichett (1997) and Grootaert (1999). A one percent increase in the level of instrumented social capital leads to 0.63 percent increase in household expenditure. The corresponding increase in household expenditure using OLS estimate for the social capital index is 0.06 percent.

Effect of Social Capital on Poverty

The discourse so far centres on the way in which social capital influences welfare. However, such an analysis can mask the differential effect of social capital on the poor and the non-poor. This arises since the OLS result of the effect of social capital on welfare imposes constant parameter over the entire distribution. Thus, it may not be possible to provide justification for the worthwhileness of the behaviour of the poor in investing time and resources on social capital. Therefore an estimation of Tobit model focusing on the probability of being poor is carried out. The results as presented in table 4.15 indicate that six of the postulated variables determine the level of poverty. These variables cut across demographic, human capital and social variable variables. Four of the six significant variables are related to social capital. The marginal analysis reveals that a unit increase in household size will further aggravate the poverty situation of the households by 3.1 percent. On the other hand, the more educated a household is the lower the poverty situation. The magnitude of the reduction in poverty level as a result of a unit change in educational attainment is at about 1.6 percent. The four social capital variables with significant effect on poverty are: heterogeneity index, meeting attendance, cash contribution score and labour contribution score. A unit increase in meeting attendance will lead to 1.0 percent reduction in poverty. The other three social capital variables will elicit between 0.3 and 0.8 percent reduction in poverty. It is instructive that both heterogeneity index and meeting attendance index come up as important variables for poverty reduction just as they are found to be welfare enhancing. Hence, diversity of members and membership attendance at meetings are key social capital factors for reducing poverty and enhancing welfare.

Table 4.18: Effect of Social capital on Poverty (Marginal analysis from Tobit Regression

	Marginal Effects	Marginal Effects**
Sex of Household Head*	-0.0545 (-0.88)	-0.0469 (-0.72)
Age of Household Head	-0.0064 (-0.78)	-0.0071 (-0.86)
Squared age of Household head	0.0001 (1.00)	0.0001 (0.99)
Household size	0.0313 (8.62)	0.0324 (8.44)
Occupation*	-0.0508 (-1.36)	-0.0674 (-1.61)
Years of Education of Household Head	-0.0161(2.27)	-0.0156 (-2.45)
Household memberships in	-0.096 (-1.75)	-0.0103 (-1.75)
	0.0010 (1.54)	-0.0002 (-0.29)

association	-0.0055 (1.86)	-0.0085 (-2.77)
Index of participation	0.0001 (1.60)	0.0001 (2.51)
Heterogeneity index	-0.0100 (-4.07)	-0.0123 (-4.70)
Squared Heterogeneity index	-0.0082 (-6.66)	-
Meeting attendance index	-0.0030 (-1.86)	-0.0043 (-2.45)
Cash contribution score	0.3256	0.3466
Labour contribution score	582	582
Sigma	0.2866	0.2118
Number of observation	194.59	143.84
Pseudo R2	-242.21	-267.59
LR chi-squared		
Log likelihood		

Figures in parenthesis are z- values

* Marginal effect is for discreet change of dummy variable from 0 to 1

Source: Computed from field survey data

** Cash contribution score was removed because of its dependence on income and by extension the per capita expenditure.

In the second column of table 4.15, the cash contribution score is removed. This does not change the directions of the relationship of the social capital variables. However, there is an improvement in the magnitude of these variables. In this respect, a one unit increase in the level of heterogeneity index will lead to 0.85 percent reduction in poverty level. Similarly, a one unit increase in meeting attendance and labour contribution score will lead to 1.2 percent and 0.4 percent reduction respectively in the level of poverty.

Chapter Five

Review of Policies for Poverty Reduction

Poverty reduction is in the main a task for economic policy and requires some antipoverty programmes directed at the rural poor. In Nigeria, development policy has had three fundamental objectives: economic growth and development; price stability, and social equity. These objectives were to be achieved through national development plans (NDPs) which were designed to alleviate poverty by achieving an improvement in real income of the average citizen, equitable distribution of income and a reduction in the level of unemployment and underemployment². It is therefore, within different theoretical models for development that past policies aimed at bringing development to the rural areas of Nigeria are designed. Realizing that approximately 70 percent of the poor live in the rural areas, where they depend largely on agricultural pursuit, public policy on agriculture was therefore, expected to impact positively on the rural poor as well as other sectoral policies that have positive rural biases.

Nigeria like other third world countries saw industrialisation as the key to attaining the economic successes of the imperial powers. Rural development was thus narrowed down to sectoral policies particularly in the areas of agriculture, which today has led to the intractable problems of the rural areas. However, the confusion that accompanies such negative development philosophy manifests itself in the failure of the development strategy to recognize the linkages between rural and agricultural development on one hand, and between rural development and the development of the total economy on the other. Thus, in the early years of independence, the rural areas were largely neglected owing to the adoption of economic dualism strategy model. In addition, the nation also adopted an import substitution industrial strategy, which in the main involved the substitution of local technology with imported ones rather than the substitution of imported components with local raw materials. These theories in their adoption and implementation did not yield the desired results of achieving the greatest socio-economic benefit for the majority rural dwellers. Situations deteriorated and the gap between the urban and rural areas widened the more.

The view is widely held that the pattern of input substitution industrial development strategy adopted led to the present urban structure. In reality however, the rate and volume of the migration of people out of the rural areas to the cities is a measure of some of the negative impact of the industrialisation strategy on the rest of the country, making it imperative for the people to move enmass from the rural areas. The infant-industry argument led to the adoption of high tariff barriers against cheaper and often better-finished imports. For the rural population, this meant paying higher prices for manufactured goods especially at a time when the prices they received for their export products were declining. To worsen matters, the growing concentration and organization of industrial labour in the cities exerted political pressure on the wage structure as to affect the cost of labour to farmers in the rural areas. For farmers, the competition for “over-priced” labour was disastrous and the growth of urban centres came to be marked by a sharp decline of rural productivity. Even for those farmers who stayed on in the rural area because they could not leave, government’s desire to satisfy restive urban population via the importation of cheap agricultural products like rice, maize, vegetable oil, etc. affected the farmers and the rural economy adversely.

