ANALYSIS OF POVERTY IN ZARIA URBAN AREA AND THE URBAN MANAGEMENT IMPLICATIONS

BY

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DECLARATION

I ALHASSAN DAHIRU DAN'AREWA declared that the work in this thesis ANALSIS OF POVERTY IN ZARIA URBAN AREA AND THE URBAN MANAGEMENT IMPLICATIONS has been written by me under the supervision of Professor J. B. Kaltho and Dr Adamu Ahmed.

All information derived from literature has been duly acknowledged in the text in list of references provided. No part of this thesis was previously presented for the award of another degree at any university.

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CERTIFICATION

This project thesis title ANALYSIS OF POVERTY IN ZARIA URBAN AREA AND THE URBAN MANAGEMENT IMPLICATIONS by ALHASSAN DAHIRU DAN'AREWA meets the regulations governing the award of M. Sc Urban Management of Ahmadu Bello University, Department of Urban and Regional Planning is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This thesis is dedicated to my late Father, Mother and to the enthusiast of truth.

AKNOWLEDGEMENT

All praise be to Allah most beneficent most merciful. My gratitude goes to Him the creator of heavens and earth Who gives without measures for given me the courage and strength to complete this thesis successfully. My profound gratitude goes to Professor J. B. Kaltho and Dr Adamu Ahmed for their patient and un-relented effort without which this thesis will not have been a success. My gratitude also goes to all my course meets and to entire staff of department of Urban and Regional Planning Ahmadu Bello University Zaria. May Allah bless us all Amen

ABSRACT

The study set out to analyse the poverty profile of Zaria Urban Area with application input for urban management. This is a departure from the conventional approaches that have broad focus and lack direct utility for urban managers. To address these shortcomings, amongst other considerations, was the use of the Basic Needs Approach to the study. This enables the isolation of neighbourhood's socio-spatial needs which have direct bearing to urban management. Data for the study was sourced from both primary and secondary sources. The primary data was obtained through general household survey by administration of questionnaires and personal interviews. The approach to the analysis was by the use of absolute and relative measures. The absolute measure adopted was the Head Count Ratio and the Relative used is the Fuzzy Set Technique. Scores obtained the profiling were used to rank districts according to poverty levels. The findings of the study show that poverty varies by districts in Zaria Urban Area. By general ranking, using aggregate Basic Needs data, the GRA exhibited minimal poverty relative to other Districts. It enjoys better access to utility and services and has better housing condition and infrastructure. Income level is also higher. Second in the ranking is Tudun Wada, then Samaru, Sabon Gari and Zaria City.

The data obtained was also dis-aggregated by each indicator across districts. This objective is to show ranking and also permit the identification of specific urban management interventions for the 5 Districts. In the study, Zaria City was shown to have the worst housing situation and the lowest income. Samaru District had the worst situation and water supply, with GRA with public school provision. Based on the result obtained, specific and general recommendations were made on how the shortcomings of

each District can be addressed. Specific recommendations were made aimed at addressing specific findings in each District.

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CHAPTER ONE

CONCEPTION AND DESIGN OF THE STUDY

1.1 INTRODUCTION:

Many African cities are urbanizing to a crisis level due to high rate of population growth and migration from rural areas to the cities. In the movement from the countryside to cities, poverty is highly evident. In some African countries (Nigeria for instance), the growth is so fast to the extent that by 2015, it is expected that there would be more people in urban areas than in rural areas. The United Nations Population Fund estimates that half of the world's population-about 3.3 billion people will be living in urban areas in 2009. It is equally envisaged that the figure will rise to five billion by 2030, the majority of whom will be poor people living in unplanned squatter settlements without water and electricity and in an environment of squalor, poverty, crime and disease. Currently, more than 7.9 million urban households, that is, about 42% of the total number of households in Africa, are living in poverty. The overall poverty situation in Nigeria is that, about seventy-seven percent (77%) of the urban households are poor and 68% of rural households are poor (FOS, 1996).That is, that poverty is becoming more of urban than rural phenomena.

The Millennium Development Goals (MDGs) brought poverty unto the global agenda and stimulated a new commitment by all nations to the battle against poverty. Measurements to improve the quality of life by reducing poverty are therefore receiving greater attention than ever before the world over. Over past decades, city managers and activists have faced an urgency to respond to the plight of the urban poor. Rapid urbanization places enormous pressure on cities to use their limited resources to meet or facilitate the increased demand for water, sanitation, electricity, basic education, health, housing and transport. With rapid growth of cities comes the typical urban dimension of poverty. Poverty is defined as the human condition characterized by the sustained or chronic deprivation of the resources, capabilities, choices, security and power necessary for the enjoyment of an adequate standard of living and other civil, cultural, economic, political and social rights. Poverty is a common plague afflicting people all over the world especially in the less developed countries. The factors that influence poverty are high inflation rate, unemployment, bad economic policies, huge wastage of scarce resources and bad governance. The problem of poverty in Nigeria has not only become entrenched and multifaceted over the years, but has defied efforts at eradication. Poverty is associated with the lack of, or inadequate necessities of life such as food, clothing, light etc.

In recent years, a lot of literature has emerged on the definition, measurement and analysis of poverty. Much of this literature focuses on measuring poverty at the national level, or special disaggregation by general categories of urban or rural areas with adjustments made for regional price differentials. For example, the recent study by Canagarajah (1997), documented the distribution of household income and expenditure in Nigeria in the period of 1985-1992. It tried to indicate in which regions and states the poor are concentrated and the extent and severity of their poverty. Yet for an individual city attempting to tackle the problems of urban poverty, this level of aggregation is not sufficient for answering specific questions such as where the poor are located in the city; whether there are differences between poor areas; if access to services vary by subgroup; whether specific programs are reaching the poorest; and how to design effective poverty reduction programs and policies. Answering these questions are critical, particularly for large, sprawling cities with highly diverse populations and growing problems of urban poverty.

