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Elizabeth Ebenyi Edith Idoko

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MEMBERS OF THE EXAMINING COMMITTEE

Prof. Dr. Marc Wuyts
Dr. Bridget O'Laughlin

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Enquires:

Postal Address:

Institute of Social Studies
P.O. Box 29776
2502 LT, The Hague
The Netherlands

Telephone : -31-70-4260460
Telefax: -31-70-4260799
e-mail: postmaster@iss.nl

Location:

Kortenaerkade 12
2518 AX, The Hague
The Netherlands

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LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ARI	Acute Respiratory Infections
ANC	Antenatal Care
BBC	
BCG	Bacille Calmette Guerin
BHSS	Basic Health Service Scheme
CM	Child Mortality
CMR	Child Mortality Rate
CPR	Chronic Poverty Report
DPT	Diphtheria Pertussis Tetanus Toxoid
FOS	Federal of Statistics
FAO	Food Agriculture Organization
FGM	Female Genital Mutilation
GDI	Gender Development Index
GNP	Gross National Product
GDP	Gross Domestic Product
GOBI-FFF	Growth monitoring, Oral rehydration, Breastfeeding, Immunisation, Female Education, Family spacing, Food supplement
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
HNP	Health, Nutrition and Population
ICT	Information Communication Technology
IMR	Infant Mortality Rate
MMR	Maternal Mortality Rate
NDHS	Nigeria Demographic Health Survey
ORT	Oral Rehydration Therapy
PEM	Protein-calorie Malnutrition
PHC	Primary Health Care
PNC	Post Neonatal Care
PRSP	Poverty Reduction Strategy Paper
SAP	Structural Adjustment Programme
SSA	Sub-Saharan Africa
TFR	Total Fertility Rate
USAID	United States Agency for International Development
UNICEF	United Nations Children's Fund
U5MR	Under-Five Mortality Rate
UPE	Universal Primary Education
WDR	World Development Report
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 The Problem

Poverty involves a large part of mankind (Kanbur and Squire, 2000), a cause for worry because it is happening amidst increased global wealth and technology. The chronically poor are between 300 and 420 million (CPR, 2004-05) and about 800 million people could not meet their minimum dietary energy requirements at the end of the 90s (Wiesmann et al, 2000). Indicators of poverty like childhood malnutrition and mortality, show that approximately 12 million under-fives die yearly in developing countries from preventable illnesses like diarrhoea, acute respiratory infections (ARI), malaria and measles (Rice et al, 2000) and the underlying effects of malnutrition on disease (Pelletier et al., 1995). Malnutrition and under-5 mortality are often used as measures of poverty because they are mostly concentrated among the poor (Gwakin et al 2003).

Although inadequate data has made the monitoring of trends and comparison between countries difficult, it has been observed that there is a general decline at a rate of about 1% annually since the 1980s. De Vries (1992) attributes this to the discovery of antibiotics after the World War II and Claeson and Waldman (2000) to the following 'evolution' of child health intervention programmes, which have been either disease-specific or more general Primary Health Care (PHC). These declines are impressive asnoted by Claeson and Waldman because they have taken place in the face of increased births, spreading resistance to commonly used antibiotics and anti-malarial drugs and with an increased rate in HIV/AIDS infection.

A closer look at this trend however, shows an uneven distribution, e.g. childhood mortality rates tend to be higher for poor people, in certain regions (mostly rural) and in some developing countries than others. Most under-fives die in Sub-Saharan Africa and South Asia, accounting for 74% of all child deaths in the world (Omar et al, 2000). Two-thirds of the world's 150 million malnourished children live in Asia and polio is still endemic in 20 countries despite the progress made in its elimination (Hilary, 2001). Most mortality declines have occurred among children in the post-neonatal period, leading to a

relative increase in neonatal or perinatal mortality rates (Claeson and Waldman, 2000). Gender issues emerged in some parts of the world e.g. in India the girl-child experience higher mortality and morbidity than boys (ibid). HIV/AIDS especially in Africa came into the scene with its impact on health from infection or the risk associated with being orphaned (Adetunji, 2000). Also, countries in transition economies have seen dramatic increases in children's diseases (Hilary, 2001). The point here is, though childhood mortality rates seems to be declining, taking countries individually, show that it is still a major health problem in some countries, with alarmingly high rates. Nigeria is one of such countries where the story has not been so good.

The number of Nigeria's poor is put at 64.7 million out of an estimated 116 million people in 1996, an increase from 38.5 million in 1985 (FOS, 1998). Death to her under-fives was 196/1000 in 1980 and 183/1000 in 2001 and Infant Mortality Rate (IMR) was 117/1000 live births in 1980 and 110/1000 in 2001, Child Mortality (CM) increased from 66/1000 in 1980 to 69/1000 in 2001 (WDI, 2001). The pattern shows a progress that dangles between stalling and increasing. Countries with similar GNPs as Nigeria in addition, seem to be doing better in their child death rankings, as shown in the table 1.1.

Countries	**Under 5 mortality Rate/1000**				**Total population Thousands (1996)**	**GNP per capita (US$) 1995**
	1960	1996	Difference in 36 years	Rank		
Nigeria	204	191	13	14	115,020	260
Yemen	340	105	235	50	15,678	260
Vietnam	219	44	175	85	75,181	240
Bangladesh	247	112	135	44	120,073	240
Uganda	224	141	83	30	20,256	240

Source: HDR, 1998

Of particular interest is Bangladesh with more people and less GNP per capita in 1995/96. All 4 countries in the table reduced childhood mortality faster in 36 years than Nigeria. Given her prospects for improvement, it will be interesting to know what determines childhood mortality there. How has she used her wealth and how does this vary in different regions and among gender? Malnutrition and childhood mortality indicate ill-being, thus this study is an assessment of the well-being of the people.

1.2 Research Questions

The following research questions therefore guided this study:

- What are the determinants of childhood mortality in Nigeria?
- Are there regional variations?
- Are there gender variations?

1.3 Research Objectives

The main objectives is to study poverty through the ill-being of children, specifically,

- To study the determinants of childhood mortality
- To study its changes over time.
- To investigate regional and gender variations.

1.4 Scope

This study has three main parts:

- A conceptual framework, which locates this study with Sen's capabilities concept.
- A political economy, which examines the political and economic dimensions of the child health problem.
- A regional and gender differential aspect, which looks at variations in poverty, food and health care of women and children, including care giving.

1.5 Limitations

The main limitation of this study is data. Firstly, its quality, omissions in births and deaths may have occurred for children who are not living with their natural mothers and for those who have died many years before the survey. Misreporting of ages at death of child or maternal ages can result in sampling, which can affect estimates.

Another limitation is data availability; it would have been interesting to assess poverty and childhood mortality consistently for a number of years using the same data source and to have a detailed analysis at the household or the individual level. It would also have been good to get a comprehensive picture of capabilities and resources of the poor for analysing income distribution especially in the rural areas. For example, for

looking at what capabilities in terms of assets and credit have failed over the years, but the data available did not allow for such analysis. Income data was practically unavailable and the expenditure data available was only for a number of years, till 1996. It was difficult to get government expenditure for different regions, also to get current data on food demand, supply and deficit for all six regions. The NDHS reports of 1990 was based on four zones and 2003 on six, this made studying trends difficult, the zones were thus reduced to two for this purpose compressing vital information.

1.6 Significance of the study

During the oil boom years, the Nigeria government did not think of poverty as a problem, so very little was done on poverty in terms of alleviating or even studying it. Consequently, her social development indicators are among the worst in Sub-Saharan Africa. The new democratically elected administration realising this, is doing all it can to address the situation. This study, which is an attempt at understanding the nature of poverty in Nigeria especially as it is reflected on childhood mortality, can inform policy making, in a strive towards achieving the millennium goals. In addition, there has been a search for solutions to child ill-health and deaths, the hampering factor has been inadequate information as to what the real determinants of childhood morbidity and mortality are; this study, which has tried to understand it from the capabilities approach, is a modest contribution to the childhood mortality framework of analysis.

1.7 Methodology

The data used for the analysis in this report comes from many sources: World Development Report (1978, 1982, 1987, 1992, 2000/01 and 2004), WHO database 2004, World Bank data on HNP 2004, UNICEF Database 2004, Human Development Report, 1998 and World Development Indicators, 2003 and 2004. Countries with national incomes of US $ 2000 and below in 1980 were selected to verify if a relationship really exists between IMR and income, this choice is based on the premise that such income is enough to adequately address poverty. These select countries were also selected in 2002 for a similar analysis. Data also came from the Nigeria Demographic and Health Survey

(NDHS) reports 1990 and 2003. There was an NDHS in 1999 but its data quality assessment cautions that some of her rates were underestimated, this analysis is thus based on the 1990 and 2003 reports.

From the NDHS, these factors are used: nutritional status (anthropometric measurements, breastfeeding, and infant feeding); the use of health services by mothers and for children; environmental health conditions; and socio-economic status. The data also allowed comparisons between urban and rural, regional and income groupings within the country. The DHS however, does not contain income nor expenditure data, in its place, total household expenditure and per capita food expenditure was taken from an analysis done by the Federal of Statistics (FOS), which they based on the 1996/97 consumer price surveys.

Nigeria has no official poverty line thus; an arbitrary proportion of the mean was used: one-third as poverty line and two-third of means as extreme poverty line. Means and percentages of most variables were found and results were presented using tables and charts. Performances in child health were scored to identify the poorest and the best zones and gender in this regard. This was done by simply allocating positions i.e. the poorest zone got 1 indicating the first position in poor indicators and the best zone got 6 and so on.

CHAPTER TWO

POVERTY AND CHILDHOOD MORTALITY

The quality of life of children is not only a sign of a community's future prospect but a sensitive measure of that community's present day well being (Kent, 1991) and/or a mirror of past deprivations (Floud, 1992). The concept of *well-being* draws attention to issues like living standard (the nature of people's lives due to internal influences like income) and other issues arising from external influences such as hurts from *commitments* and *sympathies* towards a course or someone (Sen, 1987). Pioneers in the study of living standard include Sir William Petty, who tried to estimate the national income, by measuring opulence; Adam Smith, examined the link between opulence and social functionings; Pigou, saw utility as the ultimate measure of living standard; and Joseph Louis Lagrange, worked on how physical functionings were linked with food intakes, activities, and locations, among others (ibid).

Guided by different justifications, the search for the basis of good living conditions have moved from the analysis of Income (GNP), Basic Needs, Consumption, Utility (neo-classical welfare economics), to Sen's challenge of Utility, which ushered in the Capabilities approach. The ultimate motive has been to define good living conditions for uplifting lives out of poverty, making poverty a special concept because it defines the 'condition where a certain minimum living standard is not met' (Vos, 2002 pp 4), a matter of deprivation (Sen, 1981a). The focus is usually on the poor (the people most affected by low living standards), with a view to examining the conditions of the non-poor as well. The approach to this study is no different. Using malnutrition and childhood mortality as a tool for poverty analysis, it situates *Malnutrition and childhood mortality in Nigeria* within the capability framework, motivated mainly by the need to assess the nature of the lives of Nigerians, as shown by the ill being of their children.

2.1 Poverty as lack of Capability

Poverty has a varied nature (Sen, 1987; Osmani, 1992; Pyatt, 1999) so, it is difficult to define and measure. There are variations in different parts of the world due to differences in income, styles of governance, values and habits. The question is, should it

be defined and measured according to material possession or the value of life that people live or have lived? How should this be judged? According to available resources, given an environment and its possibilities, in absolute or relative terms or by some universal standard? Whose judgement should matter, the *poor* or the *expert*? At what unit can poverty be effectively appreciated - the individual, family or region and, for how long a time? How can the findings be aggregated for comparison across different regions without loss of information, which may be vital to policy? These are the challenges.

The different definitions can be grouped into two broad categories plus an overlapping one; those who see poverty as social inequality and others who define it as an impoverished state of being. The overlapping category examines the processes of both. In the first categories, poverty is defined mostly in relative terms as a condition in which some group in society receive an income that is different from their population's share. The poor here refers to the lower socio-economic segments of the society who receive the smallest share of national income and usually are more in number than the upper segment. Poverty is seen as comparative, describing a condition of lack of needed resources to live (or participate in) a life understood in society as normal. It examines poverty mostly in the long-term as group deprivation, dividing society into various layers or quintiles and viewing the differences between the lower 20 or 10 per cent and the rest of society. This category hosts what Sen would call the inequality approach (Sen, 1992), social exclusion (Sen, 2000) and, also poverty as powerlessness and voicelessness (Kanbur and Squire, 2001). Poverty in Nigeria is often described as being in the midst of plenty suggesting that poverty could be associated with unequal sharing (W. Bank, 1996), thus in the search for causes, this concept is useful.

In the overlapping category, poverty is seen as a process. It seeks to know the *why* and *how* poverty occur in relative or absolute terms. Concepts such as Vulnerability (Wuyts, 1992; Morduch, 1994), Entitlement failure (Sen, 1981b), Chronic or Transient poverty (Hulme and Shepherd 2003), and livelihood insecurity (Ellis, 2000; Bird and Shepherd 2003) are important. It adopts both long- and short-term approaches. The process of poverty should inform our search for why young children die at such a high rate in Nigeria.

The second category on the other hand, sees poverty more, as an absolute condition, one in which income or human capabilities are insufficient to meet the necessary needs or conditions for minimal living. It is more interested in the lives of individuals, their households and community at best, studying the poor in their location, numbers and features. This is the kind of poverty Wuyts (2004) would classify as *state of affairs* or *lack of resources*, Sen (1981a) as biological and (Sen, 1987) as capability failure. However, there are many challenges about cut-off points for judging the poor and non-poor. For instance, people live in different locations, climates and cultures that may affect their choices of food; money has different values (e.g. one US$ a day) in different regions; the importance attached to certain ways of living may be due to the availability of certain services or the lack of it or cost of living in a given society thus, what is termed absolute in one community may be relative in another. However, where the capability to keep children alive is lacking, one can safely say that such poverty is absolute.

The monetary approach, held centre stage for a long time, probably because its data is easy to handle and could be studied as proxy for other aspects of poverty. In the late 1980s however, Amartya Sen, a development economist, expressed doubts as to whether its indicators alone can explain the deficiency in living standard. Sen's argument is for a broader definition to include social aspects like having the freedom or rights to choose what is valued and having access to the opportunities to *do* and *be* what you should be. Though studies confirm that income is linked to child mortality (Woods, 1982), it is considered as only one factor among others in a range of capability failures.