From the standpoint of time, the policy-development trends with serious implications on rural poverty in Nigeria can be examined from two main perspectives: before independence and post independence era. The colonial administration prepared and implemented the Ten-Year Plan of Development and Welfare for Nigeria: 1946-1956,

² See the 3NDP: 1975-1980; 4NDP: 1981-1985.

essentially with the sole objective of improving cash crop production and urban infrastructure, particularly roads and communications. Little attention was paid to rural development as it had little relevance to the imperial interests. The period before 1954 witnessed the development of the regional export economies-cotton and groundnut in the North; cocoa and rubber in the West and oil palm and kernel in the East. The 1954 Federal constitution and the process of regionalisation placed rural development as a residual item and it was therefore treated as a regional responsibility, just like agriculture, education, etc. Nevertheless, the autonomy associated to regionalism gave each of the three regions a free hand to set its own pace for development. Since revenue came mostly from agricultural exports, the regional governments tried to provide basic infrastructures particularly roads to haul commodities from the rural areas. Since the population was largely rural, and the regions were largely supported by the wealth of the rural areas, educational facilities, potable water as well as health facilities were put in place in the rural areas.

Although these were inadequate, they marked a humble beginning and a conscious attempt to improve the lot of the rural people. During this period of internal self-government, which lasted until 1968, the various regional governments operated and based their development plans on the assumptions of perfect knowledge of the problems of the rural people. Some of the schemes undertaken during this period include the Farm settlement/school leavers farms by the three regional governments; the Tree Crop Plantation (developed through the Development Corporations) of the Eastern and Western governments and the Small Farmer Credit Scheme.

With the attainment of independence in 1960 however, the subject of rural areas assumed greater importance in the scheme of national development. Thus the First National Development Plan: 1962-1968 allocated 13% of the gross capital outlay to agriculture and primary production. However, whatever gains made were wiped off by the civil war. By 1965, the new federal ministry of agriculture was very cautious not to mention agriculture in its plan so as not to hurt the spirit of the 1963 constitution yet, the political powers of the old regions brought out the need to coordinate agriculture at the centre. Consequently, three areas were identified for federal assistance to agriculture in the second National Development Plan- 1970-74. These were:

1. grants for the development of agriculture, forestry, and livestock and fishery;
2. establishment of a National Credit Institution; and
3. special Agricultural Development Schemes where the federal government enters into both financial and management partnership with state governments in carrying out projects.

The Third National Development Plan: 1975-1980, which allocated 7.2% of the N43.36 billion budget estimates to agriculture and rural development sector was essentially a continuation of the development process and policies begun in the preceding plan. The post 1975 period witnessed series of rather panic measures embarked upon by the Federal Government, including the Operation Feed the Nation (OFN), Agricultural Development Programmes (ADPs), River Basin and Rural Development Authorities (RBRDAs), and the Green Revolution Programme. Of all these, the ADPs received better attention and a systematic approach to project planning while the other schemes mentioned above remained as political slogans.

By the second half of the 1970s and early 1980s, the trickle down development strategy has started to wane. Emphasis shifted towards addressing development and poverty issues at the grassroots in rural areas with the believe that the rapid growth in the rural economy is the most promising way to reduce poverty and check rural-urban drift. Nigeria was not left out of this new thinking as several programmes were initiated with varying

degrees of successes. As argued by Onimode (2003), the economic policies that have semblance of positive policy initiatives on rural poverty reduction include the followings:

- i. Universal Free Primary Education (UPE);
- ii. Subsidy programmes for various activities, especially agriculture, social services and credit;
- iii. Primary health care including the “health-for-all by year 2000” programme³;
- iv. Rural water supply scheme;
- v. Rural electrification by Rural Electrification Boards (REBs);
- vi. Directorate for Food, Roads and Rural Infrastructure (DFRRI);
- vii. Credit guidelines, rural and community banking schemes,
- viii. National Directorate of Employment (NDE);
- ix. Small-and Medium-Scale Enterprises (SME) Programme; and
- x. Better Life for Rural Women and Family Support Programme.

These programmes can be classified into three categories:

- a) Income-generating and income-augmenting programmes (i, ii, viii, ix, x);
- b) Income and wealth redistribution programmes (ii, vii,x)
- c) Access and empowerment programmes with respect to resources and facilities (i, ii,iii,iv, v, vi, vii, viii, ix, x)

Olaniyan *et al* (2003) observed that prior to 2001, Nigeria had no known National Policy on Integrated Rural Development that could help to reduce poverty even though such policy and agricultural development have many implications for poverty reduction in the rural economy of Nigeria. However, in 2001, the Federal Ministry of Agriculture and Rural Development in collaboration with all relevant national and international development partners operating in the rural sector developed a National Policy on Integrated Rural Development (NPIRD). This has remained the most comprehensive rural development policy document to date in Nigeria.

The overall policy objective of the National Policy on Integrated Rural Development is drawn from the national objectives of developing the rural areas, raising the quality of life of the rural people, alleviating rural poverty and using rural development as a basis for laying a solid foundation for national development. In order to achieve integrated and even development on a sustainable basis, the policies to be adopted are intended to empower rural dwellers through the development of productive employment, enhancing their income, ensuring protection of the environment, promoting gender responsiveness, and ensuring adequate care for vulnerable group. This will involve:

- (i) Community Driven Participatory Approach (CDPA) in project identification design, implementation, monitoring and evaluation.
- (ii) Rationalization and realignment of public sector rural development institutions.
- (iii) Heavy reliance on the private sector to lead investment in the rural sector to promote economic growth.
- (iv) Collaborative efforts between government and other stakeholders for input delivery and marketing of agriculture and other rural products.
- (v) Promotion of even–development as a cardinal objective of integrated rural development.