City poverty profiling is a tool for providing up-to-date information of what city managers and many actors in the private and voluntary sector need to know when developing city policies, programs and projects against poverty. A city poverty profile is a geographical representation that shows where poverty is concentrated in the city, and therefore where relevant policies might have the greatest impact on reducing poverty. Poverty profiling allows for a relatively easy and intuitive comparison of indicators of poverty with a range of other data that are also available in a spatial format or have spatial dimensions. These include any social and economic information that are for example collected at a city level. It also includes a wide range of information, such as access to infrastructure or services, availability and condition of natural resources, and distribution of transport and communication facilities. Detailed geographic profiles of poverty can be extremely valuable to governments, non-governmental organizations and multilateral institutions that want to strengthen the impact that their spending has on poverty. For example, many developing countries use regional poverty maps to guide the division of resources among local agencies or administrations as a first step in reaching the poor. Understanding urban poverty presents a set of issues distinct from general poverty analysis, which also may mean additional tools and techniques.

1.2 STATEMENT OF RESEARCH PROBLEM:

A major shortcoming of approaches to measuring poverty is that they are quantitative or money-metric measures. They utilize income or consumption patterns to assess whether a household can afford to purchase a basic basket of goods at a given point in time. The basket ideally reflects local tastes, and adjusts for spatial price differentials across regions and urban or rural areas in any given country. Granted that money metric methods are useful for estimating poverty levels and making inter-temporal and inter-country comparisons. Such methods however are inadequate considering the multi-dimensional nature of poverty in Nigerian cities. Therefore, several methods of aggregation have been suggested to measure poverty, but there is still no consensus on the best measure. The argument is that there is need to go beyond money-metric measures and income and expenditures data, which appears to be the practice in most of Sub- Saharan Africa. Other shortcomings which are more theoretical and methodological, concerns the multidimensional nature of well-being usually ignored in existing methods, but need to be revised. The well-being of an individual as argued depends not only on income, but includes several other dimensions or capabilities such as health, education, empowerment, access to basic facilities, social and political exclusion etc. That is poverty manifests in different forms: household may have sufficient income but are deprived of "basic needs"; or households are able to satisfy their "basic needs" even though they have recently experienced an income fall; or households are deprived of both sufficient levels of income as well as basic needs.

At the other extreme, most of poverty studies are also criticized for their focus on measuring poverty at the national level, or by special aggregation by general categories of urban or rural. This level of aggregation is not enough for an individual city attempting to tackle the problems of urban poverty. Rather, it is expedient to answer specific questions such as where the poor are located in the city; whether there are differences between poor areas; if access to services vary by subgroup, whether specific programs are reaching the poorest, and how to design effective poverty reduction programs and policies. Answering these questions are critical, particularly for Urban Managers and for large, sprawling cities with highly diverse populations and growing problems of urban poverty. Most poverty studies carried out are however, non-conforming based on this categorization and two of such stand out. First is the study of poverty in Nigeria by Ogwumike (1987, 1991) which is based on the core basic needs approach, but which has larger special context to permit specific urban application. The second with methodological shortcoming is the study of Agege (2006) by Osinibu, which is urban based, but relying on income, expenditure, and other social welfare performance data to determine the extent of poverty. The shortcomings of the tools and approaches to poverty study established are a major constraint to urban managers who have need for spatial disaggregation and more comprehensive and multi data use to aid decision-making. To fill the gap in knowledge, this study has focus on disaggregating poverty at various urban spatial scales and using multiple criteria. This will assist the identification of where the poor are located, determine the level of extreme deprivation in each district and identify what policies to adopt in raising living standards. These are the issues useful at the management level of cities that are the interest of this study. The issues are explored in Zaria Urban Area.

1.3 The Research Questions:

The research questions answered are:

1. What are the ranges of poverty indicators in Zaria urban area?

2. What is the profile of poverty in Zaria Urban Area of relevance to Urban Manager?

1.4 Aim and Objectives:

1.4.1 Aim

The aim of this research is to analyse the poverty profile of Zaria Urban Area with application input for urban management as a basis for identifying problems and making recommendations.

1.4.2 Objectives:

The objectives of the research are.

1. To review the concept, criteria and techniques of urban poverty analysis.

2. To adopt appropriate poverty analysis techniques and operationalize usage in Zaria urban area.

3. To determine the poverty profile of Zaria Urban Area with relevance to Urban Management using the adopted technique.

4. To determine urban management challenges of the pattern and to make recommendations.

1.5 Scope and Limitations:

Preparation of the city poverty profile is the decisive test of the poverty indicators and characteristics, which is within the scope of the research. However, only the policy recommendations for operationalizing the indicators and characteristics shall be covered. That is, because the key contribution of the study is establishing the poverty indicators, the characterization and the spatial poverty profile of Zaria urban area.

1.6 Justification of the Study

If viable policies and strategies that work towards the reduction of poverty are to be developed, there is the need for reliable and relevant profiling to identify the location, calculate the numbers and social characteristics of the poor in any given population and the impact of changes to their situation. This study will contribute in establishing and applying appropriate criteria for Zaria and similar towns. This will benefit exercises, particularly in a similar Northern in Nigeria and elsewhere.