The capability framework within which this study is placed is built on the concepts of functionings and capabilities. *Functionings* are achievements or different aspects of the *states of existence* (well-being or ill-being, literacy or illiteracy) and *capabilities* are the abilities or potentials to function (health; nourishment; ability to learn). Capabilities are derived from the *characteristics of commodities* e.g. calories or protein from food items (Sen, 1987) which is influenced by activities of choosing, freedom to choose what one wants for instance. The focus is usually on the functionings a person can or cannot achieve, given available opportunities. Thus, it follows that the

contexts within which choices are made matter, for example the case of two undernourished people, one as a result of fasting and the other from starvation. Considering the choosing activities involved, the two cases explain two different capabilities sets (ibid) one had the opportunity to be well nourished, the other did not. These according to Sen cannot be ignored in a poverty analysis. An ideal capability framework by implication should examine: commodities; choosing (opportunities and limits); utilisation (rights, freedom and participation) and outcome or functionings.

According to Nussbaum (1999) capabilities could exist as in a continuum; to one extreme the absence of it may be so acute that a person cannot function at all, in this case, mortality occurs. At the other extreme, a [child's] capability is *truly human* that it has all that is needed for full human functioning. In this analysis, other intermediary stages, (mild, moderate and severe) malnutrition and infections are identified as denying the child of its full ability to function. When the failed capabilities are identified, poverty is then defined.

2.2 Poverty and Malnutrition

Malnutrition as defined by UNICEF (1998) is the combination of inadequate dietary intake and infection resulting from the imbalance between the body's needs and the intake of nutrients. There are two meanings to this: a malnourished person is one who does not get enough nutrients (undernutrition) or one who gets excess nutrients (overnutrition). Malnutrition here refers to the former and to other forms of malnutrition like protein-calorie (PEM) and micronutrient deficiencies (like iron).

Poverty is the root cause of malnutrition, poor families lack the resources to purchase or produce enough food leading to food and nutrition insecurity and malnutrition (Reinhard and Wijayaratne, 2002). Malnutrition is concentrated among the poor, Marini and Gragnolati (2003) found in Guatemala, that while only 16 percent of children in the richest quintile of households are chronically malnourished, the corresponding proportion is 62 percent among children in the poorest quintile. It is a product of the interaction of many other factors, household decisions, community

infrastructures, cultural and natural environment, national policies, and international economic conditions (UNICEF, 1998). High rates of malnutrition on the other hand, jeopardize future economic growth (Gopalan, 1992). Infants who start with low birth weight never recover from it, stunted mothers are said to almost always have low birth weight children, and stunted children grow up with learning disabilities, into stunted adults with low levels of productivity, earning low incomes (ibid). Malnutrition thus, contributes to creating poverty as well as boosted by it. These concepts are so closely related that the study of one end up being the study of the other, as put nicely below:

> *Many elements of being poor, such as hunger, inadequate health-care, unhygienic living conditions... tend to impair a person's nutritional status... being poor almost always means being deprived of full nutritional capabilities...the capability to avoid premature mortality, to live a life free of...morbidity...the study of poverty is, therefore the study of people's state of nutrition. (Osmani, 1992:1)*

Using malnutrition as tool for measuring poverty is described as the biological approach (Sen, 1987). However, he warns us that malnutrition captures only one aspect of the idea of poverty, though a very important aspect especially in the developing areas. This means that as an analytical tool it may not be always a sensitive measure in some parts of the world, especially those parts that have developed beyond simple levels of subsistence.

There is a debate though about fixing a reference standard against which real measurements can be compared. The question in the debate is, if an ideal standard exists where a person suffers from no disability in any nutritional function, and if it does exist, how it can be judged given the diversity of nutritional functions, climatic conditions and physical features. One view argues that, there can be no *ideal reference standard of requirement* because man has not evolved to a level where all his functional abilities are 'simultaneously maximised' thus, only serious deficiencies that pose a threat to life or have reached a *threshold of the breakdown of adaptation* deserve assessment (Payne, 1992). This threshold according to them is identifiable other points are imaginary. The concepts of *adaptation* (Sukhatme, 1981), which claims that the body adapts itself in a number of ways to minimise damage to nutritional functions and *small but healthy* that says a child who fails to meet its genetic potential in height, may be healthy if its weight

for height remains normal (Seckler, 1984) are used to support this argument. They also argue that requirements vary in two ways: interpersonal or genotypic and intrapersonal or phenotypic (Srinivasan, 1992) therefore, there cannot be fixed a standard. The present study *Malnutrition and Childhood mortality* does not subscribe to this view because it is about children's health and any nutritional deficiencies could inflict irreparable damages on them, which can have effects on their future well-being. Moreover, there is no convincing evidence that children can adapt Gopalan (1992), so there should be a fixed standard that strives for the best growth outcome.

A second view on the other hand, argues that though achieving nutritional adequacy maybe difficult, the criteria for assessment should not be such that allows functional deficiencies, so as to capture all those who are suffering from any degree of deficiency (Gopalan, 1992). Malnutrition to this view, can pose a threat to life even at the mild and moderate stages (Pelletier et al, 1995) not just when it has sunk below the *threshold of adaptation.* This view therefore, argue for a common reference standard, adopting the argument of *genetic potential* that says, most population groups in the world are capable of achieving the same physical dimensions if free from nutritional constraints. This has empirical support (Floud 1992; Fogel 1992) and is widely accepted. The genetic potential view vindicates the interpersonal argument but intrapersonal variation is still being debated. This study will operate within the reasoning of this view believing that it is better to have too much than too little precaution.

Judging nutritional status is still problematic: the direct method of measuring functional competence, promises accuracy but it is clinical and too technical to handle especially in large populations, so two indirect methods or proxies are used, the food intake (or FAO method) and anthropometrics (or WHO method). However, their validity is still doubted. Svedberg (2000) for example finds that they give conflicting estimates of the extent of undernutrition. The FAO method shows that the food problem in Sub-saharan Africa (SSA) is twice as high as in South Asia and the WHO method shows a reverse picture for undernutrition among children. The FAO method though good in

monitoring quantitative changes in national food supplies, is limited in that it is based only on food intake, one influence among many on nutrition.

Anthropometrics on the other hand, gives us an opportunity to assess what is obtained from consumption as shown in bodily conditions and the outcome of all stages of malnutrition (de Onis, 2000), though it does not specify what factors either in the long- or short-term explains the bodily changes. It could also act as sign for ill health and food unavailability, since children are the most vulnerable segment in the society (Carlson and Wardlaw 1990). Usually, three indices are used low weight-for-age (wasting) which indicates current acute malnutrition low height-for-age (stunting), reflects long-term cumulative effects and low weight-for-height (underweight), defines both acute and chronic malnutrition. FAO results will be useful in the background analysis, but undernutrtion here refers to anthropometric shortfalls as defined by low height-for-age or weight-for-age.

2.2.1 *Malnutrition and Childhood mortality*

There is mounting evidence about the relationship between malnutrition and mortality pioneered by Gomez et al (1956) and Scrimshaw et al (1968). These studies with recent ones (Chen et al, 1980; Scrimshaw, 1989; Pelletier et al, 1994; 1995; Schroeder and Brown 1994; Rice et al, 2000; Brundtland, 2000) agree that malnutrition and infection are 'mutually reinforcing' and that they are determined by poverty and ignorance. The contribution of malnutrition to child mortality is put roughly at 56%, 83% of this is due to mild and moderate malnutrition, which increases exponentially with the degree of malnutrition (Pelletier et al, 1995).

The risks differ for different diseases, strongest for diarrhoea and acute respiratory infections (Rice et al, 2000), stunting is higher among children with frequent exposure to diarrhoea or respiratory infections (Marini and Gragnolati, 2003) and globally, children who are poorly nourished are 11 times more likely to die than well-nourished children (Brundtland, 2000). The potentiating effect of malnutrition on childhood mortality will

not be used in this assessment, because the epidemiological data required in addition to anthropometrics is not available.

2.3 Poverty and Childhood mortality

Mortality of children under age five is mostly measured by Infant Mortality Rate (IMR), the probability of dying before age 1 for every 1000 live births; Child Mortality Rate (CMR), the probability of dying between ages 1-4 or sometimes ages 1-4.99, and Under-five Mortality Rate (U5MR), the probability of dying between birth and age five for every 1000 live births combining IMR and CMR in a single analysis (Kent, 1991). This study is about U5MR, also called childhood mortality.

Childhood mortality is an important indicator of health, social and economic conditions of a country (UN, 1988) and thus of poverty. Poverty is the cause of high childhood mortality, most under-five deaths are concentrated among the poor (Gwatkin et al, 2000; Wagstaff, 2000) and the main causes of death (malnutrition and communicable diseases, especially diarrhoea), are classified as poverty diseases. Gwatkin et al (2000) finds that, 20% of the world's poorest people account for 47% of deaths from communicable diseases while the richest 20% account for only 4%. These findings point to the fact that childhood mortality is a poverty issue, capability poverty in particular, because no parents capable of keeping their children alive do otherwise.

There has been a difficulty in identifying the best policy for promoting child health. Efforts have shifted from eradicating the major diseases via sophisticated medical hospitals and schools to the adoption of the primary health care (PHC) at the Alma Ata conference in 1978 with emphasis on improving living conditions. The PHC was supposed to provide cost-effective services, widely acceptable by different cultures, but it achievements have been minimal (Atun, 2004). There are still no known theories for the study of childhood mortality determinants, only models (Behm 1991), and the big question has been what the real determinants of childhood morbidity and mortality are.

Mosley (1983) was the first to organise this question into a model. He identified 14 proximate determinants or biological mechanisms, which he classified into 5 groups of social practices at the household level: maternal fertility factors (age, fertility and birth interval), environmental exposure to contamination, nutrient availability, injuries (accidents and intentional) and personal disease control factors (preventative and medical treatment). These determinants explicitly explain that childhood mortality is not the result of an isolated episode of disease as was thought, but 'a long series of minor biological insults' (poor diet and multiple recurrent infections) which have retarded growth, wasted and worn down the child's resistance. He is criticised for neglecting behavioural factors or acts, found to be crucial to childcare.

In 1984, Mosley and Chen modified slightly, the Mosley model combining child health and child death into a single outcome variable, weight-for-age. Data gathering is by anthropometrics. It is not just important to search for the determinants of childhood mortality in their view but child survival also. It takes its search into the socio-economic factors of child survival, which is most relevant to this study because it is broad-based. The ecology, the political economy and the way they affect organisations of production and distribution of goods and services especially health services is suggested for analysis (Mosley and Chen, 1984). This will be useful in explaining the characteristics of poverty and the constraints faced by the population.

Van Norren and Van Vianen (1986) developed another model based on Mosley's model (the malnutrition-infections syndrome). This model includes the behavioural determinants, which Mosley's excluded and tried to explain the variations in mortality among socio-economic and cultural groups using behavioural as well as biological determinants of childhood mortality. In a later version, Van Norren (1988) extended it by two levels to include community and health care programme characteristics. They select their intermediate variables from the GOBI-FFF and other Child Survival Packages of UNICEF and WHO (de Vries, 1992). This model ignores mortality conditions like accidents, sex-differences, sex-preferences that lead to neglect and infanticide, chronic conditions like malaria or sickle cells anaemia (which often lead to chronic nutritional

depletion and growth retardation) and a major cause of childhood death in Nigeria. However, the ideas of this model inform the aspect of this study which has to do with Care giving.

There have been other models, Schultz's economic model (Schultz, 1985), Barnum and Barlow (1984)'s model, etc. It is commonly agreed that childhood deaths are a result of the economic and social structure of a country or region, which shapes the living conditions of the family upon which the health of the child depends. Specifically, studies have associated childhood mortality with parental occupation, high fertility, income and education; place of residence; rural or urban migration; regional variations; ethnic factors; wars; living conditions and even past child survival programs, which have been criticised for over relying on universals like immunisation and Oral Rehydration Therapy (ORT), ignoring root causes like poverty.

Parental education shape parents' capabilities to generate the income their families need and the mothers' childcare habits (Behm, 1991) thus, it is singled out by many studies as significant in the study of childhood mortality. High childhood mortality is found with the rural population because they are more likely to be less urbanised, with less social and commercial activities, which could also mean low income earnings. It has also been found that regardless of the degree of urbanisation, when the household head is employed in agriculture and the mother is illiterate, infant mortality is high (ibid). Usually migrant families from rural areas in some countries live with their children in poor conditions, 'excluded from restrictive health care systems and immunisation programmes' (Hilary, 2001), which increases urban poverty and childhood mortality.

Regions within countries may vary in climate; topography and socio-economic factors that could affect production activities negatively or positively, and can increase the incidence of infectious and parasitic diseases. There could also be regional variations in the degree of urbanisation, ethnicity and religion that affect living styles and mortality. Ethnic factors have to do with cultural patterns and beliefs that affect thoughts about

procreation, childcare (especially of the female child), and treatment of childhood diseases, this is predominant in areas with high levels of illiteracy (Brabin, 2001).

Living conditions, like electricity, water supply and sanitation, can affect contamination of the household environment and aid the incidence of various infectious diseases like diarrhoea (Behm, 1991). Marital status e.g. single, married, polygamous or monogamous unions have and impact, low rates are associated with stable family relations (Kent, 1991) among many other factors. All these factors seem to cluster around how food, health (including water and sanitation), and care, translate into good growth for children. Food shortages, lack of care and access to health services seem to depend mainly on income, education especially of women, and policy, which is further explained by resources (human, economic and organisational) and its distribution within the household or geographic regions. This line of thinking is what frames the analysis of this study. (Figure 2.1)

2.4 Poverty and Policy

Social policy could have two meanings; a prescriptive one that is about actions and positions of government to address social needs and another seen as a process of organising politically to demand social action (Mackintosh 1990; Kanbur and Squire, 2001). Debates around policy are old and views about the poor have gone from their being seen as 'undeserving' or potential productive resources (Slack, 1988) to their being seen as people with rights. Their numbers and features are consequently being studied so as to have their plights improved. These views have defined what counts as poverty and what conditions need to be eradicated. With the variations identified earlier, it has become clear that the definition of poverty matters in poverty-reduction strategies (Lipton and Ravallion, 1995; Laderchi et al, 2003). Two views have been dominant in social policy, the market-led approach proposed by neo-liberal economists, which emphasizes economic growth (Kuznets 1963; Ahluwalia, 1976; Ravallion, 1997), and the support-led approach, which is welfarist emphasizing public intervention (Dreze and Sen, 1989).

The market-led view, supported by the Washington consensus, propose little state intervention, rather the state is to concentrate on stabilising society for business activities. Fears about growing inequality were quelled by the Kuznets curve theory popular in the 1970s, which argued that wealth would 'trickle down' to the poor and eventually reduce poverty when a certain level of development was reached (Moore and White (2003). Today with the failures arising from the Asian Economic Crisis, environmental issues, the failure of market reforms to reduce poverty and leading to slow growth, there has been a shift. In addition, some countries lowered mortality and illiteracy rates on low incomes e.g. Kerala in India, Sri Lanka, and Costa Rica (Sen, 2001). This has led to the realisation that wealth generation is not sufficient but that those resources channelled to the poor, is actually good for economic growth.