³ Disappointingly, this promise was not fulfilled at the end of year 2000.

The policies to be implemented through the National Policy on Integrated Rural Development lay special emphasis on five priority areas. These are:

- (1) **Promotion of Rural Productive Activities.** In this regards, emphasis is placed on employment and income generating opportunity and activities. The policy areas under the promotion of rural productive activity are;
 - i. Agriculture, Fisheries, Animal Husbandry And Forestry
 - ii. Mineral Resources Development
 - iii. Manufacturing and Industry
 - iv. Marketing and Distribution, and
 - v. Rural Financial Systems.
- (2) **Supportive Human Resources Development and Utilization:** Under this activity, the emphasis is on recognition of the critical and dynamic role of the total man in rural and national development. The policy areas under this are:
 - i. Health and Population
 - ii. Culture and Social Development
 - iii. Education, Technology and Skills Development
 - iv. Research and Extension Services, and
 - v. Information and Communication.
- (3) **Enhancement of Enabling Rural Infrastructure:** This places emphasis on government taking adequate measures to promote the development and improvement of rural infrastructure with a view to stimulating and promoting sustainable growth of rural productive activities. The policy areas under this include:
 - i. Transport infrastructure and facilities
 - ii. Communications infrastructure
 - iii. Housing
 - iv. Environment
 - v. Energy, and
 - vi. Water and sanitation
- (4) **Special Programmes for Target Groups:** This is premised on the fact that the powerless, marginalized and deprived rural people deserve special attention. This policy targets the following groups:
 - i. Women
 - ii. Youth
 - iii. Children
 - iv. The Elderly and Retired
 - v. Beggars and destitute
 - vi. Emergencies and National Disasters
 - vii. Economically Disadvantage Areas; and
 - viii. Border areas.
- (5) **Rural Community Organisation and Mobilisation:** This policy recognises the fact that the need for full participation of members of the rural communities in the development process is critical to the quality and sustainability of the development efforts of government. The strategy to be employed in achieving this priority policy area is through special and appropriate provision for the support of community initiatives and programmes through managerial, technical, financial and other appropriate assistance.

It is important to underscore the fact that some anti-rural and poverty policies are noticeable in Nigeria. They include:

- a) Persistent and massive denial of physical and social infrastructure;
- b) Poor transport linkages by road, rail, water or air;
- c) Poor access to development resources like land, credit, and technology;
- d) Concentration of industries in urban centres;
- e) Bias of even agricultural expenditure towards powerful and rich urban dwellers;
- f) Bias of domestic terms of trade against agriculture and other rural activities with relatively low producer prices for food, agricultural exports and other rural produce;
- g) Poor incentives to the rural economy and to economic activities in rural areas;
- h) Denial of political power to the rural majority (even with local government reforms) so that the rural population is underrepresented in decision-making organs at all levels of society; and
- i) The relative neglect of the informal sector.

In the light of continuous government's concern for poverty reduction, in 1994, government set up a broad-based Poverty Alleviation Programme Development Committee (PAPDC) under the aegis of the National Planning Commission. The primary objective of PAPDC was to advise government on the design, coordination and implementation of poverty reduction policies and programmes. The work of PAPDC contributed immensely to the emergence of a new approach in 1996 known as the Community Action Programme for Poverty Alleviation (CAPP). Current efforts at poverty reduction include the launching of the Universal Basic Programme (UBE) and the Poverty Alleviation Programme (PAP), the constitution of the Ahmed Joda Panel in 1999 and the Anjo Abdullahi Committee in 2000 with the mandate to streamline and rationalize existing poverty alleviation institutions. These led to the emergence of the National Poverty Eradication Programme (NAPEP) and the National Poverty Eradication Council (NAPEC) in early 2001. Last but not the least is the launching of the Poverty Reduction Strategy Paper in 2003. In order to have a holistic approach to poverty reduction in the country, and because of the little success achieved in terms of selective approach to fighting poverty in the past, the paper attempts an inter-sectoral strategy to fighting poverty in Nigeria. In specific terms, the strategies include:

- Bottom-up and demand-driven identification and prioritization in order to allow for community ownership. Community participation would be enhanced in aspects of project circles, by decentralizing decision-making;
- Capacity Building and Empowerment: This involves grassroots decision making, provision of access to productive inputs and assets such as credit, land etc; relevant and effective training and education, exposure to and adoption of appropriate technology, access to adequate infrastructure and social services, integration of informal sector into the main stream of economic activities
- Service delivery comprising of: (1) targeted intervention and building on existing safety – nets of the poor; (2) building mechanisms into poverty reduction plan; (3) provision of a support mechanism to finance projects which are initiated by intended beneficiaries; and (4) emplacement of pro-poor national growth strategies.
- Coordination, Monitoring and Evaluation, which involves streamlining and networking of existing poverty reduction programmes into the support mechanism
- Use of appropriate monitoring and evaluation mechanism for poverty reduction and eventual elimination.