CHAPTER TWO

CONCEPT OF POVERTY, PROFILING TECHNIQUES INDICATORS OF URBAN POVERTY: A LITERATURE REVIEW

2.10 INTRODUCTION

This section reviewed major concepts, indicators and poverty-profiling techniques on existing knowledge or works in order have a good theoretical background for the research.

2.20 CONCEPT OF POVERTY

There is no generally agreed definition of poverty. This is because, Piachaud argues, the definition of poverty is a moral question - it refers to hardship, which is unacceptable.

Sen (1983), relates poverty to entitlements which are taken to be the various bundles of goods and services over which one has command, taking into cognizance the means by which such goods are acquired (for example, Money and Coupons etc) and the availability of the needed goods. Yet, other experts see poverty in very broad terms, such as being unable to meet “basic needs” – (physical; (food, health care, education, shelter etc.) and non – physical; participation, identity, etc) requirements for a meaningful life (World Bank, 1996).

Peter Townsend (2003) defines poverty as "the absence or inadequacy of those diets, amenities, standards, services and activities which are common or customary in society." European Society for Child and Adolescent Psychiatry, (ESCAP) defines poverty as having three inter-related and inter-locking aspects:

(a) Lack of regular income, employment opportunities and purchasing power.

(b) Lack of access to services (such as health, education and water) and

(c) Lack of political power, participation, dignity and respect.

'Poverty' also refers to;

***Material conditions** - needing goods and services, multiple deprivations, or a low standard of living;

***Economic position** - low income, limited resources, inequality or low social class; and

***Social position** - of the poor through lack of entitlement, dependency or social exclusion.

The definition of poverty used by Ireland National Anti Poverty Strategy (NAPS) is as follows: People are living in poverty, if their income and resources (material, cultural and social) are so inadequate as to preclude them from having a standard of living, which is regarded as acceptable by Irish society generally. As a result of inadequate income and resources, people may be excluded and marginalized from participating in activities, which are considered the norm for other people in society.

Poverty can also be represented in two main models.

2.21 Absolute Poverty: Absolute poverty is based on subsistence, a minimum standard needed to live. It measures the number of people living below certain income threshold or the number of household unable to afford certain basic goods and services such as food, shelter or shelter to survive. Seebohm Rowntree's research identified a 'poverty line' based on minimum needs. The Copenhagen Declaration defines absolute poverty as "a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to social services."

2.22 Relative Poverty: Relative poverty is based on a comparison of poor people with others in society. It measure the extent to which household financial resources fall bellow an average income threshold for the economy as the inability of a citizen to participate fully in economic terms in the society in which he or she lives. Peter Townsend defines poverty as "the absence or inadequacy of those diets, amenities, standards, services and activities which are common or customary in society."

Poverty, like all need, is defined in terms of the society where it takes place: what people can eat, and where they can live, depend on the society they live in. That does not mean that it is based on a comparison with others in the same society.

2.30 POVERTY INDICATORS

Poverty has many faces and different cities will find they need to select indicators appropriate to their individual circumstances. In most cites, household income or consumption of the most marginalized will be crucial determinant of poverty levels. This can be accompanied by access to basic set of services ranging from water, electricity and sanitation to school attendance of children. Many cities all over the world experience increase level of violence in the street, thus the incidence of violence is the determinant of wellbeing in the city as well.

The table bellow shows the description of different types of indicator as provided by the World Bank.

Table 1 World Bank's poverty indicators

INCOME	- Access to credit: e.g., % of the target population using (or eligible for) credits from formal finance organization (including for housing and productive uses); or, the share of credits used by the target group in the total loans offered by formal finance organizations - C, I - Shares of informal employment - C, I - Share of household expenditures on housing (lowest 2 quintiles) - U, C, I - Model shares of transport for work trips - C, I - Share of household expenditures on transport (lowest 2 quintiles) - U, C, I - Mean travel time to work - C - Access to electricity - U, C, I - Regulatory delays (licensing burden on SMEs, etc.) - C - Land development controls - C - Coverage of social assistance – C	- Poverty headcount - U, C, I - Poverty gap - U, C, I - Extreme poverty incidence - Female headed households in poverty - U, C, I - Income inequality (Gini coefficient) - C , I - Quintile ratio of inequality - C, I - Unemployment rate - U, C, I - *Housing price/income ratio - Cdah*
HEALTH	U, C, I - *% Household connected to water/sewerage - U, C, I* - Per capita consumption of water - C, I - % Wastewater treated - C - % Households with regular solid waste collection - C, *I* - % of solid waste safely disposed - C - Crowding (housing floor space per person) - C, I - Air pollution concentrations - C - Shares of sources of household energy - U, C, I - Access to primary health services - U, C, I - Access to nutritional safety net - C, I - Share of household expenditures on health care (lowest 2 quintiles) - U, C, I - Share of household expenditures on food (lowest 2 quintiles) - U, C, I	- Infant and under-5 mortality - U, C, I - Maternal mortality rate - U, C, I - Life expectancy at birth - U, C, I - Female-male gap in health (under-5 mortality rate by sex) - U, C, I - Malnutrition rate of children - U, C, I - Morbidity and mortality rates from public health/environment-related diseases (e.g., diarrheal, respiratory, malaria) - U, C, I - Death rates by violence - U, C, I - Injury/death rates by transport accidents - U, C, I - Mortality rates by disaster - U, C, I
EDUCATION	- Primary and secondary school enrollment rates - U, C, I - Access to vocational training - U, C, I - Share of household expenditures on education (lowest 2 quintiles) – U, C, I	- Literacy rate - U, C, I - School completion rates - U, C, I - Gender gap in education attainment - U, C, I - Child labor - C, I - Street children - C, I
EMPOWERMENT	- Extent of public consultation in local government budget decisions - C, I - Participation of residents in political or community organizations - C, I - Discrimination in access to services/jobs - C, I - Access to telephones and internet - U, C, I	- Citizen involvement in major planning decisions - C, I - Public access to information about local government decisions, services, and performance - C, I - Satisfaction with city services - C, I