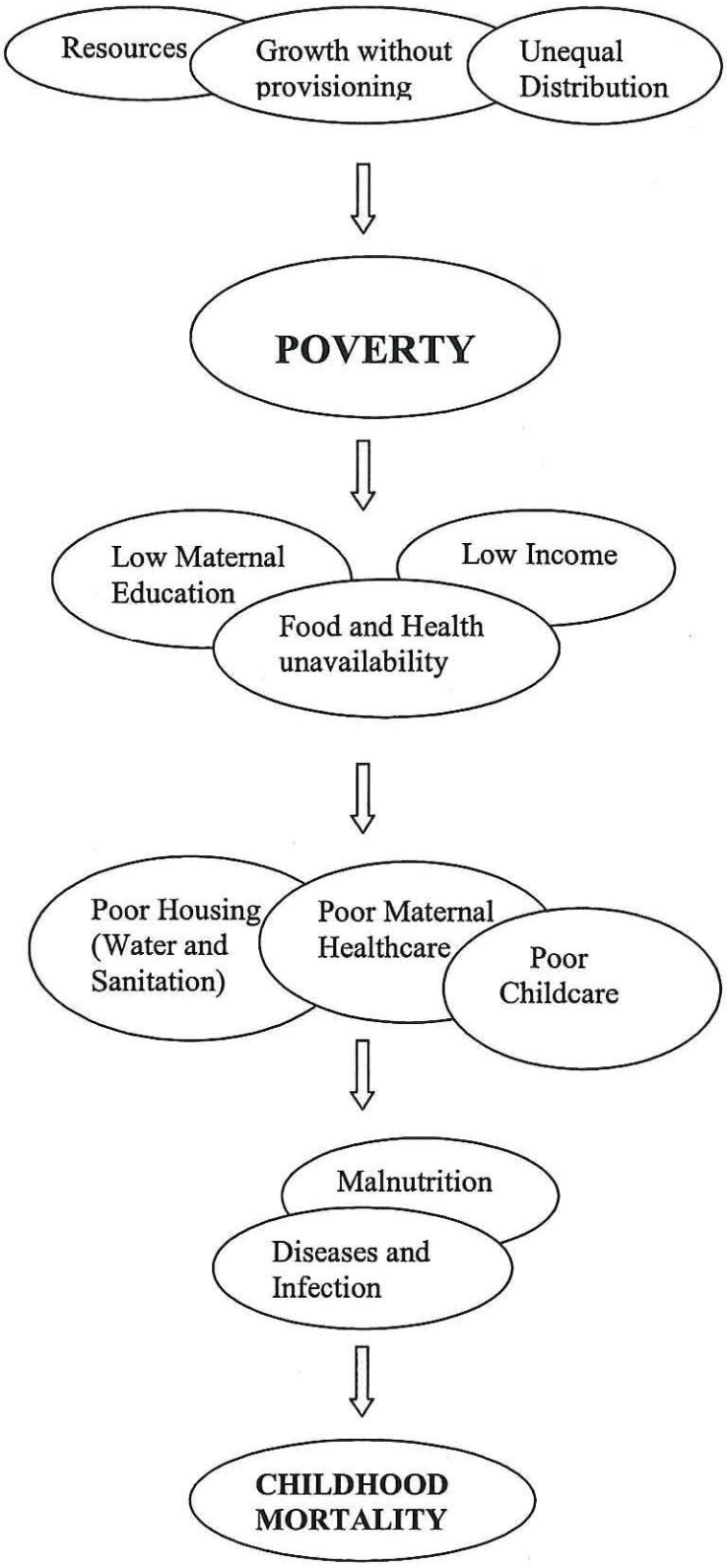
The debate does not end there as others have argued that social development or distribution alone is not enough, but that they must be combined with growth and poverty reduction so as to break away from income poverty and have a developed human capital which will be more able to enhance their capability and contribute to growth (Taylor et al, 1997), hence *growth with equity*. Commitments are directed towards child mortality reduction, improvement of health, provision of safety nets, and access to credit (Ranis et al, 2000). The problem is still how to achieve it. Ideas about *good governance, democracy, empowerment* and *participation* have been explored especially in the preparation of the Poverty Reduction Strategy Papers (PRSP) but in reality they are only superficial. The politics of inclusion is hampered by the fact that, civil power still lies with state actors, the market within and beyond the boundaries of the state and that political organisations are not encouraged (Moore and White, 2003; Houtzager, 2003).

The human development approach is Sen's capability approach operationalised (Fukuda-Parr, 2002). It is multi-dimensional and opposed to the neo-liberal paradigm. It differs from basic needs and utility in the areas of *rights, freedoms and human agency* (ibid). Policy it is believed, should improve lives based on the principle of equity and according to accepted standards, removing limits that keep people from functioning, as they should. It sees economic growth as important but defines poverty by social and

political progress centrally. It is concerned with 'governance for social justice that enlarges participation, power, and influence [also] of...women, ethnic minorities...' (Pp.8). It believes that people are agents of change and investing in their education and health is crucial to bringing that about.

There are two problems however, in practicalising poverty definitions in policy-making: the nature of the government and power relations within it on the one hand, and how the standards used in poverty measurement should translate into policy on the other (Sen, 1981a). The question is should public policy be defined in terms of the views of society or according to what policy actually should be? The dilemma is, if it is according to what policy actually should be, it may fail to catch the political issues (the nature of government, sources of power and the forces exerted by organisations) involved in policy making, if according to the views of society, what constitutes deprivation and how it should be eliminated will be defined by feasibility (ibid). Policy definition should therefore, be according to standard, and bearing in mind the rights of citizens not according to the capacity of the government. How resources are made available is an issue for a different study. This study thus, defines policy according to the standards for optimal well being taking into consideration issues like freedom from disease and malnutrition, illiteracy, child mortality, and the increase of livelihood or social security.

Figure 2.1: ***An Analytical framework for the study of Poverty and Childhood Mortality in Nigeria***



CHAPTER THREE

A POLITICAL ECONOMY OF CHILDHOOD MORTALITY

This chapter presents the nature of poverty and under-5 mortality in Nigeria, a West African country, which holds at least $1/5^{th}$ of the African population. The analysis is aimed at assessing the determinants of childhood mortality at the aggregate level, placing a special focus on the impact of the political economy on capabilities and constraints of the people in areas of income, quality of life and public financing.

3.1 The Nigerian Political Economy

Nigeria is 44 years old as an independent country from the British colonial power. She was promising, a strong voice for liberation in Africa, well resourced and poised to becoming 'an African democratic and developmental state', (Joseph, 1999). Decades later she has not only turned into a disappointment in these regard, but a target of international action for the observation of human rights (ibid). Many blame the corrupt, undemocratic and frequently changing military regimes, under which Nigeria spent about 30 of her 44 independence years.

Others blame politicians who did not practice politics with maturity but saw it as an opportunity to promote ethnic and religious eccentricities (Olowu et al, 1997). Yet others blame the amalgamation of two regions in 1914, an Islamic North and a Christian South, with opposing methods of governance and values. A civil war was fought in the late 1960s to resolve what should 'constitute an acceptable social, political and economic order' with no success (Joseph, 1999). In these confusions, life deteriorated and no developmental policy really worked.

3.1.1 The Political System

The Nigerian system of rule is likened to *neopatrimonialism,* a term from Max Weber's concept of *patrimonialism,* used to describe a type of governance characterised by the pursuit of material wealth through the appropriation of state offices, where a ruler (president or his appointed chief executives)'s preferences rather than state laws shape

authority (Bratton and Van de Walle, 1997). Power is over-centralised and stability is maintained by selectively distributing favours or material benefits to loyal followers (Joseph, 1999). State functionaries enjoy access to various forms of 'illicit rents, prebends and petty corruption', seen as office entitlements though; they receive official salary (ibid), creating the need for patron-client relationships (for easy access to their rights) termed *godfatherism* in Nigeria.

These features have been present in most regimes in Nigeria, even the newly elected one because, change is difficult. Consequently, public funds have gone to pay 'bloated salary bills...' of the political class or disappeared (as much as 10^{th} of GDP in the 1990s) and there has been little time for the governed (Dike, 2003), because only what will give immediate benefit attracts attention and serious addressing, poverty happens not to be one of such things. The Ogonis of the Delta region is a good example of such neglect and human rights violation. While the people lose their sources of livelihood, water and food like fish, due to the oil extraction activities, their frustrations were either not heeded to or campaigns for human rights to be applied were violently quelled. Poverty thus, is linked with neglect and the denial of rights and freedom which breeds capabilities poverty (Sen, 1987).

These issues are made worse by how it is explained using either religion or ethnicity, diverting attention from corruption. It makes way for condoning bad governance, deep *tribal prejudices and nepotism*. It affects peoples' ability to secure employment and access public services as those in places of authority hire or favour their own people. Those who relocate to states other than their own for example, are treated as non-indigenes and find it difficult to secure employment in such states (Dike, 2003), unless with the help of a *godfather*. It is also difficult to organize politically to demand social action, while corrupt leaders enjoy the backings of their people. These leaders do close to nothing to alleviate poverty even of their own people, but it is fashionable to support your tribe's person. Since independence for instance, there has been more presidents from the North, but located in that region, is Nigeria's largest poor population and consequently her highest rates of child deaths.

3.1.2 The economy

The Nigerian economy is capitalist with a 'trickle down' approach to development (Aigbokhan, 2000). It is foreign controlled and the benefits of available development are skewed in favour of the urban areas (Oyovbaire, 2004). Until the 1970s agriculture and industry were the mainstay of the economy in terms of providing means of livelihood and food supply then, the oil industry came as the major source of foreign exchange, about 98% of export earnings in 1998 and 58.3% in 1970 (Ali-Akpajiak and Pyke, 2003). The high revenues from oil diverted attention from sectors like agriculture which declined, from 80% in 1960 to 1.5% in 1995, industry grew for some time then declined from the mid-1980s, 43.2% in 1989 to 33.3% in 1998 and others like solid minerals were not really started though Nigeria is rich in coal, tin, gold, kaolin iron ore, etc (ibid).

With the oil-boom the problem was concealed because there was employment in commerce, construction and urban-based manufacturing, in 1981 however oil prices slumped on the world market (Odebode, 2004) shocking the economy. Poverty increased as a result of austerity measures taken in response to these shocks, which involved import restrictions, deduction of employees' salaries, withdrawal of petroleum subsidies, introduction of SAP, (ibid), etc. Real wages fell from 94.9% of nominal wages in 1986 to 20.9% in 1992 and to 3.5% (Aigbokhan, 2000); poverty levels rose as a result and equal distribution of income less equal. An 'over-valued' local currency (Naira) also depreciated, inflation soared, limiting the potentials of the economy to compete (Oyovbaire, 2004), and leading to the closure of many local industries. This increased unemployment and violence, and discouraged foreign investment (Dike 2003), which was badly needed in the declining economy, to create employment especially for the educated youth. The government also resorted to excessive borrowing; by 1999 her external debt had reached US $ 30.1 billion, about 40% of GDP (Ali-Akpajiak and Pyke, 2003). This mounted pressure on government hindering her from providing basic social services like water, healthcare, etc.

The necessary infrastructure and conditions for economic recovery are under-developed. There is little investment in technological development, resources for research and development is only about 0.01% of GDP and technology creation is almost non-existent (Ali-Akpajiak and Pyke, 2003). The provision of technological facilities and use are southern, urban and the rich biased, only about 40% of the population have access to electricity (Northern states 10-15%, Southern states 60%, and Lagos more than 90% of households). She lags behind many African countries in the development of the ICT sector and in computer penetration (ibid). These have effects on the livelihood of the people, manufacturers have to provide their own electricity, water, transport and even security service, e.g. pushing up the cost of production and causing a decline in both production and employment (ibid). Low technology has also meant their goods competed unfavourably in the over liberalised economy.

3.1.3 Poverty Alleviation Strategies

Poverty alleviation was really not a priority for the government as shown in her public expenditure pattern (table 3.2). In theory Nigeria has laudable polices directed at rural areas and the poor, the problem is the consistency in implementation and influenced by the system of governance in place 'they only made well-connected and powerful people richer' (Dike, 2003), as they were used as reasons for squandering the nation's wealth. They were also changed very frequently; each regime adopted a new program instead of continuing with, and improving on a previous one because most times, they were meant only to 'buy legitimacy for [a ruling]...government' (Osinubi, 2003). All these meant that the poor struggled on their own with little or no assistance from the state, making poverty more serious.

In addition, there were no proper studies done on poverty in Nigeria until about 1995, because with the oil boom, government did not view poverty as a problem and there was no household data on which to base such studies (Olaniyan, 2000). Thus, how economic policies suppressed opportunities for the poor, how food supply fell short of requirements, how poorly the poor accessed health or education and how their exclusion determined poverty outcomes like childhood mortality were not properly understood by those who were supposed to alleviate their plight.

3.1.4 Food Supply

Every inch of Nigeria is arable, given her tropical climate and good drainage; she is capable of producing sufficient and varied foods for her population and for export (Atinmo, 1983; Oyejide, 1986; Ojo, 1991). However, her food supply is substantially supplemented through imports because the necessary organisational arrangements are still lacking. The food problem started with the outbreak of the civil war in the late 1960s and was worsened by the 1972-73 Sahelian droughts. It is largely a problem of policy in three major ways. First, agricultural policies to help the farmer were focussed on non-food crops thus; large-scale farmers whose produce were either exported or sold to industries benefited more from them (Oyejide, 1986).

Second, trade policies did not take the plight of farmers into consideration. With the oil boom, the need to rely heavily on revenue from agricultural exports taxes ceased thus farmers and agricultural policies were abandoned. Though there were restrictions placed on the import of locally produced foods, these restrictions were not effective (ibid). For example, the state and federal governments made large quantities of food imports duty free. Import licences were abused, especially with the 1972-73 drought relief programmes and the Universal Primary Education (UPE) of 1976, even food locally produced and others foreign to the traditional diets were imported. So, the market was flooded with imported items and many Nigerians acquired new tastes, which could not be locally, produced e.g. barley. Food imports bills mounted as a result, from 57.7 million in 1970 to 1437.5 in 1980, and 1646.5 in 1987 to 88.0 billion in 1996, and food now accounts for 10% of total imports (Ali-Akpajiak and Pyke, 2003). Crops like palm oil which once accounted for over 21% of total world production in 1972 became an imported commodity in 1975 (Toyo, 1987).