Review of Programme/Institutions for Poverty Alleviation

Efforts at improving the rural areas of Nigeria predated the independence of the country in 1960. The major efforts made in pre-independence and the early days of independent Nigeria according to Omale and Molem (2003) were in the area of farm settlement schemes. The aim of these farm settlements was to bring scattered small communities together so that they could take advantage of economies of scale in farm inputs, agro services, marketing, etc. These schemes recorded little or no achievement because those they were affected were not involved at the planning stages. Since then, a number of government programmes have been put in place to improve basic services, infrastructure and housing facilities for the rural population, extending access to credit farm inputs, and creating employment. Most of the programmes were however, not specifically targeted towards the rural poor, though they affect them. Such programmes included specific multi-sector programmes (water and sanitation, environment, etc) as well as sector-specific programmes in agriculture, health, education, transport, housing, finance, industry/manufacturing and nutrition. (See Box 1 for some government programmes related to rural poverty reduction).

Ilori (1999) categorized rural poverty related programmes into three: development programmes, palliative measures popularly known as the Social Dimension of Adjustment (SDA), and the sector-specific poverty related programmes. Examples of development programmes are: rural electrification schemes; rural banking scheme; and Operation Feed the Nation later named Green Revolution. Palliative measures include programmes such as the Directorate of Food, Roads and Rural Infrastructure (DFRRI), the National Directorate of Employment, and Family Support Programme. The major sector-specific poverty related programmes include the National Agricultural Land Development Programme (NALDA), micro credit schemes such as Peoples Bank, Community Bank etc. All the programme put together are meant to provide a catalytic impetus for the take-off and subsequent advancement of the rural areas towards:

- a) Linking them to national and international economic systems;
- b) Increasing rural household income;
- c) Providing basic socio-economic and physical infrastructure;
- d) Efficient resource allocation to shift attention and interest of the private sector towards investment in rural areas to enhance rural development; and,
- e) Enhancing rural welfare. Some of the programmes that have direct bearing on rural poverty in Nigeria are examined as follows:

Some of the programmes are examined briefly below:

The Agricultural Development Programmes

This was introduced in 1975 in three enclaves but now cover the whole country. The main objective of the ADPs has been to increase production of food and fibre as well as producer incomes. The distinguishing characteristics of ADPs include:

- a) an input and credit supply system through a network of farm service centres which ensure that no farmer travels more than 5-15km to purchase needed farm inputs;
- b) a massive feeder road network that has opened up new areas for cultivation and has facilitated rapid evacuation of farm produce and prompt delivery of inputs;
- c) a revitalized unified extension and training system backed up by timely input supply and adaptive research services;
- d) joint state-federal collaboration for project implementation; and
- e) solid project management together with built-in project monitoring and evaluation.

The ADPs represent a truly innovative approach to agricultural and rural development both in their integrated supply of farm inputs and infrastructural support and in their efforts to revamp and revitalize extension services. Along with the implementation of the ADPs, some states of the federation initiated a variety of new schemes to deal with new and old problems. For example:

- a) The Lagos State Government embarked on the Agricultural Input Credit Scheme to promote mechanized farming, while its Graduate Farming Scheme was to tackle the twin problems of graduate unemployment and food shortages through the provision of land, equipment and all necessary inputs for cropping. In addition, its School Agriculture Programme was designed to popularize agriculture in schools.
- b) The Niger State Back-to-Land and the Small Scale Farmers Programmes guaranteed loans to various categories of farmers;
- c). The Bauchi State Graduate and School Leavers Farming Schemes were similar to those in Lagos State.
- d). The River State School-to-Land Programme was designed to reduce unemployment among school leavers as well as act as a catalyst to revolutionize agriculture, while its Community Block Farms was to encourage farming cooperatives in the state.
- e). The Oyo State Integrated- Self-Employment and the Graduate Self-Employment Schemes were designed to solve the unemployment problems of school leavers and graduates respectively in the state.
- f). The Shell Company of Nigeria also has Community Land Development Programme in the oil producing states. This is designed to provide alternative means of livelihood to the original landowners of oil well sites.

Land Reform Measures (Land Use Decree)

In 1978, the government of Nigeria embarked on the first major land reform when it enacted the Land Use Decree of 1978. The Land Use Decree was meant to free land from the bottleneck of institutional constraints among other things, enable landless but enterprising farmers have access to productive land. The decree sought to take over ownership of land from individuals and vest power of control over such lands in the state governors. In practice however, especially in the countryside, the customary tenure is still widely adhered to. Except for rich land speculators, the accessibility of poor peasants to productive farmlands has remained as difficult as ever. The unintended fallout has been incessant warfare over land by adjoining communities.

The Directorate of Food, Roads and Rural Infrastructure (DFRRI)

The Directorate of Food, Roads and Rural Infrastructure (DFRRI) was created in January, 1986 as an integrated approach to rural development. DFRRI was designed to act as a policy catalyst for the development of the rural areas of the country and lay particular emphasis on the provision of water and the construction, rehabilitation and maintenance of an effective rural feeder road network. The directorate had the following objectives:

- a). To promote a framework for grassroots social mobilisation.
- b). To mount a virile programme of development, monitoring and performance evaluation.
- c). To provide rural areas with access roads and potable water.
- d). To improve rural sanitation, literacy and technology.

The main task of DFERRI can be categorized briefly into two. First, it was to make rural areas more attractive to live in (through the provision of improved, well-maintained rural infrastructure such as roads, water and electricity) in order to stem the migration to urban areas. Secondly, it was to change for better, the rural ways of life and modes of production in order to meet the challenges of increased agricultural and industrial production, and raise income thereby reducing urban-rural disparities. It was involved in the production and distribution of improved seeds and other planting materials; the promotion of rural and urban fish farming, storage and processing of grains as well as encouraging the production of small animals such as sheep and goats. The Directorate operated through its coordinating officers in the states and in each local government.