Source: The World Bank (2009)

Indicators can be collected at different level of aggregation:

Key: U = Nationwide urban average or total (all urban areas combine). C = City specific (citywide rate). I = Intracity (e.g. neighborhood level)

Hentschel and Seshagir (2000) poverty indicator "The City Poverty Assessment Primer," prepared for Urban Management Course.

Table 2 Hentschel and Seshagir (2000) poverty indicators.

Indicators	**Data sources**
Income Poverty Indicators Poverty rate (incidence, poverty gap, poverty severity, extreme poverty rate (incidence), income in equality measure.	National level household survey (Living Standard Measurement Surveys, Employment Surveys) if representative at city level, Multi topic city survey.
Health and Educational Outcome indicators -Under – five mortality rate, infant mortality rate, maternal mortality rate, life expectancy -Malnutrition rate - Literacy rate, Years of schooling	Specialized National Household Surveys such as (DHL or LSMS), if representative at city level National levels (DHS, LSMS), Nutritional Surveys, Height census. Most Surveys and most Censuses.
Access indicators -Water, electricity, Sanitation, garbage collection. -School and health facilities. -Social Programs (nutrition, social assistance) -Service satisfaction. Non-Income Deprivation indicators -Unemployment -Violence -Child labour -Discrimination	 Various household surveys, population census, administrative data. Various household surveys, population census, administrative data. Specialized household surveys (LSMS) multi topic surveys administrative data. Specialized city surveys (service satisfaction and needs survey, multi topic city survey) National Employment surveys, LSMS, Multi topic surveys. Violence surveys, participatory appraisals. National surveys, LSMS, multi topic city survey. Participatory assessment, household surveys (not directly but through application of models

Sources: The World Bank (2009)

2.4.0 APPROACHES TO MEASURING URBAN POVERTY

Poverty is multidimensional, thus measuring it presents a number of challenges. Beyond low income, there is low human, social and financial capital. The most common approach to measuring poverty is quantitative, money-metric measures, which use income or consumption to assess whether a household can afford to purchase a basic basket of goods at a given point in time. The basket ideally reflects local tastes, and adjusts for spatial price differentials across regions and urban or rural areas in a given country.

Money-metric methods are widely used because they are objective, can be used as the basis for a range of socio-economic variables, and it is possible to adjust for differences between households, and intra household inequalities. Designs vary significantly between countries and over time, making comparability difficult. Some use income based measures, other consumption. Decisions about how to value housing, homegrown food and how to account for household size and composition all affect poverty estimates. If not properly adjusted, monetary measures can underestimate urban poverty because they do not make allowance for the extra cost of urban living (housing, transport, and lack of opportunity to grow ones own food).

Income or consumption measures also do not capture many of the dimensions of poverty. For example, in the urban context, the urban poor rely heavily on the cash economy thus making them more vulnerable to fluctuations in income, and there are severe environmental and health hazards due to crowded living conditions in urban slums, and no tenure security. Other aspects of poverty, in urban areas, which are multidimensional relate to access to basic services such as water, sewage, health and education, and a safety net to mitigate hard times.

Measuring urban poverty can be carried out using a number of approaches summarized below. Regardless of the methodology chosen, the data should ideally be comparable across different section of the city. This will capture vast differences between the poor and non-poor in the study area.

2.4.1The Head-Count Ratio (HC)

The headcount ratio (*HC*) is the simplest way of measuring poverty. It gives the percentage of population, which is not above the poverty line. It can be formally defined as follows:

$$HC = P/N$$

Where *P* is the number of poor people (those below a poverty line *z*) and N is total population.

2.4.2 The Poverty Gap (PG)

For any individual, the poverty gap may be defined as the distance between the poverty line z and his/her own income y. Aggregating individual poverty gaps for all poor individuals, gives the aggregate poverty gap:

$$\Sigma=-=PiiyzPG1$$

Where P is the number of poor individuals (and not the size of total population!). A refined version of the poverty gap normalizes expression over the maximum amount of money that would be needed to wipe out poverty. The product between the number of poor individuals P and the poverty line z gives this last amount. The intuition is simple. As z represents the minimum individual income for which an individual is not considered poor, the product of this income with the number of poor individuals P gives the amount of money that is necessary to eradicate poverty.

2.4.3 Income and Consumption Measures: Both are based on data that assess whether an individual or household can afford a basic basket of goods (typically food, housing water, clothing, transport, etc.). Consumption is generally considered to be a better measure than income because incomes tend to fluctuate over time; there are problems of under-reporting (particularly income derived from the private and informal sectors). Money metric measures can be adjusted to account for the higher cost of living in urban areas when measuring poverty.

2.4.4 Basic Needs or Unsatisfied Basic Needs Index: This approach defines a minimum threshold for several dimensions of poverty classifying those households who do not have access to these basic needs. They include characteristics such as literacy, school attendance, piped water, sewage, adequate housing, overcrowding, and some kind of caloric and protein requirement. If a household is deficient in one or more of the categories, they are classified as having unsatisfied basic needs.