Third, though an effort towards a food and nutrition policy was started in 1979, it was only drafted in 1997 and officially approved in 1998 (UNICEF, 2001). Efforts towards operationalising it is just beginning, thus the food problem in its totality has never been fully understood leading to 'duplications, revisions and wasteful policy reversals' (Idachaba, 1983). Agricultural problems such as poor infrastructure, lack of working capital, obsolete equipments and machinery and low rate of adoption of

appropriate technology, were left unattended to. Benefits from existing agricultural policies and programmes go to new breed farmers who are only interested in getting certificates of occupancy for large tracks of land, which would serve as collateral for securing loans (Dike, 2003); most of the real farmers could not benefit because they are uneducated.

In addition, the rate at which the urban areas were filling up as farmers abandoned farming for city jobs and the high rate of population growth constitute its own problem. Energy is said to increase by age until 40 years then a decline sets in (Fadayomi, 1983), about 80% of the Nigerian population is below 40 years, constituting a fast growing demand for nutrients to be met by a declining food supply sector. This is the food task for Nigeria, which has led to undernourishment for many.

3.1.5 The Health system

Public health was started in 1946 when soldiers and staff of the colonial administration were treated free; in 1975 the Basic Health Services Scheme (BHSS) was launched to increase access to preventive health, in 1988 a national Health Policy was adopted to expand the PHC with emphasis on community participation, intersectoral linkages and decentralisation (UNICEF, 2001). Implementation has been hampered by a lack of human and physical infrastructure. There are a host of other policies or drafts in place that can improve child health, Maternal and Child health policy (1994), Breastfeeding policy (1999), Water supply and Sanitation policy (2000) and a Child policy recently approved among many others, how to operationalise them are still being worked out (USAID, 2002). Healthcare provisioning is done at three levels, federal (tertiary facilities), state (secondary) and local government (PHC). Nigeria is considered as well covered by health centres with 78% living within 10 km of some kind of facility, though better in the South than the North (Ali-Akpajiak and Pyke, 2003).

However, many of these facilities are poorly equipped, lacking in essential drugs and trained staff. This has led to a rise of private health care, providing 31% of PHC and 75% of secondary healthcare in 1999 (ibid), mostly set up by health staff, who are still in government employment. There has also been a rise in the use of traditional medicine

though no assessment ascertains its merit (ibid). Low government spending, (about 0.2% for the period 1990-1998), lack of data for planning, brain drain, from lack of money to pay salaries and maintain the system causing consumer dissatisfaction and the introduction of user fees since 1986 have resulted in low use of the public health system.

The Nigerian health system relies heavily on a host of donors for funding, even for programmes like family planning, child and maternal health service delivery, research and data collection and the PHC. Consequently, she lost control of the ability to direct a fragmented system into an integrated whole along national objectives due to her low capacity for management. For example, donors invest wherever they like and support programmes of their choice without considering the need for national integration or coordination and they often use poorly trained LGA staff (UNICEF, 2001). This has lead to duplication and concentration of badly needed efforts. PHC is only implemented in the rural areas because it is donor-run leaving the urban poor to struggle with accessing health in secondary and tertiary institutions (ibid). UNICEF is one organisation that has one of the widest coverage, she only operates in 100 LGAs of a total of 774 in the country; others have two or three focal points (ibid) creating serious health inequalities. The system was in crisis in the 1990s when most donors withdrew their funding, leaving its infrastructure in decay.

Many Nigerians lack access to safe drinking water, adequate refuse, drainage and human waste disposal (UNICEF, 2001). Piped water in the cities, which is often irregular is said to be unsafe for drinking without boiling and filtering and most of the rural population still depend on surface water. These have been due to inadequate maintenance and investment, irregular power supply and an almost non-existent refuse collection in small towns. This means that public health is poor.

3.1.6 Women

Women in Nigeria have a more inferior status than men though they head one third of Nigerian households (UNICEF, 2001). The history of the struggle for their liberation is said to date back to 1929, and they were a formidable part of the struggle for

independence. The military regime is blamed for hampering their progress by imposing mainly patriarchal norms. Though Nigeria has a national policy on women aimed at removing all gender-biased inequalities so as to include them in the development process, harmful practices like child marriages, FGM, abusive rites at widowhood and other forms of violence against women are still in place (ibid). There are no laws banning or punishing perpetrators of these acts. Consequently, they are under represented in parliament, in paid employment, have less access to credit, education and health, and are not allowed to own land in some parts of the country, supported by patriarchal traditions and religion (ibid). Such denial of rights limits opportunities and thus the capabilities to support child survival.

3.2 Poverty, Inequality and Under-5 mortality

From the foregoing, Nigeria is a declining economy that neglects her poor. How does this determine poverty and childhood mortality? The rate of poverty in Nigeria is high and fast rising (Canagarajan et al, 1997; Aigbokhan, 2000; Ali-Akpajiak and Pyke, 2003). Using the international poverty line of US $ 1 a day, about 70.2% of her population was below the poverty line in 1996-98. In 2002, Nigeria's Gross National Product (GNP) per capita was $290, a fall from $1,010 in 1980 (Table 3.1), which according to USAID (2002) was even lower for rural dwellers that constitute about 63.7% of the population, also for the urban slum dwellers (Osinubi, 2003). Her GNP in 2002 was below countries like Bangladesh ($360) and compared with countries like Tanzania ($280) and Togo ($270) (WDR, 2004). These countries were low-income economies in the 1980s when the Nigerian economy was classified as middle-income; by 1990 she had become a low-income economy. Lack of resources probably explains why her childhood mortality rates are so high especially in the 1990s.

However, this reasoning does not hold for very long, figure 1 and 2 below show the link between IMR and economic growth among 55 low and middle-income countries in 1980 and 2002. There is a positive relationship between the two variables, which is stronger in 2002 than 1980. In 1980, Nigeria had a higher income than Sri Lanka and China, yet they lowered IMR for their countries, to rates much lower than Nigeria. By

2002, while the two economies grew in GNP pc, Nigeria declined to about China and Sri Lanka's income level in 1980, with a higher IMR. The point is that, in boom income times and in bad Nigeria's IMR has been high and even worsened as confirmed on table 3.1 more clearly. A declining economy therefore does not explain her level of poverty and childhood mortality.

Figure 2: Relationship between logIMR and GNP pc, 1980 (WDR, 1982)

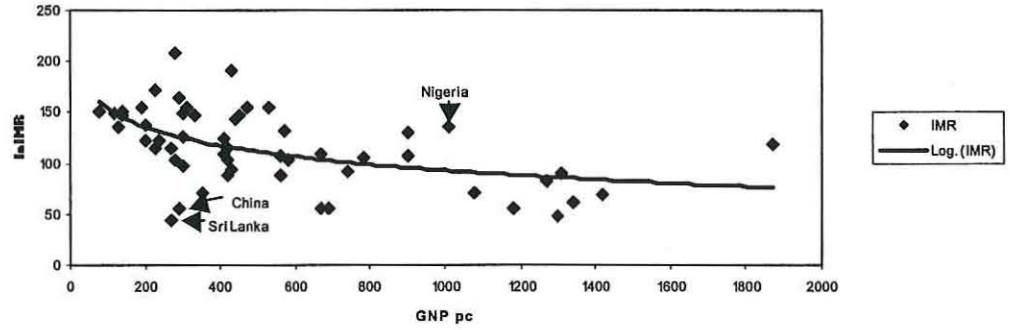
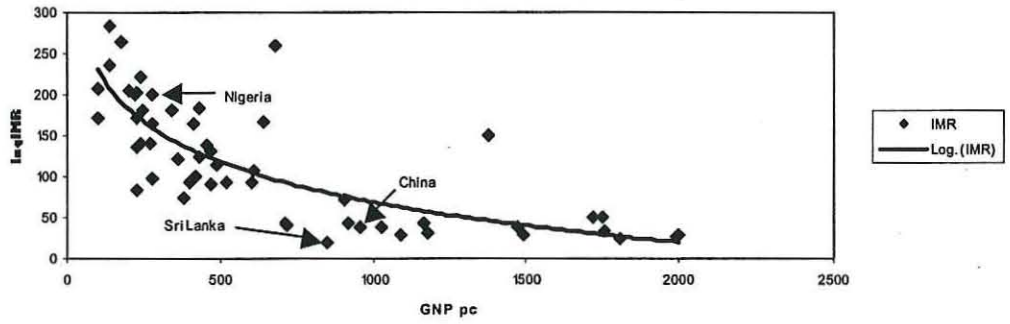


Figure 3: Relationship between lnImr and GNP pc, 2002 (WB database, 2004)



Sen (2001) noted after a similar observation that economic progress might be necessary, but not sufficient for health improvement but a 'responsible sharing of resources'. Woods (1982) viewing these issues from a micro-level in Brazil commented, 'the income effect on mortality would be dampened if the provision of health care and basic needs was socialised and did not depend on the individual's purchasing power' (p.227). This may be the problem with Nigeria; many writers have said that she has not had a *responsible sharing* of her oil wealth. With the introduction of SAP in the 1980s user fees was introduced for most services (Dike, 2003), which meant a lot had to depend on people's purchasing power.

TABLE 3.1: TRENDS IN GNP PER CAPITA (US $) 1976-2002

Years	1976	1980	1985	1990	1995	1999	**2002
GNP pc	380	1010	800	290	260	310	290
*U5MR	197	192	192	177	175	172	201

Source: World development Report 1978, 1982, 1987, 1992, 1997, 2000/'01 & 2004
*Omar et al (2000) ** HNP Stats http://devdata.worldbank.org/hnpstats/aagselection.asp

3.2.1 Income inequality

According to Canagarajan et al (1997), in the years 1985-1992 the growth performance was about 5%, but the gains were distributed in favour of the rich. It was found that, the increase in mean per capita household spending during this period, reduced the proportion of the population in poverty from 43% to 34% (about 1.13 million), but the decline was due to a net +13.6% growth factor and a –4.7% income distribution factor. As a result, the extremely poor became poorer while the living standard of all other income groups improved (ibid).

Ali-Akpajiak and Pyke (2003) found that while 20% of the highest income-earning group owned 50% of total national income, the poorest 20% owned only 4%. Under-5 mortality rates consequently, stood at 240/1000 births for the poorest quintile and 120/1000 for the richest quintile and measles immunisation rates were 35% verses 70% respectively, for children ages 12-23 months in 1990 (WDI, 2004). Most income poor were uneducated, work in agriculture and were rural dwellers (Canagarajan et al, 1997). Differences were also observed among regions, with most poor living in the North (Dike, 2003), may be because that zone has more rural areas and uneducated people. According to Canagarajan et al, (1997) poverty is higher in the rural than the urban areas and among the uneducated and those in agriculture. The incidence of poverty decreased in the 1990s in the Southern states and the urban areas and deteriorated in the North and the rural areas, but inequality worsened during this period among these sectors as well (Aigbokhan, 2000).

3.3 Public spending

One major problem with Nigeria is identified in figure 4 above, low public spending; she spent more on the military and so little on health and education in 1997. Table 3.2 below also shows that she has spent consistently less than 1% of her GDP on health since 1980, though WHO recommends at least 5% (Verheul and Cooper, 2001). Nigeria has clearly not combined growth with social provisioning, it is may be difficult to raise the living standard of the people, a prerequisite for child survival, with growth and low public intervention (Dreze and Sen, 1989).

Figure 4: Social Spending in 1997 (WDR, 2000/01)

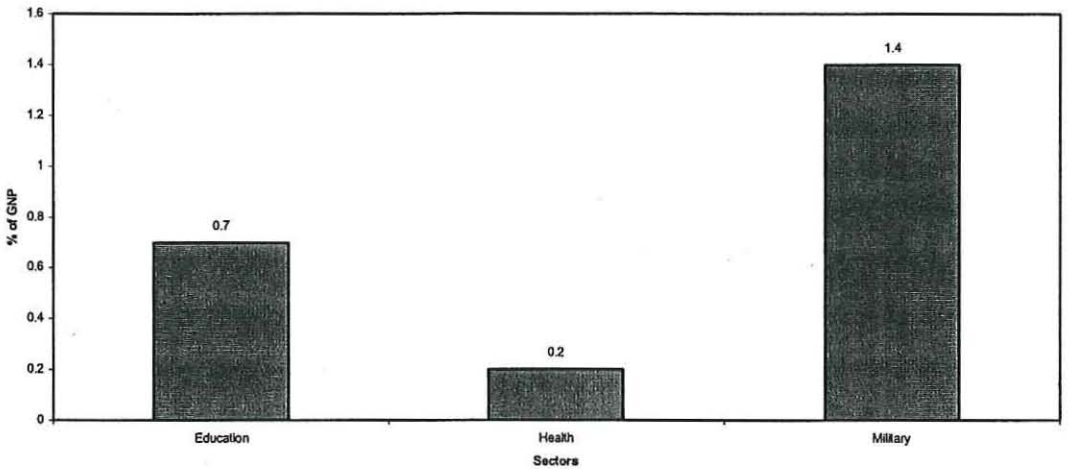


TABLE 3.2: HEALTH EXPENDITURE AS % OF GNP IN NIGERIA, 1980-2002

YEARS	1980	1985	1990	1995	1996	1997	1998	*2000	*2002
Health	0.7	0.3	0.3	0.2	0.2	0.2	0.5	2.7	4.7

Source: UNICEF, 2001

3.4 Quality of life

Nigeria ranks 54th out of 78 countries in Human Poverty Index (41.6) and her HDI is 156th in the world above 23 least developed countries in Africa (Ali-Akpajiak and Pyke, 2003). The closer the GDI to the HDI is, the lower the gender disparity in such country, Nigeria's GDI (45.8) and HDI (51.6) (WHO, 2004), give an evidence of gender disparity. In the education sector according to Dike (2003), the gross primary enrolment

rate increased from 42% in 1960 to 92% in 1982/83. By 1992, the rate had dropped to 78%. Secondary and tertiary gross enrolment also increased until the early 1980s and afterwards began to decline. Women at parliament stands at only 7% in 2004 and those in non- agricultural employment were at a low of about 36.4% (ibid). These indicators point to low health, low education (parental?) and low women's status for Nigeria, the conditions for child survival are lacking.

3.4.1 Social Development

Demography and Health: Table 3.4 shows that Nigeria has a large and young population, growing at a rate of 2.3%. High mortality is said to be associated with high fertility, which has an impact on household income, and can determine who stays above or below the poverty line (Eastwood and Lipton, 1999). Her dependency ratio stands at about 91 per 100 persons, coming more from her young (44%) than her aged population. The implications of this for the provision of such services as education, recreation and health care facilities are enormous. With low allocation for health and education, there must be various unmet needs. High dependency burden is usually characterised by low savings and unemployment (Jeffery, 2001), this should have meant a lowered purchasing power for the people. Life expectancy at birth is low at 48.8 years and adult literacy rate, the best indicator of the extent education has spread is low especially for women.