The National Agricultural Land Development Authority (NALDA)

To solve the problems of low utilization of farmlands, increase farm sizes and hence productivity to alleviate rural poverty, the Federal Government initiated a national agricultural land development programme under the National Agricultural Land Development Authority (NALDA) in 1991. NALDA as an executing agency was empowered to develop between 30,000 and 50,000 hectares of land in each state of the federation during the 1992-94 National Rolling Plan period. It was also to see to the placement of at least 7,500-12,500 farmers within the area developed such that each participating farmer member lives within 3km-5km radius of his farmland. The programme on the whole was to:

- a). provide strategic public support for land development;
- b). promote and support optimum utilization of the nation's land resources for the accelerated production of food and fibre;
- c). encourage and support economic size farm holdings and promote the consolidation of fragmented farm holdings;
- d). encourage the evolution of economic size villages;
- e). provide gainful income and employment opportunities for rural people;
- f). address the special problem of the nation's rural majority;
- g). expand production capacity in agriculture;
- h). contribute significantly to the attainment of national food and fibre self-reliance; and
- i). facilitate the appropriate cost-effective mechanization of agriculture.

Better Life Programme (BLP)

In 1987, the Better Life Programme was first introduced as a programme mainly for rural women by the then First Lady, Mrs. Maryam Babangida. The programme was generally aimed at complementing the existing Federal Government policy to develop the rural areas. The programme's objectives were:

- a) the desire to stimulate and motivate women in rural areas towards achieving a better and higher standards of life, as well as sensitize the general populace to the plight of rural women;
- b) educate women on simple hygiene, family planning, importance of childcare and to increase literacy;
- c) to mobilize women for concrete activities towards achieving specific objectives, including seeking leadership roles in all spheres of national life; and
- d) to raise the social consciousness of women about their rights, as well as social, political and economic responsibilities.

As the implementation of the programme progressed, it was realized that the scope of

the programme had to be widened to include urban women and cooperatives where men were members. Thus, the name was changed from Better Life Programme for Rural Women to Better Life Programme (BLP). The programme generally covered many areas that relate to enhancing labour productivity and entrepreneurship development. Areas covered include: health, agriculture, education, social welfare and cooperatives. The formation of cooperatives in the programme has direct bearing to entrepreneurial development. Numerous fishing, farming, marketing, weaving and sundry craft cooperatives were set-up. The cooperatives were supported in terms of access to credit facilities from People's Bank, which owes its existence partly to the Better Life Programme. Thus, a linkage was effectively created between the two agencies.

During the Abacha regime, the programme appeared to narrow down its activities and was re-named Family Support Programme (FSP) with greater emphasis on the health component. However, in an attempt to create a more embracing socio-economic poverty alleviation programme by the regime, a new agency called Family Economic Advancement Programme (FEAP) was established. The FEAP was established to stimulate economic activities by providing loans directly to Nigerians through cooperative societies and informal associations.

4.6 National Directorate of Employment (NDE)

This is a skill formation and credit-granting scheme with consequences on accelerating entrepreneurship development. The Directorate was set up in 1986 with the underlying philosophy of self-enterprise, which emphasizes self-employment in preference to wage employment. The Directorate implements four core programmes namely, Vocational Skills Development Programme (VSDP), Special Public Works (SPW), Small Scale Enterprises (SSE) and Rural Employment Promotion Programme (RPP). The Vocational Skills Development Programme is a skill acquisition programme, which consists of 80 trades spread through its four ancillary schemes of:

The National Open Apprenticeship Scheme (NOAS): This scheme emphasizes on-the-job training by which apprentices are attached to master craftsmen or women, companies, ministries and parastatals for periods varying between six months to three years.

The School on Wheel Scheme: This involves the use of mobile workshop to take vocational training to the rural areas.

The Wealth-to-Waste Scheme: Under this scheme, interested youths are trained to convert discarded materials to useful and valuable products such as jewelry, flower vase, key holders etc.

The Resettlement Scheme: The scheme was set up to assist selected NOAS graduates who lack the means to set up own businesses and cannot get wage employment. The scheme also provided management support services to young entrepreneurs who may be in need of professional advice.

People's Bank of Nigeria (PBN)

The PBN was set-up by Decree No. 22 of 1990 with the following mandate:

- a) the provision of basic credit requirements to the under privileged Nigerians who are involved in legitimate economic activities in both rural and urban areas and who cannot normally benefit from the services of orthodox banking systems due to their inability to provide collateral securities; and

- b) the acceptance of savings from the same group of customers and make repayment of such savings together with any interest thereon, after placing the money, in bulk sums, on short-term deposits with Commercial and Merchant Banks.

Arising from the mandate are the following specific objectives:

- a) Extension of credit facilities to the less privileged members of the society who cannot normally benefit from the services of the conventional banks.
- b) Provision of opportunities for self-employment for the vast unutilized and underutilized manpower resources in the country.
- c) Complementing of government's efforts in improving the productive base of the economy.
- d) Inculcating banking habits at the grassroots and reducing the rural-urban migration.
- e) Eradication of poverty and provision of succor to the poor
- g) Bringing relief to the financially marginalized groups in the society.

By implication, the People's Bank is to serve as an alternative banking institution providing easy credit access to the poor who otherwise would not have had access to credit and other banking services at affordable rates of interest and without the complicated requirement of collateral security. It became the most significant financial institution providing micro-credit as part of poverty alleviation programme with special focus on small-scale enterprise development. In order to further strengthen the delivery of credit to small-scale entrepreneurs and the poor as part of the current effort at poverty alleviation, the activities of FEAP and Nigeria Agricultural and Cooperative Bank have been rationalized to avoid duplication and overlapping of functions. Thus, a new institution called the Nigerian Agricultural, Co-operative and Rural Development Bank (NACRDB) was established mainly to do what these institutions were created to do with a more clearly defined focus.