2.4.5 Asset Indicators: This has been used increasingly with the Demographic and Health Surveys (DHS). A range of variables on the ownership of household assets is used to construct an indicator of household's socio-economic status. These assets include a car, refrigerator, television, dwelling characteristics (type of roof, flooring, toilet), and access to basic services including clean water and electricity.

2.4.6 Vulnerability: This approach defines vulnerability as a dynamic concept referring to the risk that a household or individual will experience an episode of income or health poverty over time, and the probability of being exposed to a number of other risks (violence, crime, natural disasters, being pulled out of school). Indicators that make it possible to assess a household's risk exposure over time through panel data measure vulnerability. These indicators include measures of physical assets, human capital, income diversification, links to networks, participation in the formal safety net, and access to credit markets. This kind of analysis can be quite complex, requiring a specially designed survey.

2.4.7 Participatory Method:

This typically relies on qualitative approaches to capture aspects of urban poverty that may not be identified through pre-coded surveys. Through tools such as focus group discussions, case studies, and individual open-ended interviews, it is possible to determine the perceptions of poverty, identify priority needs and concerns, and gain insight on the effectiveness of programs and policies from the perspective of the beneficiaries. Participatory Poverty Assessments (PPAs) are assessments made by poor people themselves of what constitutes poverty. The World Bank has recently carried out 78 PPAs in 47 countries. On this basis, five dimensions of poverty were mapped:

1. Powerlessness – lack of influence/control on means of survival/development, lack of self-respect.
2. Vulnerability – to economic shocks.
3. Physical weakness – illness, malnutrition.
4. Material poverty – lack of income, goods and services, assets, capital
5. Isolation – lack of education and resources

Those aspects of poverty most easily identified are difficult to quantify and measure progress in reduction.' (Sumner 2001). In practice, this means more time from participants, researchers, and resources. It also results in policy interventions that are tailored to local circumstances and are micro-level focused rather than focused at the macro-level and structural interventions.

2.4.8 The Living Standards Measurement Study

The Living Standards Measurement Study (LSMSw) as established by the World Bank in 1980 to explore ways of improving the type and quality of household data collected by statistical offices in developing countries. Its goal is to foster increased use of household data as a basis for policy decision making. Specifically, the LSMS is working to develop new methods to monitor progress in raising levels of living, to identify the consequences for households of past and proposed government policies, and to improve communications between survey statisticians, analysts, and policymakers.

2.4.9 Human Development Index (HDI)

The (HDI) as a social indicator of poverty has gained significant momentum over the years. Developed by Mahbub ul Haq, it has since been used by the United Nations Development Program in order to measure well-being in correlation to traditional per-capita income measures forwarded by the World Bank in the year 1948. Technically, the HDI is defined as «the arithmetic average of a country's achievements in three basic dimensions of human development» (Cashin et al. 2001). The HDI ranges from a value of zero (low HD) to a value of one (high HD). A range of social indicators were derived to reflect the human development aspects of poverty and its multiple dimensions (e.g. life expectancy, infant mortality, literacy, school attendance, access to health care, sanitation and safe water). These are used together with indicators of a decent standard of living, e.g. adjusted per capita income, percentage of people living below the income poverty line (50% of median disposable income) and shares between men and women. These can be expressed as welfare functions that 'identify those who fall below a specified minimum level of welfare; and they allow us to measure (1) the multiple dimensions of well being and (2) How an individual chooses between them' (Beard 2001). Composite indexes give a weight to these different measures and combine them.

The United Nations Development Program (UNDP) has developed a series of these composite indexes for measuring human development, gender development and poverty. These combine indicators for longevity, knowledge and a decent standard of living. 'The Human Development Index (HDI) 'focuses on progress in the community as a whole. The Human Poverty Index 'focuses on the situation and progress of the most deprived people in the community' (UNDP 1997).

The popularity of the HDI as a social indicator of poverty that supplements the official indicators is due to the fact that the data used to compile the HDI and the methodology applied to arrive at the values are uniform across the board. This allows for adequate comparison of poverty among various countries (something that was originally difficult given that the there are no standard indicators of poverty prescribed internationally). It implies that there is greater accuracy in reading the trends in poverty globally, regionally and even within countries.

2.4.10 Human Poverty Index:

The Human Poverty Index 'focuses on the situation and progress of the most deprived people in the community' (UNDP 1997). The Human Poverty Index relates standard of living to access to safe water, health services and proportion of undernourished children under five for developing countries (HP-1). In the case of developed countries (HP-2), it is percentage of people living below nationally defined income poverty lines, defined as 50% of median disposable income. They provide a basis for international comparison based on ranking. Questions remain about how different measures for different factors are weighted and combined. Factors that are difficult to measure relating to social exclusion or empowerment are not covered in such indexes.

The UNDP indexes are not the only ones in use. There are three separate approaches to indicators being undertaken by different agencies. These are policy related approaches such as that of the UNCHS and the World Bank, thematic indices used by the UN and systems approaches preferred by the OECD (Westfall and de Villa 2001). The policy related approaches originate from the social indicators movement, now used by the World Bank/ UN-Habitat Indicators Programme and the Global Urban Observatory.

Such indicators typically stem from government or community concern in a particular area and are closely related to the process of establishing urban strategies and policies. They work by developing a comprehensive inventory of major social goals or norms, and then devising indicators to measure progress towards these goals. They are:

(a) Holistic, looking at the health of cities or sectors as a whole;

(b) Inclusive, covering areas beyond a single management structure; and

(c) Pluralist intended to foster or inform a dialogue between the different parties involved in urban development.