Access to basic services: Table 3.4 also shows that the population has a low level of access to save drinking water and sanitation. This suggests a high exposure to environmental contamination, a condition that allows for diseases like diarrhoea. She also has an embarrassingly low access to telephone use. There was no social security for health either from government or by private arrangements in 2002 and health expenditure was completely out-of-pocket at point of delivery. These conditions could lower the use of health services, at normal times and during emergencies.

Maternal health care: Having healthy children who will survive is almost always equal to having healthy mothers (UNICEF, 1998). This makes the health of the mother and her access to healthcare before and during delivery, and while breastfeeding crucial to child health. Nigeria has a high MMR at 800 per 100,000 births. A high MMR has

serious implication for U5MR because children who lose their mothers are said to be 10 times more likely to die especially at infancy, than those whose mothers survive (USAID, 2002). Table 3.4 also shows a low rate of births attended to by skilled health personnel and only a 63.6% as women had antenatal care during their period of pregnancy in 1997-2000. Low antenatal coverage results in high prevalence of neonatal tetanus and maternal deaths, most maternal deaths in Nigeria are due to pregnancy complications and childbirth (ibid).

Table 3.3: Social Development Indicators

Indicators	Number or Rates	Year
Population in millions	120.9	2002
Pop. Growth Rate (%)	2.3	*** 2001
Population aged 0-14 (%)	44.0	*** 2001
Dependency Ratio / 100	91.0	2002
Life Expectancy (in years)	48.8	2002
MMR/100,000 births	800.0	2002
Antenatal coverage (%)	63.6	*1997-2000
Low birth weight (%)	12.0	2002
Births att.d by H. pers. (%)	42.0	2002
Total Fertility Rate (TFR)	5.3	2001
Contraceptive use (%)	15.3	2001
Prevalence of HIV (%)	5.8	***2001
Undernutrition in pop. (%)	8.0	***2001
Anaemia in preg. women (%)	55.0	***2001
U-5 Malnutrition (%)	30.7	***2001
Severe Malnutrition (%)	12.0	1998-2001
Exclusive Breast feeding	17.0	1998-2001
Immunisation		
Measles (%)	40.0	***2001
DPT (%)	26.0	***2001
Adult illiteracy Rate (% 15yrs +)		
Male	30.0	*1998
Female	48.0	*1998
Assess to save water (%)	62.0	**2000
Assess to sanitation (%)	54.0	**2000
Telephone subscribers / 100	1.8	2002
Social security (health)		
% Govt. exp. soc. security	0.0	2002
% Private exp. out-of-pocket	100.0	2002
% Private exp. prepaid plans	0.0	2002

Sources: WHO Database, 2004; *UNICEF database; **World Development Report, 2000/2001; *** HNP Stats http://devdata.worldbank.org/hnpstats/aagselection.asp

The level of children born with low birth weight indicate the level of maternal malnutrition and morbidity, this is relatively low at 12%. Nigeria's TFR is the high at

5.3% explained by a low contraceptive prevalence of 15.3%. Low contraceptive prevalence rate has something to do with how widespread family planning programmes are, which depends on a country's health ideology (Feinsilver, 1993) and the level of women's empowerment (Bradley, 1995). Nigeria's health policy is aimed at achieving total health, based on the Primary Health Care (PHC) framework, though she is said to be well covered in health infrastructure, in 1990 only 17% of the population had access to modern health facilities. Her health care system plagued by poor quality, a lack of drugs and equipment, and a lack of skilled personnel lost via brain drain (USAID, 2002).

Child health: About 30.7% of Nigeria's under-fives were malnourished in 2001 and 12% severely (Table 3.4). There is a low level of undernourishment among the population (8%), which seems to say that general food intake is not terribly inadequate. Poor infant feeding practices and care may be the problem, which according to USAID (2002) is deeply rooted in cultural beliefs and attitudes e.g. in some tribes breastfeeding is delayed and also not sustained because it is believed that the *colostrums* is dirty and should not be fed to infants. Only 17% of all children were exclusively breastfed in 1995-2002 (ibid). These are contrary to WHO/UNICEF recommendations that, to enhance child nutrition and reduce the rate of diarrhoea, exclusive breastfeeding should be practiced for the first four to six months of life.

In 1999, childhood deaths were due to malaria (30%), vaccine preventable deaths (22%), diarrhoea (19%), acute respiratory infection (16%), typhoid (3%), and malnutrition (2%) (UNICEF, 2001). As an underlying factor, malnutrition contributed to more than 50% of these deaths and the sickle cell disease, a genetic disorder, about 25% and 5% of overall burden of childhood morbidity and mortality. The Nigerian child is at a growing risk of HIV/AIDS infection (table 3.4) and of losing a parent(s) to it. These factors are capable of increasing childhood mortality.

The rate of child immunisation for measles and tetanus is low at 40% and 26% coverage respectively (table 3.4) meaning that a majority (60% and 74%) of her children were not immunised in 2001. Campaigns for immunisation against polio were stopped partly in some northern states in 2003 for fear that the vaccine contained a contraceptive that could render children infertile, Nigeria is said to have the world's highest number of

cases (BBC, 2003). Immunisation is capable of reducing childhood mortality even in the absence of increased standards of living (Hanmer et al, 1998). With low immunisation coverage, Nigeria can hardly prevent her infants from infections, diseases and deaths. Evidently, 22% of child deaths are due to vaccine preventable diseases (UNICEF, 2001). Low parental education coupled with a low official commitment to make childcare information available can make cultural beliefs widely held (Brabin, 2001), capable of denying children access to new child survival discoveries. This may be the case in Nigeria, especially in the Northern were these rates are even higher (Ali-Akpajiak and Pyke, 2003).

CHAPTER FOUR

DIFFERENTIALS IN CHILDHOOD MORTALITY

This chapter presents regional and gender variations of the child health problem. Analysis is presented for the different income quintiles, gender, zones and sectors (rural and urban areas). It is aimed at identifying the differentials in childhood mortality across different socio-economic and regional levels.

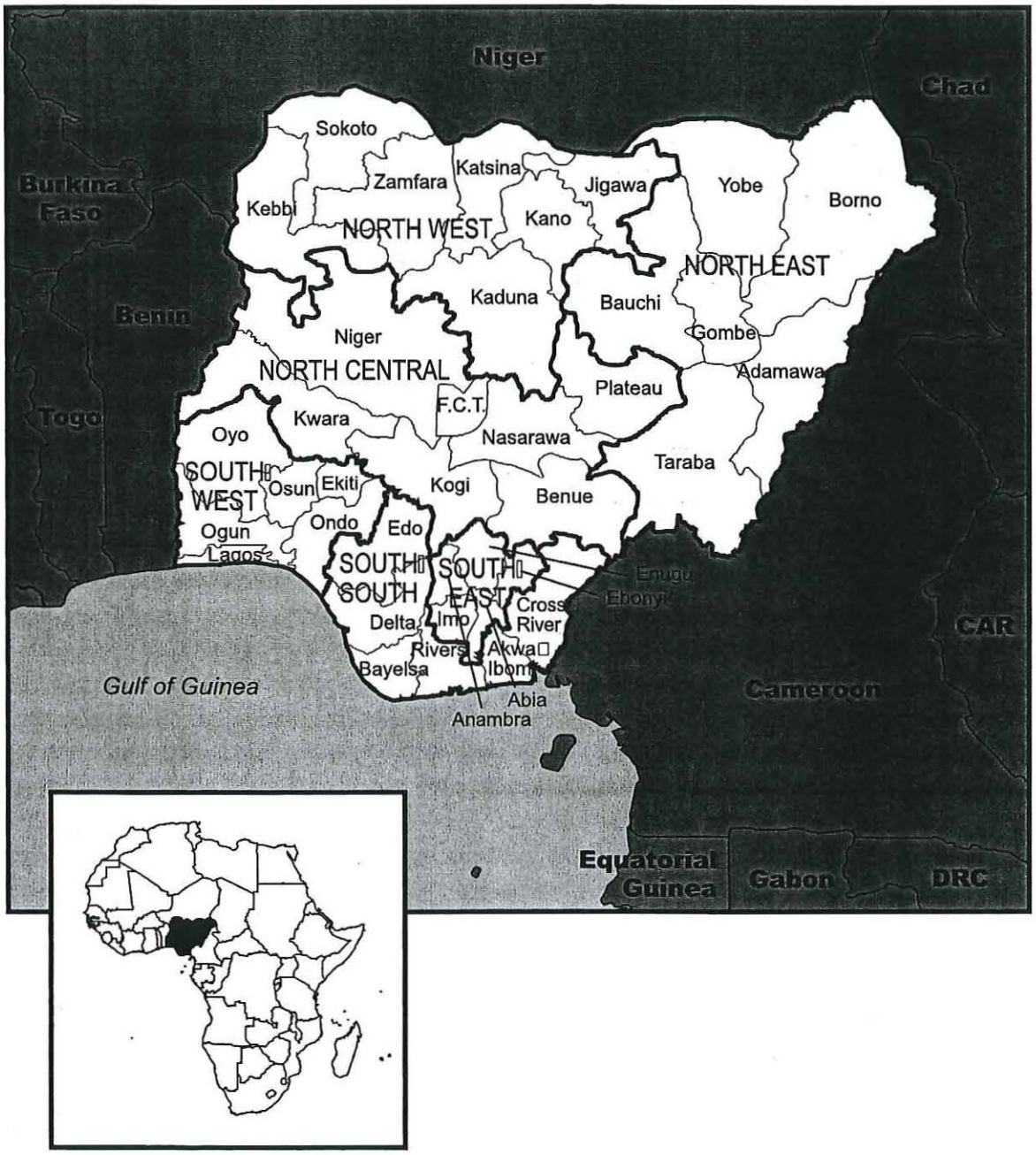
The Northern and Southern zones are home to different groups of people with varied tastes and values, religions and educational attainment. The climate is hot and humid with temperatures ranging from 25 C to 30 C in the South, and hot and dry with temperatures going up to 40 C in the hottest months in the North. The rainy season range from 3 months in the far North to 11 months in the South (Idachaba, 1983). The downpours in the North are often heavy leading to severe soil leaching. The distribution of rainfall allows only one cropping season in the North without irrigation a year and two cropping seasons in the South (ibid). Most of the North East is semi arid, thus it has more unfavourable conditions for food production in particular. Fishing is the main occupation in the swampy South tip and fruit trees are also important. These factors explain some of the regional and even gender variations. However, public intervention could have made a difference for the disadvantaged if it were not lacking, for as Crow (1992) would reason for famine, adverse conditions exist all over the world but not all such places experience famine.

4.1 Child Health

4.1.1 Childhood Mortality

Childhood mortality is high for Nigeria at 217 per 1000 and for all groups, even those of the highest wealth group and highest educational level (figure 5). The figure also shows that apart from the educated and wealthy all other Nigerians are doing very poorly, especially those who live in the North West and North East and those whose mothers have no education or belong in the second wealth quintile. The higher rate of mortality for those in the second wealth quintile than those in the lowest quintile, is probably

NIGERIA


Niger
Chad
Sokoto
Zamfara
Katsina
Jigawa
Yobe
Borno
Kebbi
NORTH WEST
Kano
NORTH EAST
Kaduna
Bauchi
Gombe
Niger
NORTH CENTRAL
Adamawa
Plateau
F.C.T.
Kwara
Nasarawa
Oyo
Taraba
SOUTH WEST
Osun
Ekiti
Kogi
Benue
Ondo
Edo
Ogun
Lagos
SOUTH SOUTH
SOUTH EAST
Enugu
Ebonyi
Cross River
Delta
Imo
Rivers
Akwa Ibom
Bayelsa
Abia
Anambra
Gulf of Guinea
Cameroon
CAR
Equatorial Guinea
Gabon
DRC
Burkina Faso
Benin
Togo

explained by the living conditions of the urban poor, who though may be earning higher incomes, may also live in poorer housing conditions than those in the rural areas. Their high income as it shows is not sufficient for child survival, living conditions is important for keeping infections away. More females than male children survived the first five years of life. Generally, there are wide variations between the urban and the rural, the North and the South and along socio-economic groupings.

Figure 5: U5MR by Background Characteristics, 2003 (NDHS)

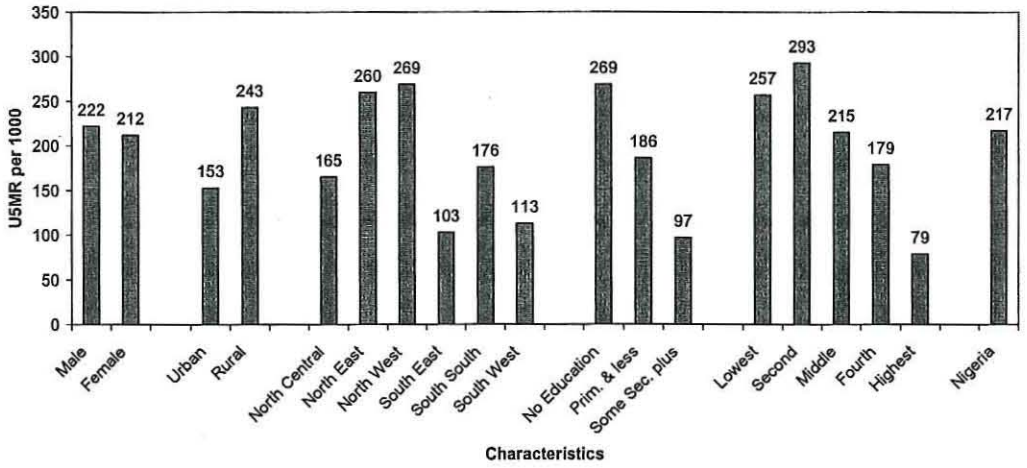
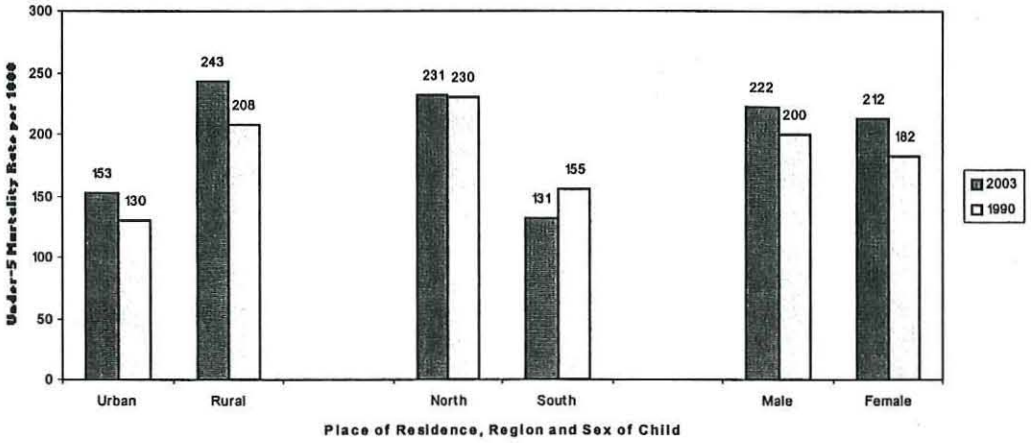


Figure 6 below shows trends in childhood mortality rates in 1990 and 2003 by place of Residence and Gender. The general trend shows an increase in rates (16/1000) in most sectors except the South where a reduction of 24/1000 was recorded. These increases are more in the rural (by 35/1000). Mortality reduction was greater for female children than for male children between 1990 and 2003. The last five years have witnessed more withdrawals of public support e.g. oil subsidies and public staff retrenchment. This has resulted in the prices of many commodities goods and services. This probably explains the increase in childhood mortality due to deteriorating conditions.