The Agricultural Credit Guarantee Scheme

In 1977, the Agricultural Credit Guarantee Scheme Fund Decree, whose objective was to provide cover in respect of loans granted for agricultural purposes, was promulgated. It was believed that this would encourage commercial banks to loan investment funds to the agricultural sector including the small-scale rural dwellers. However, the main beneficiaries of this programme were the large scale and educated farmers.

The River Basin Development Authorities

In addition, in 1977, eleven River Basin Development Authorities were established to undertake food production and the provision of rural infrastructure. In 1986, they were re-organised and directed to focus on land and water resources development.

Community Bank

A community bank is a self-sustaining financial institution owned and managed by a community or a group of communities for the purpose of providing credit, banking and other financial services to its members largely on the basis of their self recognition and credit worthiness. The community bank was set up in 1991 in order to encourage communities to pull resources together for investment purposes. The belief was that this framework would provide avenue for small-scale enterprises that hitherto has limited access to finance from formal banking institutions to have access to credit. Community banks are located all over

Nigeria with more than 60 per cent in rural areas. Community banks are jointly owned by community development associations, co-operative societies, clubs and private individuals in the locality. Most of the lending of community banks in Nigeria is directed at micro enterprises and SSEs.

Interventions from International Development Agencies

Beyond the domestic poverty reduction programmes, there are various interventions by the international development agencies. At the forefront of the international dimension to poverty alleviation strategies are the activities of the World Bank, United Nations Children Fund (UNICEF), United Nations Development Programme (UNDP), and the World Health Organization (WHO) etc. The World Bank has been supporting poverty alleviation in Nigeria through such strategies as promoting broad-based economic growth that could generate income-earning opportunities for the poor. It has also supported the strategy of improving access to basic social services, so that the poor can take advantage of these opportunities.

Evaluation

In evaluating poverty reduction programmes in Nigeria, the standard World Bank's framework discussed earlier in the paper is adopted. Although Nigeria has not adopted a particular framework for the design and implementation of poverty reduction strategies, many of the poverty reduction programmes put in place could well fit into one or more aspects of this framework.

Rights and Empowerment

In this respect, various institutions were established to enhance income-generating capability of the rural dwellers. These institutions stem the effect of rural-urban migration, which is a bane of urban poverty in Nigeria. In this regard, DFFRI until its merger with the Federal Ministry of Water Resources in 1987, had constructed, rehabilitated and maintained over 90,800 kilometers of rural roads, provided 20,732 water points to serve 27,267 communities, completed 406 rural electrification schemes and trained 115 Technical Extension Workers on the use of local raw-materials such as burnt bricks, floor tiles, roofing-sheets etc. (Central Bank of Nigeria, 1998). The merger of DFFRI notwithstanding, DFFRI outfits and its former collaborators in the states have continued to maintain the infrastructure it established under the guidance and supervision of the Rural Development Department of the Federal Ministry of Water Resources. However, by the very nature of the activities of DFFRI, it could fit into the frameworks of building a sustainable livelihood for the poor and empowerment of the poor to exploit economic and other opportunities.

In spite of these achievements, the failure of DFFRI in solving poverty problems in the rural areas is very glaring from available poverty profile, which showed that incidences and contribution of rural areas to national poverty increased between 1992 and 1996 (see Okojie *et al*, 2000) before the merger of the Directorate. Part of the failure of DFFRI was ascribed to the lack of standard set for project harmonization. This was occasioned by the absence of any effective mechanisms for co-ordination among the three levels of government and between DFFRI and the three tiers of government.

The National Directorate of Employment (NDE) emphasizes self-employment in preference to wage employment. The activities of NDE was structured into four main programme areas which entails job creation as well as productivity and income generating enhancement for the youths and other beneficiaries. The four-programme areas are: the Vocational Skill Development Programme (VSDP), the Small Scale Enterprise Programme(SSE), the Special Public Works Programme(SPW) and the Agricultural

Employment Programme(AEP). The VSDP programme is a skill acquisition programme which consists of 80 trades spread through its four ancillary themes of; (1)The National Open Apprenticeship Scheme: Between inception and 1995, the scheme has trained able-bodied and disabled bodies numbering 392,275.(2)The School on Wheel Scheme: The scheme benefited a total of about 15,000 youths in the old 21 states of the Federation and Abuja where the mobile training workshops are located. (3)The Wealth -to-Waste Scheme: The scheme has benefited about 6,394 participants since inception. (4)The Resettlement scheme: The scheme also provided management support services to those young professionals who may be in need of professional advice. Other notable achievement of the NDE can be traced to the activities of the Special Public Works Programme that created about 154,910 jobs to unemployed youths between 1987 and 1996(CBN, 1992-1997).

However, given that FEAP transcends the other two institutions, we shall focus on the activities of the latter. The FEAP was instituted to stimulate economic activities by providing loans directly to Nigerians as the capital required to set and run cottage industries with emphasis on encouraging local design and manufacture of appropriate plants and machinery. The programme was specially designed for all Nigerians particularly, the low income families; co-operative societies; and families of the Armed Forces, the Nigerian police and para-military services who are directly engaged in productive agricultural activities and are registered with the programme. However, in assessing the activities of the FEAP and its impact on the poor, the approach as a poverty alleviation strategy suffer the same weakness with most other poverty alleviation strategies in Nigeria where assessment is based on the amount of loan disbursed by FEAP. However, given the design of the programme and the intended beneficiaries, the extent to which the programme could be seen as poverty alleviation strategy is an open debate. This rests on the fact that it is not specifically targeted at any particular poverty-ridden group in the society. Given these weaknesses of the FEAP, the government in 1998 inaugurated an inter-ministerial committee to review the roles and functions of FEAP along with some other poverty alleviation institutions. Despite the report of the committee, Ilori, (1999) noted that some fundamental issues relating to the operation of the programme such as the target beneficiaries, focus and cooperative orientation, which excludes a vast majority of the poor, among others, have remained unresolved.