2.5 OTHER APPROACHES TO MEASURING POVERTY

In analyses of poverty in Bangaldesh in (2001), the following approaches were used to poverty measurement: indirect approach, direct approach and the integrated approach. Salient features of these three approaches are discussed.

2.5.1 Indirect Method

This is the income measure where a critical minimal level of income called poverty line income (PLI) required to support a predetermined minimum living standard is calculated. Households with a gross monthly income below the PLI are considered poor. Allowance is usually made for urban and rural poverty lines according to the prevailing average consumption and sometimes for cost differentials between these two areas. Poverty lines are expressed at current prices in units of the national currency. The PLI or indirect method in principle consists of:

(a) Definition of a standard basket of essential satisfiers for each household.

(b) Cost estimation of the standard basket, which makes up the poverty line.

(c) Comparison of the poverty line with household income or consumption expenditure.

(d) Classification of households whose income or consumption expenditure is below the poverty line, as poor.

Following items are usually incorporated in the standard basket of essentials:

a) Food, clothing and foot ware, and fuel.

b) Transport and basic communication services.

c) Personal and home care, leisure and entertainment.

d) Payments for housing services.

e) Health care and educational expenses.

2.5.2 Direct Method

This method relates to identifying basic needs in physical terms and measuring the degree of satisfaction of these needs. Usually termed the unsatisfied basic needs index, these measures captures the degree of dissatisfaction of basic needs with regard to minimum standards, such as food, quality of and access to housing, water supply, sanitation, energy, education, and health. They assess poverty as the share of households with unsatisfied nutrition requirements and other necessities. The direct method or unmet basic needs (UBN) consist of the following steps:

1. Definition of basic needs and their satisfiers.

2. Selection of variables and indicators that, for each need and satisfier, express their degree of satisfaction.

3. Definition of a minimum level for each indicator, below which the need is considered deprived. The cost of private health care and educational expenses must be included in the PLI when household members are not entitled to free services or when the free services need to be supplemented by private purchases.

4. Classification of households as poor when one or more basic needs are unsatisfied.

Poverty estimates based on the direct method have been formulated based on the following household indicators:

a. Improvised or inadequate housing, as judged by their building materials.

b. Overcrowding.

c. Inadequate water supply.

d. Lack of (or inadequate) sewage disposal system or sanitation.

e. Non-attendance of children at primary school.

f. Education level of the household head of an indirect indicator of households' economic capacity. Additional indicator such as electricity may also be incorporated into the purview of "basic needs" indicator set with the stipulation that inclusion of an additional item raises the incidence of poverty.

2.5.3 Integration of Indirect and Direct Approach

It is observed from above analysis that the direct method involves factual concept of poverty, identified by observed deprivation of "basic need" under consideration and the indirect method involves a potentiality concept as it looks for the incapacity to satisfy basic needs due to insufficient income (i.e. hence consumption expenditure). The indirect method only takes into account current household income while the direct method only considers household patrimony and access to services provided by government or non-government agencies. Thus both methods provide a partial view of poverty, which may results in its underestimation. The indirect method concentrates on current private consumption requirements while the direct method focuses on public expenditure and private investment requirements for such provisions. The indirect measure identifies target populations with inadequate income, which thus require employment, wage and income generation policies. Conversely, the target populations identified by direct measure require housing loans, water supply, sewage disposal systems, education and other such policies. The first approach leads mainly to the design of economic policies, the second leads mostly to the design of social policies (Boltnivik 1994). An adequate poverty measure may therefore take into account the welfare sources mentioned in the indirect-direct approaches and their interrelations. Poverty measurement adopting one of these two approaches may provide a partial view of poverty profiles and may conceal critical aspects for formulating an efficient welfare programme. Direct (UBN) and Indirect (PLI) measurement methods are thus complementary. Simultaneous application of these two methods identifies poor population from the union of both sets of poor and not from their intersection. Their simultaneous use constitutes a new methodology indirect-direct or Integrated Poverty Measure (IPM). The integration of these methods calls for the elimination of redundancies and for a general review of both methods in order to achieve full complementary.

In order to maximize complementarities, it may be essential to specify which of these two methods would be used to detect the dissatisfaction of different kinds. A well-accepted and convenient division is to use direct (UBN) to tackle all "basic needs" that are preponderantly met through public spending4, through accumulated household's investment, or as a result of individual effort. On the other hand, those, which are predominantly satisfied by current private consumption expenditures, can be dealt with by using indirect method (PLI). According to "Integrated Poverty Measure", households may be classified into four groups with one non-poor and three broad groups of poor. Classification of these four groups is presented in

Identification of households by Integrated Poverty Measures

Table 3 Classification of poor and non-poor using IPM

	Incomes below the poverty line	Incomes equal to or above the poverty line
At least one critical Basic Need Shortage	Households in a situation of chronic poverty (Chronic Poor)	Households with inertial Shortages (Inertial Poor)
No critical shortages	Households in a situation of recent poverty (Recent Poor	Households in a condition of social integration (Socially Integrated

1. Chronic Poor: Households those who are poor by both methods, i.e. they lack minimum level of income as well as are deprived of one or all of the selected “basic needs”. In the poverty related literature this household groups constitute the “core” of poverty (Katzman 1988).

2. Recent Poor: Households who are poor only by indirect method. This category includes those households who have a per capita income below the poverty line but do not report any paucity of “basic needs” under consideration. The basic assumption in the design of this typology is that the capacity to meet “basic needs” which are incorporated into the index show a certain inflexibility with respect to the deterioration in the economic situation of the households and to that extent, they provide important information concerning the previous living conditions of these households.