Figure 6: Trends in U5MR 1990-2003 by, Place of Residence, Region and Gender (NDHS, 2003)



4.1.2 Childhood Malnutrition

Figure 7 below shows childhood malnutrition rates as indicated by their heights-for-age, 2003. The highest rates of malnutrition were recorded among children in the North West, those whose mothers have no education and whose households are of the lowest wealth quintile. Childhood malnutrition follows the same distribution pattern as U5MR, higher among males, the rural areas, the North than among females, urban areas and the South and so on.

Figure 6: Childhood Malnutrition (Stunting) by Background Characteristics, 2003 (NDHS)

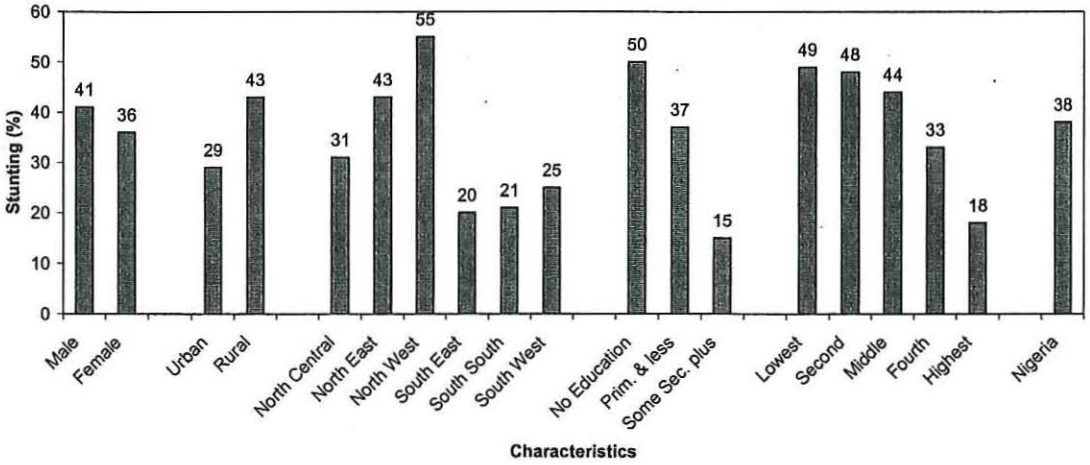
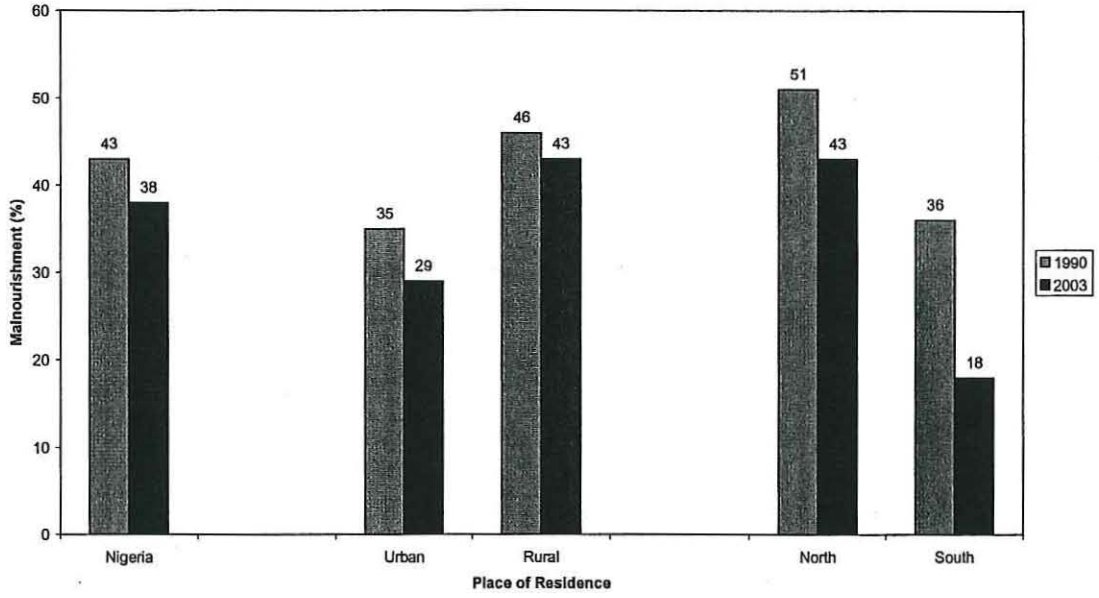


Figure 8 below shows trends in childhood malnutrition, 1990 to 2003. There is a general decline in the percentage of children malnourished especially in the South. More than half of all children in the North were stunted in 1990; this reduced to about 43% in 2003. Generally, there is less stunting among children in the urban areas and the south like other indicators.

Figure 8: Trends in Chronically malnourished children by Place of Residence (1990 and 2003)



Children who fall two standard deviations (-2 SD) below the reference median are considered malnourished while those who fall three standard deviations (-3 SD) are considered severely malnourished (NDHS, 2003). Table 4.10 below show that at least one in every three children in Nigeria was either stunted or wasted in 2003 and one in every five or in every ten (respectively) severely, especially among male and rural children. There are wide differences between the North and the South; the North West has the most malnourished children (55.3%), and about 60% of them severely. There was more malnourishment among children whose mothers have no education and whose households belong in the lowest wealth quintile. Like childhood mortality, it also follows that the children of those in the second income quintile were more malnourished than those in the lowest quintile.

Table 4.1 Nutritional Status of Children by Sex, Place of Residence and Socio-economic status in 2003

Background Characteristics	Height-for-age (Stunting)		Weight-for-age (Wasting)	
	Below -3 SD (%)	Below -2 SD (%)	Below -3 SD (%)	Below -2 SD (%)
Sex				
Male	20.3	40.8	9.3	29.2
Female	18.2	35.9	8.4	28.1
Residence				
Urban	12.9	28.8	6.8	22.2
Rural	22.3	42.9	9.9	31.8
Region				
North Central	11.3	31.4	4.9	19.6
North East	21.6	43.0	9.5	33.1
North West	34.4	55.3	14.7	42.9
South East	5.3	19.7	2.1	8.5
South South	6.3	20.9	6.4	18.0
South West	8.6	24.6	4.7	19.1
Mother's Education				
No Education	28.7	50.0	11.7	37.6
Prim. & less	15.9	36.6	8.6	26.1
Some Sec. plus	4.8	14.8	3.7	12.9
Wealth Quintile				
Lowest	26.4	48.8	10.8	34.8
Second	26.0	47.7	12.0	37.5
Middle	22.5	44.2	10.3	30.7
Fourth	15.8	32.5	7.8	26.6
Highest	5.2	17.9	3.4	13.4
Nigeria	**19.2**	**38.3**	**8.9**	**28.7**

Source: NDHS, 2003

4.1.3 Childhood Morbidity

Table 4.2 shows ARI, fever and diarrhoea prevalence, major causes of morbidity and mortality among Nigerian children. Fever is the greatest cause of childhood morbidity in all regions and sectors. In 2003, 10.3% of children had ARI symptoms, 31% fever and 18.8% diarrhoea two weeks preceding the survey; these rates were less in 1990 (NDHS, 1990). There is no significant difference between genders, which probably indicates equal care. These rates follow the usual regional pattern expect for ARI. Diarrhoea prevalence is more than twice higher for the Northern than the Southern zones, suggesting high environmental contamination as a determinant of childhood morbidity. The second wealth quintile has a higher rate of child ill-being than the lowest quintile. This as explained before, may due to the differing features of urban and rural poverty.

Table 4.2: Prevalence of Childhood Disease (NDHS, 2003)

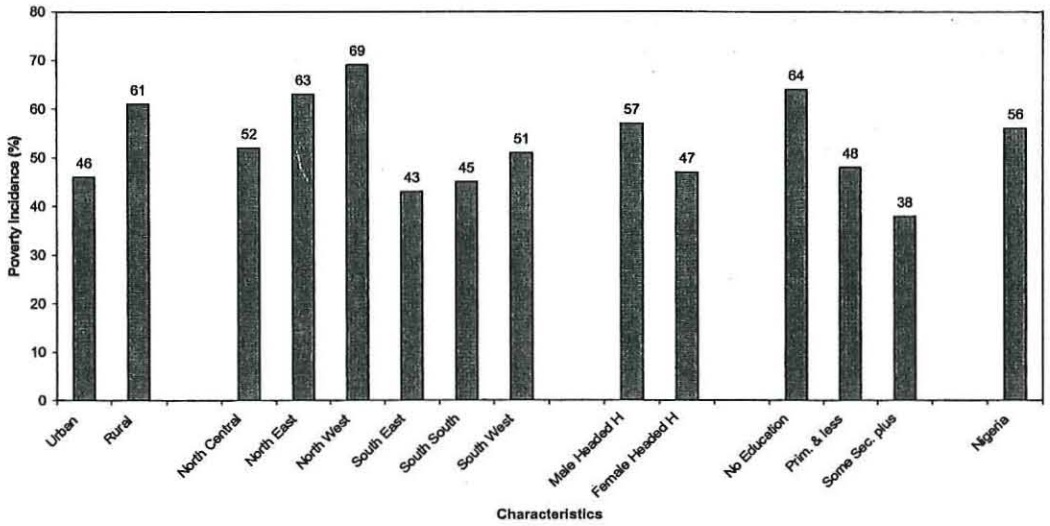
Characteristics	ARI (%)	Fever (%)	Diarrhoea (%)
Sex			
Male	10.5	31.0	19.3
Female	10.1	31.1	18.3
Residence			
Urban	7.8	27.0	14.5
Rural	11.4	32.8	20.7
Region			
North Central	6.7	23.9	14.9
North East	16.2	37.4	35.1
North West	8.8	35.7	18.9
South East	6.3	22.9	8.6
South South	12.2	29.5	8.0
South West	6.8	17.2	6.4
Mother's Education			
No education	11.0	35.7	24.0
Prim. & less	11.3	28.3	17.2
Some Sec. plus	6.9	25.9	8.8
Wealth quintile			
Lowest	11.0	32.8	21.7
Second	12.4	35.0	23.6
Middle	12.1	34.0	19.6
Fourth	9.2	30.5	18.9
Highest	6.2	21.7	9.0
Total	**10.3**	**31.0**	**18.8**

Source: NDHS, 2003

4.2 Poverty Incidence and Childhood mortality

Figure 9 shows the distribution of poverty by places of residence and socio-economic status in 1996 given a poverty line of N11, 292.96. Fifty-six percent of Nigerians were below the national poverty line and it is high for all zones; the South East with the least poverty incidence has 43 % of her population living below the poverty line. The highest poverty incidences are found in the rural areas, in the North West and the North East, and among those with no education.

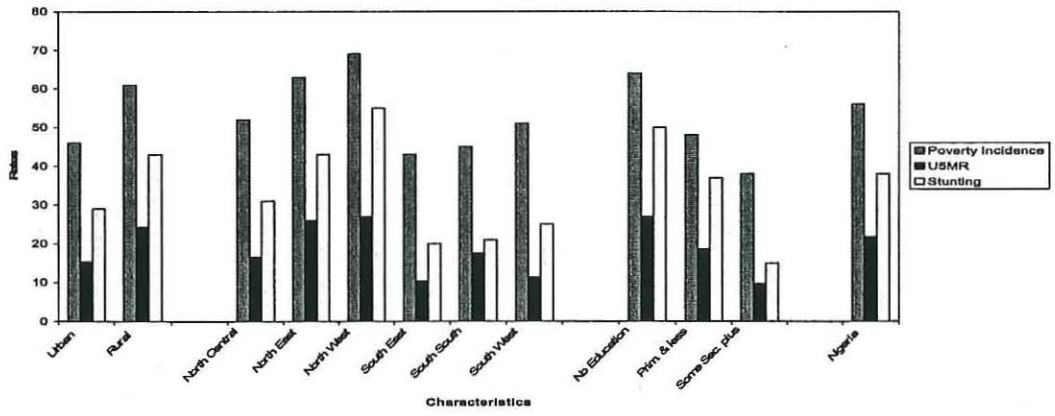
Figure: 9 Poverty Incidence in Nigeria, 1996



South West is more industrialised and holds a larger number of Nigerian cities, the high incidence of poverty in that region may be due to urban poverty and unemployment and the lower incidence of poverty in the South East region may be because many are self employed (traders), thus unemployment is less. There are more male-headed households in poverty than female-headed households, influenced by the education of the head of household.

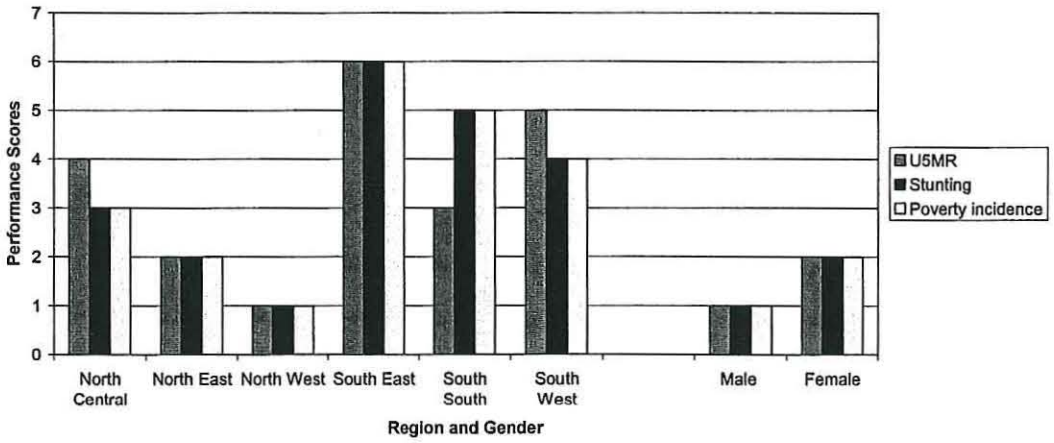
Childhood mortality, malnutrition and poverty incidence rates are compared on figure 10, all variables seem to follow the same pattern expect U5MR in the South South, which is much higher than those of South East and West. This seems to confirm the relationship between these variables.