The micro-credit institutions like the People's Bank and the Community Banks provide the poor with opportunity for self-realization through entrepreneurship, cushioning them against external shock, and providing them a means of social empowerment. The failure of orthodox banks in granting loans to the poor because of inadequate collateral also necessitated the establishment of these banks because they are expected to give loans at concessional rates. An assessment of the activities of these Banks by DPC (1999) is suggestive of their failure as poverty alleviation programme.

The People's Bank was structured to provide credit of between N50 and N2, 000 working capital to indigent Nigeria. This amount of loan is too small to cope with the realities of the business world. In terms of outreach, the People's Bank is well spread over the country and the number of branches increased tremendously from one in 1990 to 278 by 1997. In addition, the loan and advances profile of the bank is also encouraging with a loan-deposit ratio of close to 100 per cent in 1997. Other measures especially in terms of sustainability showed the Bank might not survive if the government withdraws its subventions to the Bank.

Community banks have made tremendous growth from one bank in 1990 to more than 1014 in 1999. The growth can be traced to the low capital requirements relative to the conventional banks and the less stringent operational requirements relative to the conventional banks. As a result, assets and deposits in the banks increased over the years. Incidentally, loans and advances have been increasing at a rate higher than the rate at which deposits are mobilized. Hence, the loan deposit ratio, which was 20.73 in 1991, increased

over the years to 53.37 by the end of 1999. During the mid nineties, many community banks suffered from the financial sector distress, which adversely affected their operational performance. The problem was more pronounced because of the weak capital base which was initially put at ₦250,000.00. The capital base was subsequently increased to ₦3 million. This is based on the belief that it would sustain their sustainability and outreach

The Community Banks' activities showed similar dismal picture as a poverty alleviation programme. An instance of the failure of this Bank is revealed in the interest charged on loans and advances to customers. These rates are higher than what commercial banks collect from their customers. For instance, while Community Banks charged as high as 36% rate of interest on loans and advances in 1992, commercial Banks charged only 29%. In addition, between 1995 and 1997, Community Banks and Commercial Banks were almost charging the same rates of interest on loans and advances, thereby casting doubts on the Community Banks programme as a poverty alleviation strategy. An assessment of income distribution in Nigeria showed that inequality is on the increase (see Okojie et al, 2000) and poverty is rising unabated with majority of people suffering from acute malnutrition.

Pro-poor Growth Policies

However, when viewed from pro-poor growth process, available indicators show that economic growth policies may be anti-poor in Nigeria. For example, while GDP growth rate has fluctuated at very low levels overtime at between 1.3% and 4.7%, inflation rate was as high as 72.5% in 1995 as against the 13.0% recorded in 1991. The Nigerian macro-economic environment portends a picture that quite limits the ability of the poor to tap into any opportunity that can get them out of poverty. Government's share of domestic credit was very high and much higher than the private sector share. This implies limited scope for private sector initiatives. The balance of payment position is such precarious as the Nigerian economy persistently witnessed negative decline in the overall balance of payment throughout the review period. The implication of this is that resources for building infrastructure and other social capital become unavailable for this purpose with dire consequences on the poor who continues to languish in poverty. (See Appendices 2 and 3).

One of the avenues of government impacted positively on poverty alleviation is on its expenditure on social services. In Nigeria, the proportion of social expenditure averaged only 9.4% of total expenditure during the period of 1985 to 1996 the proportion of the amount spent on education averaged 4.6% while health and housing garnered only 1.5% of the total expenditure. Agriculture, transportation and communication expenditure, which can impact positively on poverty alleviation averaged 2.4% and 1.8% respectively over the period. In contrast, defense and security got nearly twice as much proportion as education over the period, averaging 8.8% of total expenditure. This is about six times the share of health and housing over the period. All these indicate that social expenditure and other expenditures, which can impact positively on poverty alleviation, are not accorded the priority they deserve. When compared to other countries, the Nigerian performance in terms of public expenditure on education and health lags miserably behind. Kenya, for example, spends more than twice as much as of its national output on education and health than Nigeria in 1990. What is more worrying is that the proportion of the GDP spent on health is much less than the 5% recommended by the WHO.

Resources Redistribution

Within this aspect of the framework, the Nigerian government has been found wanting. The government has not come up with specific policies of distributing or redistributing resources from the rich to the poor. However, different governments have initiated various income redistribution policies such as the periodic review of wages and

salaries. Nevertheless, in spite of the various adjustments made to the salary level, the spiraling inflation that the economy has been witnessing has made the real value to be falling. Moreover, in terms of tax rates and allowances, government in the 1997 budget initiated various tax allowances and relief on personal allowance, children allowance and dependent relation allowance. This was with a view to lighten the tax burden on individuals and allow them to adjust conveniently to the impact of inflation and rising cost of living. In a similar vein government in the 1998 budget also increase the tax-free earned income for individuals who are on paid employment. In this regards, the tax-free workers earned income, which is exempted, from tax rose to N30, 000 in 1998 as against N10, 000 in 1997. However, the effect of these measures has been low pay and declining real value of salaries with serious consequences on the rising trend of poverty, and the creation of high income and asset inequality.

Also, one of the main distributive instruments available to the government for targeting old-age poor is the guarantee of a minimum pension to all members of the pension scheme. A full pension in Nigeria represents a maximum of 70% of previous earnings. When the real salary of senior civil servants was below the poverty line, it can therefore be asserted that all pensioners living only on pension are extremely poor. Majority of workers in the informal sector are not covered by any form of social security, nor have any devices for security. In addition, the rural population, the largely unemployed people, the disabled and the disadvantaged ones are left out in the pension schemes (Olayiwola, 1998).