3. Inertial Deprived: Households who are poor only by direct method. This category includes only those households who exhibit one or more critical deprivation of “basic needs”, even though they have declared a per capita income above the poverty line.

Analysis of Poverty Profiles by Basic Needs Approach deprivation may reflect persistence of previous habits and inherent inertia of cultural factors or lack of provision of “basic needs”.

4. Non-poor or Socially Integrated: Households who are non-poor by the both methods. Households whose per capita income exceeds the amount needed to cover the cost of a basic/standard consumer basket and have no critical shortages in the dimensions of the “basic needs” under consideration.

Identification of households by the above four criteria may have direct implication for adopting different types of policies for each of specific groups.

2.6.0 METHODOLOGY FOR CONSTRUCTING POVERTY LINES

An important aspect in poverty analysis is the setting of poverty lines below which persons are considered poor and above which they are not poor. A poverty line may serve other purposes such as: (1) monitoring poverty over time, (2) developing poverty profiles, (3) acting as a threshold for entitlement, and (4) providing a focus for public debate (*see* Bidani *et al*, 2001). It is sometimes necessary to distinguish between absolute poverty lines and relative poverty lines. The former has fixed .real values. Over time and space, while the latter rise with average expenditure.

Francis (2004) in a study on poverty in Cameroon identified various techniques uses in constructing poverty line, which includes the following:

The two traditional approaches for setting absolute poverty lines are the cost-of-basic-needs (CBN) and the food-energy-intake (FEI) methods. Both methods anchor the definition of basic needs to food energy requirements.

2.6.1 The Food-Energy-Intake Method:

The FEI method proceeds by finding the consumption expenditure or income level at which a person's typical food energy intake is just sufficient to meet predetermined food energy requirement. This method has been widely used in the literature (see for instance, Greer and Thorbecke, 1986; Ahmed, 1991; Ercelawn, 1991 and Fambon *et al*. 2000b).6 An advantage of the FEI method is that it automatically includes an allowance for both food and non-food consumption - thus avoiding the tricky issue of determining exactly the basic needs of these goods - as long as one locates the total consumption expenditure at which a person typically attains the calorie requirement. Other advantages of the FEI method include: (1) its non-reliance on the need for price data, which can be very problematic in developing countries (2) it is parsimonious in its data requirements, and (3) It allows for differences in preferences between subgroups.

The main weakness of the FEI method is that it does not allow us to make comparisons across different sub-groups of the population using a common yardstick for standards of living because it based on assumptions.

2.6.2 The Cost-of-Basic-Needs (CBN) Method

This approach considers poverty as a lack of command over basic consumption needs, and the poverty line as the cost of those needs. The basic food basket is usually set using the nutritional requirements. The bundle is then evaluated at local prices to get the food component of the overall poverty line. Setting the non-food component of the poverty line is probably the most contentious since there is less agreement on an anchor analogous to the role played by food-energy requirements in setting the food component of the poverty line. Since there is less agreement in an anchor for estimating the non-food component of the poverty line, there tends to be much arbitrariness in determining the level of poverty. This implies the possibility of a multitude of poverty lines, as there are variations in assumptions used to determine the level of the non-food component, even from the same data set - outcomes that may not be very helpful to policy-makers.

A traditional way of getting round this problem is to divide the food component of the poverty line by some estimate of the budget share devoted to food to obtain the overall poverty line. For instance, if a food share of one-third is assumed, then the overall poverty line will be three times the food poverty line. The non-food component is then deduced by taking the difference between the overall and the food poverty lines. The problem here is that the determination of the budget share devoted to food is likely not to be a transparent process (Ravallion, 1998).

Another approach is to specify essential non-food expenditures by simply choosing directly what non-food items should be included in the basket. These items are priced, and the total gives an amount for minimum non-food expenditures. The total is then added to the food poverty line that has already been developed to yield an overall poverty line. Though attractively straightforward, this approach is seldom used in practice (Bidani *et al*., 2001). This approach has the advantage that it does not require detailed information about household consumption apart from the prices of the chosen goods. It is, however, viewed as paternalistic and arbitrary because there is no objective standard similar to the minimum nutritional requirements used in selecting food items.

2.6.3 A Blend of the Traditional Methods Using Non-Parametric Regressions

The blend of the two traditional FEI and the CBN methods to arrive at the poverty line with *a priori* requirements is less stringent. The procedure followed in deriving the poverty lines used to separate the poor from the non-poor consists of two stages:

(1) Calculating a food poverty line by the FEI method non parametrically and

(2) Evaluating the corresponding non-food expenditures required to scale up the food poverty line to determine the overall poverty lines. In determining the non-food expenditures that scale up the food poverty line to overall poverty lines, use is also made of a non-parametric version of the CBN method that follows the logic of Ravallion and Bidani (1994), and Ravallion (1998).

2.7.0 POVERTY PROFILING – GENERIC STEPS

These eight generic steps involved in a poverty profiling effort highlight key decision points faced by researchers and producers of poverty maps. Not every poverty-profiling exercise will include all eight steps or follow them sequentially.

2.7.1 Define Purpose and Expected Use of Profile

In an ideal world, all poverty profiling would start here. Maps may be needed to show that certain regions are disadvantaged, to rapidly assess options for food emergency interventions, to target public investment to areas of greatest need, or to investigate specific causes of poverty. The purpose and intended use of poverty maps determine the scope and the required precision of the mapping exercise and should shape methodological choices described below.