Figure 10: Poverty Incidence, U5MR and and Child malnutrition (Stunting) compared (NDHS, 2003)



Scores were also allocated to the zones and gender for their performance, the lower the score the worse the situation. Figure 11 shows that consistently in all variables; the North West has the lowest performance of all six zones followed by the North East, which means they are the poorest. South East has the highest scores, which implies that in terms of meeting child survival conditions the North East stands the best chance. Among the genders, the female child or household fared better.

Figure 11: Chart showing performance scores of U5MR, Stunting rates and Poverty Incidence by Region and Gender, 2003



4.3 Determinants of Childhood Mortality

4.3.1 Food Availability

Food availability data for the zones are not available, food shares are used here for a clue. Table 4.3 shows that a large share of the expenditure goes to food every month (64%) in all Nigeria. Food shares are highest in the rural areas (also than in the urban areas), probably because farmers sell off there produce during the harvesting season to meet immediate needs, then resort to buying again when the hungry seasons comes. When the poor spends so much on food, they have less to spend on other essentials like health. At 60%, even the non-poor spend a lot on food, suggesting high food prices for Nigeria and implying that though food may exist on the market either through imports or local production, its high prices may be keeping it out of the reach of the poor. Going by the table, childhood mortality rates follow food shares pattern, particularly true for the North West and East, and South East, with the highest or lowest shares per month. The

low share for North central may be explained by the fact that she produce most of the country's foods, and thus spends less on food or buys food cheaply.

Table 4.3: Monthly Food Shares per capita expenditure by Background characteristics in 1996

Background Characteristics	Urban (%)	Rural (%)	Nigeria (%)
Poverty Levels			
Poor	73	77	76
Non-poor	57	64	60
Region			
North Central	55	65	60
North East	64	69	68
North West	73	76	75
South East	52	66	59
South South	61	60	61
South West	61	65	62
Education of Head			
No Education	67	71	70
Prim. & less	57	65	61
Some Sec. plus	56	61	57
Nigeria	**60**	**69**	**64**

Source: FOS, 1998

4.3.2 Health Sector Inequality

The distribution of secondary health care among regions and the use of health facilities during child delivery are presented on table 4.3 and figure 12. Table 4.4 shows that in 1999, the bulk of secondary health was provided by private investors (2,448 Vs 827 public facilities), which could mean higher health costs, as private facilities tend to be more expensive. The table shows wide regional variations, 2,626 secondary health facilities in the South as against 645 in the North, the South West region has the largest number of facilities. The North has a wider land area and people live more sparsely, so this could mean an over 4 times difference in distance to a facility.

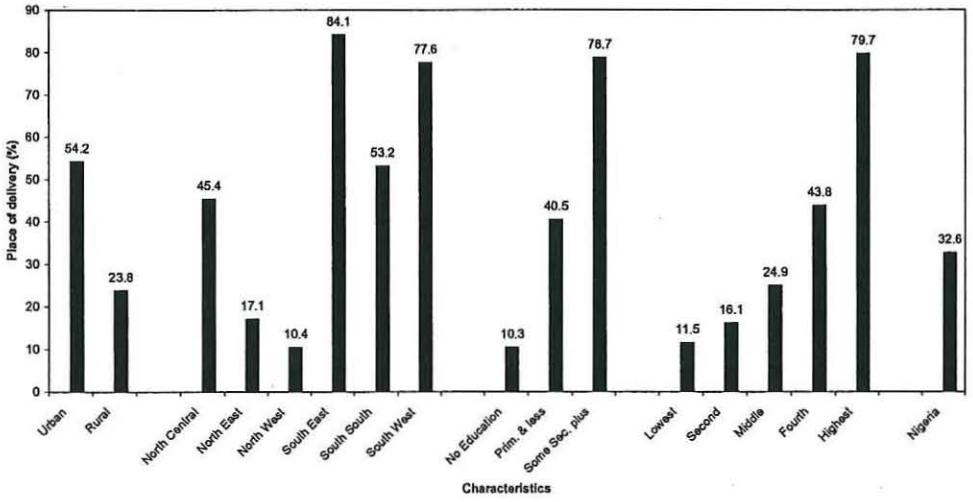
Table 4.4: Distribution of Secondary Health Facilities by Tiers and Region in 1999

Region	Total	Private	Public
North Central	404	195	209
North East	100	20	80
North West	141	37	104
South East	551	515	36
South South	635	490	145
South West	1,444	1,191	253
Nigeria	**3,275**	**2,448**	**827**

Source: UNICEF, 2001

Only 32.6% of women used a health facility during their last delivery (figure 12). The situation is better in the urban than in the rural areas with wide regional variations, ranging from a high of 84.1% in the South East and a low of about 10.4% in the North West, 73% difference. While the North Central seems better than other Northern regions, the South South lags behind other Southern zones. Education and wealth are related to health accessibility during delivery, the difference between those with no education and those with some secondary school is wide, and so is the difference between those in the lowest and highest quintiles. When asked what hinders their access to health, in about 30.4% of the time, it is lack of money and 24% of the time, distance to a health facility (NDHS, 2003). It follows that the zones with poor child health are also those with low access to a health care facility during delivery, this is known to increase childhood mortality during the neonatal period.

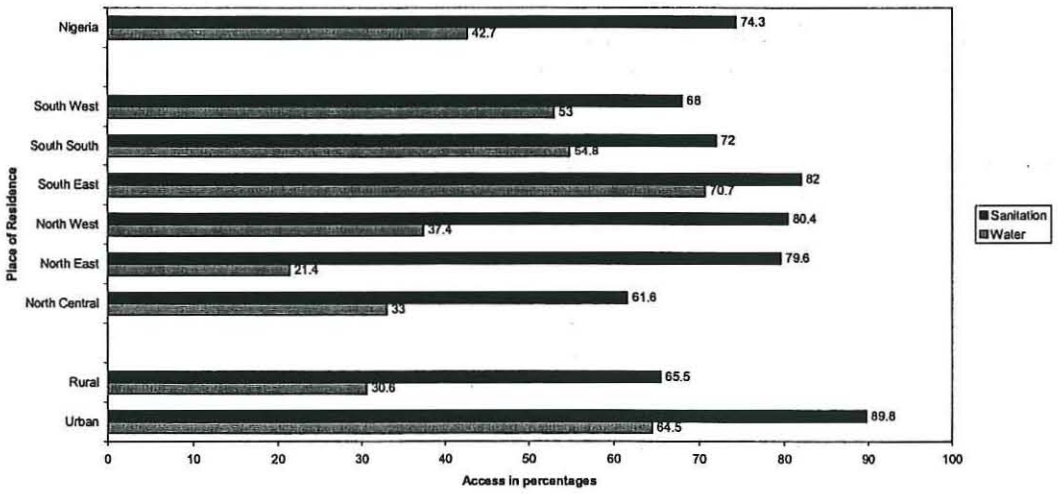
Figure 12: Percentage of women who delivered at a health facility by Background Characteristics (NDHS, 2003)



4.3.3 Water and Sanitation

Many childhood diseases are water borne and are increased in places where there are poor sanitary facilities and where poor drainages serve as breeding grounds for malaria mosquitoes (USAID, 2002). Access to water and sanitation is therefore important. For all Nigeria, provision of water and sanitation is generally low (figure 13). 42.7% access than sanitation at 74.3%. The urban more than the rural areas enjoy better sanitation. Water is also in shorter supply in the North, particularly the North East with a supply of 21.4%, which is twice below the already low national supply. This zone also has the highest childhood malnutrition and mortality. A majority of the population in poor regions depend on surface water, which still serves up to about 28.6% of the rural population, a drop from 51.9% in 1990 (NDHS, 1990 & 2003).

Figure 13: Percentage access to Water and Sanitation by place of Residence (NDHS, 2003)



Access to sanitation here refers to any facility, a closer look at the available facilities show that, a majority of the people (56.6%) use the traditional pit toilet (table 4.5). The traditional pit toilet if not dug deeply, kept clean and located away from sources of food may only be a ground for breeding diseases, many times they are. While as high as 74.3% of the people in the North East and North West use this type of facility, about one-third of the people in the rural areas, the North Central and South West have no facility, 25.6% in all of Nigeria. This means that contamination rate will be high, an easy explanation for their high rates of mortality. People with no facility usually defecate in near by bushes and wash in the same water sources that serve them domestically.

Table 4.5: Sanitation Facilities, NDHS 2003

Characteristics	Residence		Regions						Nigeria
	Urban	Rural	NC	NE	NW	SE	SS	SW	
Access to a sanitation facility (with main sources)									
Total	89.8	65.5	61.6	79.6	80.4	82.0	72.0	68.0	**74.3**
Traditional pit toilet	55.6	56.9	50.1	74.6	74.3	39.8	42.3	39.1	**56.5**
No Facility	10.0	34.3	38.4	20.4	19.5	17.7	27.9	32.8	**25.6**

Source: NDHS, 2003

4.3.4 Educational Inequalities

Many authors link childhood mortality to income poverty and ignorance, literacy is the way out of these conditions, thus a lack of it is a major capability failure. Illiteracy can leave a child inadequately cared for e.g. it can lead to non-immunisation, overcrowding in the household and harmful practices detrimental to child health. Table 4.6 shows literacy rates by place of residence. There are variations between the urban and rural areas especially for women who are generally more disadvantaged than men. The highest rates of literacy are found in the South West and South East and the lowest in the North West and North East. Women in the last two regions are also the most disadvantaged (20.9% vs. 25.6%).

Table 4.6: Literacy Rates by place of Residence in 2003

Background Characteristics	Sex			Gender Parity Index	
	Male	Female	Both	Prim. School	Sec. School
Residence					
Urban	86.8	67.5	72.2	0.89	0.89
Rural	64.0	38.0	51.0	0.84	0.71
Region					
North Central	75.2	43.4	59.3	1.01	0.61
North East	59.9	25.6	42.8	0.73	0.55
North West	55.7	20.9	38.3	0.63	0.36
South East	92.9	85.6	89.3	0.94	1.11
South South	80.5	75.0	77.8	0.92	1.00
South West	93.0	79.1	86.1	1.10	0.85
Nigeria	**72.5**	**48.2**	**60.4**	**0.86**	**0.77**

Source: NDHS, 2003

Gender Parity Index is the gross attendance ratio of females to males, used to show gender differences in school attendance. If it is less than 1 it indicates that a smaller proportion of females than males attend school (NDHS, 2003), given here for both primary and secondary levels. There are significant regional differences, especially lower

for women living in the North West and North East at both secondary and primary levels, there are also the poorest child health zones.

Literacy rates in Nigeria may not be high enough to ensure child health, her rates of knowledge dissemination through the media could supplement. Table 4.7 shows that generally, about one-third of men and women do not have access to the mass media in Nigeria and more females than males lack exposure to the media at least once a week. The highest lack of exposure is in the North East (65.6%) and North Central (44.2%). The implication of this is that when any information on child survival is being disseminated, a large group of Nigerians could be excluded, which could affect childcare practices.

Table 4.7: Exposure to the mass media (Newspaper, TV and Radio) at least one a week, by Place of Residence, 2003

Background Characteristics	Sex	
	Male	Female
Residence		
Urban	20.3	18.4
Rural	45.6	44.2
Region		
North Central	44.2	48.6
North East	65.6	61.0
North West	26.8	27.1
South East	25.0	24.2
South South	35.1	30.9
South West	15.8	15.6
Nigeria	**36.2**	**35.3**

Source: NDHS, 2003

4.3.5 Women's Status

The 2003 NDHS asked certain questions about the attitude of people towards women and about their involvement in decision making. Four of such questions are presented in Table 4.8 below. Over half of all men and women asked; think that wife beating is right for at least one of these reasons: if she burns the food; did not cook on time; argues with the husband; goes out without telling him; neglects the children; or refuses to have sex with him. The situation is worse in the North and rural areas, and improves with more male education though not significantly. Women surprisingly, think

more strongly that wife beating for the select reasons is right, as shown the percentages of those who agreed with it compared with those of men. This gives a clue as to how the women are socialised into assuming inferior positions to men, who could do with them what they please, lack of freedom limits opportunities and leads to non-use, even of whatever capabilities they must have acquired, be it education (Nussbaum, 1999).

The percentage of men who think women are free to take a decision about the money they earn is higher for urban than for rural and increase with education. Across the regions however, it was common for men to think that women were not free to take decision about the money they earn, apart from South West and probably North Central, all other rates are low at below 60%. This could be influenced by culture but may be made worse by poverty. Women on a general note have little rights when it comes to making decisions about there own health. Though it improves with education and is higher in the South and the urban areas, rates for all sectors are low (24.5% all Nigeria). When women are culturally limited and cannot take decisions about there own health, the implication could be delays or a resort to traditional medicine, which could be fatal for them and their children.

Table 4.8: Attitude towards women and Women's Participation in decision making in 2003

Background Characteristics	Attitude towards Women		Decision making	
	Wife beating (Men)	Wife beating (Women)	Money she earns (Men)	Own healthcare (Women)
Residence				
Urban	53.7	56.6	65.0	30.3
Rural	65.8	68.7	49.3	21.4
Region				
North Central	50.7	52.9	63.2	21.3
North East	82.0	90.2	32.2	12.4
North West	70.8	75.3	58.2	13.1
South East	36.6	31.3	55.3	48.9
South South	60.5	62.0	49.3	32.7
South West	44.8	46.9	78.7	39.8
Education				
No Education	73.5	77.9	44.7	17.5
Prim. & less	61.0	64.3	51.4	30.1
Some Sec. plus	56.9	41.9	64.2	35.4
Nigeria	**61.3**	**64.5**	**55.1**	**24.5**

Source: NDHS, 2003

4.3.6 Other Social Inequalities

Nigeria supplies electricity to her neighbouring countries, her access to the same commodity is pretty low at 52.2%. The South has about twice more access than the North to electricity, so is the urban to rural areas. Telephone use is at a low of 5.5, which is about six times higher for the urban areas and the South. This has implications for job creation, information dissemination and income generation, and thus for child survival.