Chapter Six

Conclusion

The analysis indicates that poverty is widespread in rural Nigeria and those engaged in farm activities are poorer than those engaged in non-farming activities. Furthermore, the probit estimates emphasise the significant effects of human capital and capabilities in determining poverty status of rural households in Nigeria.

Six measures of social capital were identified. These are density of membership, internal heterogeneity of associations, meeting attendance, payment of membership due, labour contribution and decision making. The study reveals that an average household size of 9 participates in at least 3 LLIs. Further, internal heterogeneity reveals some level of diversity in each group while meeting attendance index averaged about 60 percent for all participating members of households. An average of N4, 254.90 membership due and 43 days of labour are contributed by households to LLIs. The basic data from the study indicate that households with higher social capital are less poor using different dimensions of poverty. Using a reduced form model of household welfare which controls for relevant household characteristics, the contribution of social capital to household welfare was estimated. The result shows that increasing social capital by one unit will lead to 0.57 percent increase in household expenditure per capita. A one unit increase in the level of educational attainment will lead to 8.1 percent change in the level of welfare.

The disaggregation of social capital into six dimensions reveals that the level of diversity among members of LLIs, meeting attendance and labour contribution score have positive influence on the per capita expenditure of households. In this instance, a 1 unit increase in meeting attendance will lead to 2.6 percent increase in per capita expenditure. Similar increase in heterogeneity index and labour contribution score will lead to 3.1 percent and 0.85 percent increase in per capita expenditure respectively. The test of reverse causality between social capital and household expenditure with the aid of instrumental variable estimation technique indicates that the direct effect of social capital on welfare outweighs the reverse effect in the explanation of the correlation between the two variables. Another finding of the study is that social capital reduces the probability of being poor. The social capital dimensions of meeting attendance, heterogeneity index and labour contribution in LLIs significantly reduce the probability of being poor. A unit rise in meeting attendance, heterogeneity index and labour contribution will lead to reduction in the probability of being poor by 1.2 percent, 0.8 percent and 0.4 percent respectively. A unit increase in human capital (i.e. level of education will elicit 1.6 percent reduction in the probability of being poor. The findings of this study support recent emphasis on investing in social capital. In addition it has been shown that investments in LLIs need to be part of poverty alleviation programmes. This is because social capital (and its dimensions) has positive influence on per capita expenditure while at the same time reducing the probability of being poor. In addition, it is evident that social capital can compliment human capital endowment in enhancing welfare and reducing poverty. This study has also contributed to the growing literature on the effect of social capital on poverty with particular reference to Nigeria.

This study also examined the issue of inequality in expenditure among rural households in Nigeria. This was done utilising the generalised entropy measures and the Gini coefficient. The results of our analysis indicate that factors such as age, gender, and education level of the household head are important factors in explaining inequality profile in the country. We however found that most of the inequality exists within group and not much of differences in groups explain appreciable levels of inequality in Nigeria except for educational attainment of household head and the geopolitical zones that the household belong.

An examination of certain indicators of performance indicates that poverty reduction measures have had minimal impact in addressing the problems of poverty and also had insignificant impact on the living conditions of the poor. The general consideration of these measures indicates that the strategies were badly implemented and even had no particular focus on the poor in terms of design and implementation. The strategies try as much as possible to create the opportunity and empower the poor, but they are found wanting in the areas of pro-poor growth and resource redistribution. The effort of international agencies cannot be sustained due to lack of domestic supportive measures to guarantee its sustainability. This is understandable from the fact that states and local governments which have responsibilities for health care and education at the grassroots level and programmes which affect poverty alleviation, have much less share in the Federation Account. This points to the fact that efficient design of poverty reduction programmes in Nigeria requires that the poor must be identified and targeted and policies adopted should be consistent and sustainable. This calls for an articulated policy document for poverty alleviation in Nigeria.

The findings of this study therefore suggest a conscious effort at the policy level to redress poverty by increasing the human capital of individuals through provision of adequate education to individuals especially in rural areas. Since capabilities also explain substantial part of poverty in Nigeria, there is the need for better provision of social services, infrastructure and public goods. It should be noted that any increase in public incomes in the rural area would inevitably lead to significant decrease in rural poverty.

This thus suggests policies that will increase educational opportunity for all citizens as well as policies to reduce inter geopolitical zone access to opportunities.

Beyond this, an encompassing policy framework would be necessary to reduce national inequality. Some of the policies might include the following

- Redistributing wealth
- Land Reforms – in large rural areas, productivity and equality are both served by land reforms
- Human capital education plays a crucial policy role in greater distributional equality. Also is nutrition, health and other social investments

Social return is very high Girls' education is too important to be left alone especially for its effects on fertility, nutrition and family health. Education is very important for those at the bottom of the income distribution

Within the framework of this policy, priorities have to be set in individual cases based on resources and what is institutionally feasible. The three clusters of focus – opportunity, empowerment and security- are necessary and there must be complementarities among them. To create more opportunity, effective private investment needs to be encouraged, while international markets have to be expanded. There is the need to build the assets of poor people and address assets inequality across gender, ethnic racial and social divides. Infrastructures have to be provided to the rural area, so also access to information.

The effort of poverty alleviation strategies should also be geared to empowerment. There is the need to lay the political and legal basis for inclusive development, create public administration that fosters growth and equity and promotion of inclusive decentralization and community development. Also, promotion of gender equity, tackling of social barriers and support of poor people's social capital needs to be done to enhance empowerment of the poor. As a way of guaranteeing the security of the poor, there will be the need to formulate an approach to helping poor people to manage risk. This calls for designing national systems for social risk management and addressing civil conflicts. If all these three clusters can be addressed in the poverty alleviation strategy, the United Nations Decade of Eradication of Poverty will be feasible and realizable in Nigeria.

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