Table 4.9: Access to Electricity and Telephone/Cell Phone by Place of Residence, 2003

Background Characteristics	Electricity	Telephone
Residence		
Urban	84.9	11.8
Rural	33.8	1.9
Region		
North Central	47.2	1.6
North East	30.9	1.1
North West	42.0	2.3
South East	70.2	14.0
South South	57.9	6.5
South West	79.9	12.8
Nigeria	**52.2**	**5.5**

Source: NDHS, 2003

4.4 Care and Care giving

4.4.1 Child Feeding

UNICEF and WHO recommends that the baby be exclusively breast fed in the first six months of life, especially with the first breast milk which contains *colostrums* to prevent frequent illnesses and malnutrition (NDHS, 2003). When the baby has been introduced to other foods after six months, it should be adequate and only complementary to breast milk for two years (ibid). Table 4.10 shows the percentage five feeding practices in Nigeria. Only 31.9% meet the UNICEF and WHO recommendations of initiating breast milk in the first 1 hour and about 17.2% of all infants were exclusively breastfed in Nigeria, as confirmed by the high rate of prelacteal feeding across all sectors (table 4.10). Mothers in the North East (83.2%) and North West (78.7%) and the South West (74.2%) are more likely to practice prelacteal feeding. The use of feeding bottles is said to be common (NDHS, 2003) though discouraged for its hygienic standards demands. While

there are no variations in the duration of breastfeeding for males or female children, rural areas, Northern women and those with no education and the lowest quintile are more likely to feed babies longer, generally to an average median duration of 18.6 months (table 4.10). The table also show that children who took foods rich in vitamin A and who took supplements are at a low of 43.3% and 33.7% respectively with the usual variations across regions and socio-economic factors.

Table 4.10: Child feeding practices, 2003

Background Characteristics	Initial Breastfeeding (within 1 hr of birth) (%)	Prelacteal Feeding (%)	Took vitamin A rich fruits & vegetables (%)	Took vitamin A supplements (%)	Median duration (months)
Sex					
Male	30.9	69.7	40.7	34.3	18.6
Female	32.9	67.2	46.0	33.2	18.6
Residence					
Urban	34.7	63.5	49.4	48.9	18.6
Rural	30.8	70.5	40.7	27.0	18.6
Region					
North Central	46.6	39.8	29.2	32.4	19.0
North East	25.9	83.2	43.3	25.1	20.5
North West	27.1	78.7	44.7	15.2	19.9
South East	57.5	53.6	55.6	60.4	13.3
South South	40.3	49.0	50.5	55.8	15.8
South West	12.7	74.2	42.8	76.4	15.9
Mother's Education					
No Education	27.0	78.4	41.3	16.8	20.0
Prim. & less	35.9	63.4	41.8	40.4	18.4
Some Sec. plus	49.9	47.0	50.7	62.2	16.3
Wealth Quintile					
Lowest	22.4	77.8	40.5	22.6	20.2
Second	30.6	72.9	42.6	18.4	20.2
Middle	36.8	67.2	46.3	24.5	19.1
Fourth	35.4	64.4	40.2	43.6	18.4
Highest	36.5	56.2	47.7	64.9	14.3
Nigeria	**31.9**	**68.5**	**43.3**	**33.7**	**18.6**

Source: NDHS, 2003

4.4.2 Maternal Healthcare

Good maternal health during pregnancy is protection for the child against infections and mortality and a good indicator of health care delivery (USAID, 2002). Antenatal care, place of delivery and postnatal care are important indicators. Table 4.11 shows that about 37% of Nigerian women had no antenatal care, 71% no postnatal care and 66.4% delivered at no health facility in 2003. These high levels of under coverage,

coverage, indicates poor health care for many women. It is made worse by a high TFR of 5.7 in 2003, while most of the births (65.1%) are grouped in the *avoidable risk* category i.e. having children at too young or too old an age, too closely or too many. There are wide usual regional variations and the situation seems better with improved education and income.

ANC helps to reduce risks for the mother and the child during pregnancy; at least four visits are recommended (NDHS, 2003). About half of all rural and Northern mothers did not received ANC compared with only 15% of urban dwellers probably because of the concentration of hospitals and health centres in the urban and southern areas. Of the women who received ANC, less than half made the recommended four visits (NDHS, 2003), and most of them are urban dwellers and educated women.

Table 4.12: Percentage of women who had no Antenatal (ANC), no Postnatal Care and delivered at no facility in 2003.

Characteristics	No ANC (%)	No PNC (%)	No Delivery Facility (%)
Residence			
Urban	15.0	60.4	44.8
Rural	46.0	73.9	75.1
Region			
North Central	25.3	80.1	54.6
North East	47.1	64.0	82.2
North West	59.0	78.1	88.6
South East	0.8	76.0	13.2
South South	16.8	55.4	45.0
South West	2.3	47.4	20.8
Mother's education			
No education	59.6	74.0	88.8
Prim. & less	20.3	66.8	58.0
Some sec. plus	4.9	58.1	20.3
Wealth quintile			
Lowest	59.7	77.8	87.1
Second	58.1	76.1	82.8
Middle	37.2	69.7	74.5
Fourth	18.0	62.8	55.2
Highest	1.8	42.7	19.2
Total	**36.9**	**71.3**	**66.4**

Source: NDHS, 2003

Anaemia is a major cause of premature delivery and low birth weights infants, thus it is recommended that an iron tablet be taken daily for at least three months during pregnancy (NDHS, 2003). Only about 39.8% took iron tablets or syrup and only 21.2%

for 90 days as recommended. A low of 38.6% of women received anti-malarial drugs during their antenatal check ups (ibid), though malaria is implicated in over half of maternal deaths in Nigeria. The South South stands out however as a zone in the South that lags behind other Southern zones, 29.7% of her women did not take iron tablets as against 4% in the South East and 9.4% in the South West. Those that did not take iron tablets in the North East are at a high of 58.8%, only 9.5% took it up to 90 days. About half of all women did not receive any tetanus toxoid injection (ibid), though neonatal tetanus is said to be a major cause of childhood mortality (USAID, 2002).

Proper medical care and conditions at delivery is important for child survival as it can reduce the risk of complications and infections to both mother and child (USAID, 2002). Table 4.11 shows that, two-thirds of mothers delivered at no facility. Of those who delivered at a facility according to the NDHS, 2003 report, only about one-third were attended to by a doctor, nurse or midwife, about one-fifth sought the assistance of traditional birth attendants, or were assisted by relatives, and 17% were totally unassisted. There are wide regional variations, with strikingly high rates in the North West (88.6%) and North East (82.2%).

Postnatal care is important for treating complications after the birth of a child (ibid), the first two days are said to be critical because most maternal and neonatal deaths occur during those days. Only 23% of those who received PNC were within two days of birth (NDHS, 2003). During such visits, women are supposed to be given Vitamin A supplements to enhance their micronutrient status during breastfeeding; only 19.6% received any vitamin A dose (ibid), with significant differences along regional and socio-economic lines.

Table 4.12 Vaccination coverage

Background Characteristics	All Vaccination (%)	No Vaccination (%)
12-59 months	10.6	29.3
Sex		
Male	9.1	27.7
Female	17.0	25.3
Residence		
Urban	25.1	16.7
Rural	7.4	31.0
Region		
North Central	12.4	16.7
North East	6.0	31.0
North West	3.7	16.7
South East	44.6	31.0
South South	20.8	16.7
South West	32.5	31.0
Mother's education		
No education	3.8	41.1
Prim. & less	13.0	18.6
Some sec. plus	21.9	5.4
Wealth quintile		
Lowest	3.4	36.1
Second	3.9	34.8
Middle	8.9	31.8
Fourth	11.0	22.9
Highest	39.9	4.3
Total	**12.9**	**26.5**

Source: NDHS, 2003

Vaccine preventable diseases are implicated in up to 20% of childhood deaths in Nigeria, but only about 29.6% of children received all vaccination (BCG, DPT, polio and measles) in 1990, the rate deteriorated to 12.9% in 2003. About 26.5% received no vaccination in 2003 (table 4.12). There is a significant variation among the genders, male children are less likely to be immunised than female children, this is explained by no known form of discrimination probably, and more male children were born in the five years preceding the survey, traditionally male children are preferred to females. Children in the urban areas (25.1%) are more likely to be immunised than those in the rural (7.4%), there are significant variations between the North and South especially in the North East (3.7%) and the South East (44.6%). The situation followed the usual pattern, improving with education and wealth.

Of the children with symptoms of ARI and fever, only 31.4% were treated in a health facility, a drop from 32.3% in 1990 (NDHS, 2003). Only about 21.5% were treated for diarrhoea in a health facility and 19.8% had no treatment, the rest were given either ORT or other home made treatment. Faeces disposal is important for preventing the spread of diseases, only about 67.6% of disposals were considered adequate by the NDHS in 2003; distribution followed the usual regional and socio-economic variations.

CHAPTER FIVE

CONCLUSION

Despite Nigeria's oil wealth, a large proportion of her population remain poor, this study has asked why. Using malnutrition and childhood mortality as tools, it tried to identify the factors that determine poverty in Nigeria. Poverty was viewed as a multi-dimensional phenomenon, a failure of varied capabilities, which starts with the lack of income and education (for child survival maternal education in particular). A failure of these two capabilities brings about the inability to provide food, health and care. As a result, the necessary conditions for maternal and child care is not achieved, making way for diseases or infections aided by malnutrition. The outcome is childhood morbidity or mortality. Development can be hindered when children grow into adults with poor health or low cognitive capacity, as this can affect their production.

5.1 Summary of the Findings

Poverty is the failure of many capabilities; a list of which would depend on how it is defined, in absolute or relative terms or as a process. In absolute terms, poverty exists where income is not enough to meet needs of food, health and care; where children die prematurely from malnutrition and diarrhoea due to poor health and lack of access to healthcare, adequate housing, water and sanitation; where there is illiteracy especially female illiteracy, where there is hunger in terms of inadequate diets quantitatively and qualitatively and where government policies exclude people.

Poverty in Nigeria is a matter of neglect and a denial of rights which operates through a high level of corruption and an unfair distributive system. This has led to a lack of knowledge about the poor and unimplemented pro-poor policies with inadequate public provisioning. Over half of the Nigerian population as a result are poor. She runs a capitalist system that believes in the *trickle down* approach to development, turned oil boom into the loss of livelihoods for many as attention diverted from other sectors like agriculture upon which employed the poor. As a result, child health is generally poor in most regions and group, expect for those in the highest wealth quintile, which has fall

below international standards. Most of the poor in Nigeria live in the North, particularly the North West and North East, the South West region on the other is the region conditions favour child survival.

Women particularly, are in more disadvantaged positions; the available laws meant to protect them are ineffective. However, the girl child does not really receive a differential treatment in Nigeria, going by the findings of this research. Traditionally the male child is preferred but the female child has survived more, has a lower rate of malnutrition and disease prevalence, and are treated as well as the male child or better but not worse. No form of discrimination is known to explain this. Probably more male children were being nursed at the time of interview.

The determinants of Childhood mortality at the aggregate level is a neglect of the poor which is shown in low public spending, lack of knowledge of the poor, lack of commitment in addressing poverty, which has resulted in a lack of capabilities like income, education and safe environment necessary for child survival. Other determinants are high cost of food, lack of access to health care especially during pregnancy, birth and afterwards, lack of safe drinking water and low sanitation, low maternal education, low decision making capacity, improper child feeding and treatment, low maternal health from low quality of health provided and region of residence.

5.2 Recommendations

Nigeria lacks in the basic conditions for child survival. She is a declining economy, but one that has not invested in the well-being of her people in good and bad times. Her policy for addressing poverty must be broad-based aimed at removing all lacks or limits and provide opportunities that would expand people's choices. This should involve in order words, economic growth, social development and poverty reduction and recognise that people have rights to participation, survival and development.

This should include diversifying the economy to discontinue the over-reliance on the oil economy to give her people economic independence; to fight corruption and create a society where the rule of law is in place with proper accountability, transparency and

political freedoms, with corruption successfully fought, half the battle is won, and then she needs to take 3 basic steps:

First, get to know her poor, their needs of health, education, water, sanitation, sources of livelihood, and other failed capabilities, including their perceived solutions. This she can achieve by investing on data collection and analysis, and establishing poverty monitoring systems that will allow poverty analysis at the household and individual level.

Second, she needs to alleviate poverty by adopting pro-poor social policies that address the inclusion of all citizens in the process of development especially women and minorities. Nigeria needs to invest and heavily too in the rural areas, on agriculture, health and education and social facilities like information technology, electricity, roads, to attract investment in the rural areas and help cottage industries grow.

Third, as part of her poverty alleviation strategy, she needs to reduce childhood mortality by planning and implementing an effective advocacy strategy to include combating disease and malnutrition within the primary health care (PHC) framework. This should include proper allocation and management of funds; training of a diverse workforce to handle the provision of medical assistance and health for all children including pre- and post-natal care, follow up medical calls, growth monitoring, immunisation, family planning and other preventive health care services as well as the provision of water and sanitation, and knowledge of childcare and hygiene. It may also include encouraging of female education and identifying special groups for immediate interventions. Here is a child health capability list to strive towards:

- **Life** – being able to survive and live free of morbidity.
- **Income** – having enough to meet needs of food, shelter, health, etc.
- **Environment** - being where housing, drinking water and sanitation are adequate, where literacy especially female literacy is high or adequate information and services about healthcare is available. Where high-risk behaviours like having too children, too close at too young or too old an age minimised.
- **Health** – having healthy parents who will live long, especially a healthy and well nourished mother. Having access to healthcare services, especially immunisation and other child and maternal health programme.

- **Care** - Being breastfed exclusively, fed with the right diet prepared hygienically and on time. Being treated medically or with proper home remedies on time.
- **Nutrition** – being nourished with adequate diets in quantity and quality.
- **Public policy** – being in a country with a relevant and functioning health, educational, nutritional, agricultural, housing, maternal, child and population policies, that are not subnormal and the same for all.

For **funding,** the cost recovery or user fees in place for health should be eradicated rather a risk sharing scheme between the poor and rich, the sick and the well should be planned and put in place for providing the necessary services like health, education and even safe water. If all citizens make some payment at a point in time or other (depending on their income levels) as health or education premium, then everybody can receive any type of treatment with little or no out-of pocket payments at the point of delivery. Payroll deductions, compulsory employer contributions, government levies on such items like tobacco and alcohol could be part of this fund raising effort. These efforts however, do not relieve the governments of her duties to the people her allocations should be at least up to the 5% as recommended by WHO.

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