2.7.2 Select Measure(s) of Poverty and Human Wellbeing

Choosing an indicator or indicators of poverty is a pivotal step in map production. Poverty is a multidimensional phenomenon, including economic, social, and other aspects of human wellbeing. The selected indicator may be a monetary or non-monetary variable—for example, the proportion of households below a certain income level or the proportion of households without access to sanitation. Researchers sometimes distinguish between status and outcome variables—e.g., access to safe drinking water (status) versus incidence of waterborne diseases (outcome) — but because indicators of poverty are interdependent, the distinction between status and outcome measures is not always clear. A poverty indicator may measure a single important dimension of human wellbeing, such as household expenditure compared to a minimum necessary level or poverty line. Alternatively, the indicator may be multidimensional, for instance, a composite index that depicts deficits in basic human needs, such as education, health care, and sanitation. Each type of poverty indicator has its own strengths and weaknesses, and the choice of indicator will certainly influence who is classified as "poor."

2.7.3 Select Input Data

Data used to construct a poverty profiling typically are drawn from population censuses, household surveys, or spatial (GIS) databases in which values are fixed to specific locations on a grid. Increasingly, poverty profiling relies on data from many sources. Data used in poverty profiling may vary in coverage, collection method, and level of resolution, all of which may have methodological implications. Data coverage may be comprehensive— such as a national census or a detailed map covering the entire geographic area under consideration—or it may be partial, for example, a survey of household expenditures covering a representative sample of the population. Researchers may face choices with respect to data collection methods, including qualitative versus quantitative approaches, or top-down versus participatory methods. The level of resolution of input data used in poverty mapping may be high (e.g., household level) or relatively coarse (e.g., averages for census tracts or administrative units).

2.7.4 Select Method of Estimating or Calculating Poverty Indicators

Researchers may choose to estimate a single variable, such as per capita household expenditures compared to a specific standard of living (i.e., poverty line). Alternatively, they could use a composite index, which may be calculated by simple aggregation (i.e., equal weighting) of a few variables or by multivariate analysis, such as principal components or factor analysis.

2.7.5 Select a Method to Calculate, Estimate, or Display Poverty Indicator for Geographic Area

Depending on the chosen poverty indicator, input data, and method of estimation/calculation, researchers will have different options for calculating or estimating the poverty indicator across a geographic area. For instance, if map producers are using census-level data made available at the household level, then simple aggregation of the data for the selected geographic unit may suffice. However, researchers often need techniques that are more sophisticated. Poverty profiling often combine census data (featuring complete country coverage) with household survey data (encompassing a representative sample of the selected population). This is accomplished by means of advanced statistical methods based on econometric techniques, sometimes referred to as small area estimation. Combining data from these two sources enables a poverty profiling study to benefit from both the complete spatial coverage of the census and from a relevant poverty indicator in the household survey. Such statistical techniques help overcome the survey's insufficient sample size, which could not be aggregated to small administrative units, and the census' lack of an appropriate poverty measure.

2.7.6 Decide on Number of Units for Final Map (Resolution) to present Poverty Data

For many poverty-mapping methods, this step is often combined with the previous one. In the case of small area estimation relying on household-unit data, researchers cannot map an individual household; they must aggregate household-level data to larger units to reduce the statistical error in their prediction model. Sensitivity tests conducted by researchers suggest that a minimum of 5,000 households is needed to reduce statistical error to an acceptable level (Elbers et al. 2002). The number of households required may be significantly higher in other cases, especially if the statistical model is not as strong in its predictive power.

2.7.7 Produce and Distribute Maps

Mapping software is used to produce a spatial representation of the geographic distribution of calculated/estimated poverty indicators. Maps and supporting analyses are distributed to the targeted decision-makers. Increasingly, map producers are supplementing hardcopy maps with other products, such as interactive decision-support tools and/or datasets on compact discs (CDs), aimed at various audiences (technical, general, or mixed).

2.7.8 Monitor Usage and Feedback

Poverty maps are used for various purposes, ranging from identifying and understanding the causes of poverty, to assisting in program development and policy formulation, to guiding allocation of anti-poverty investments and expenditures. Map producers should monitor and evaluate the various ways in which decision-makers and/or researchers are using their maps, and users should provide feedback on the impact and limitations of poverty maps to map developers. Sources: Adapted from Henninger (1998), Deichmann (1999), and Davis (2002)

The money metric and or regionally methods of poverty analysis are inadequate or have limited values in providing basic information concerning the nature of access, availability of infrastructural services and where the poor are located within particular town. This kind of information is very helpful especially to urban manager by providing basic information that will help him design appropriate strategy for alleviating the plight of urban poor especially in the new call for inclusive cities.

CHAPTER THREE

RESEARCH PROCEDURES

3.1 Conceptual Framework for Urban Poverty Mapping.

A city-wide multidimensional poverty analysis starts by defining or identifying the range of items that are considered basic needs or necessities of life, the lacking of which can be regarded as the indicators of poverty of a given population . The next stage is the measurement of the volume of those established indicators, which may include income generating activities, social and physical infrastructure and services, required to satisfy these needs. Variables and indicators are chosen to describe every basic need or necessity and thresholds are established below which the household's needs cannot be said to be met, and thus the household may be considered poor. The most widely accepted basic needs indicators are those that detect deficiencies in access to public services such as education and health, and in the quality of housing. The next stage is the measure of how the indicators manifest in each district by measuring deprivation levels and preparing a poverty map.

The context by which this is defined is that:

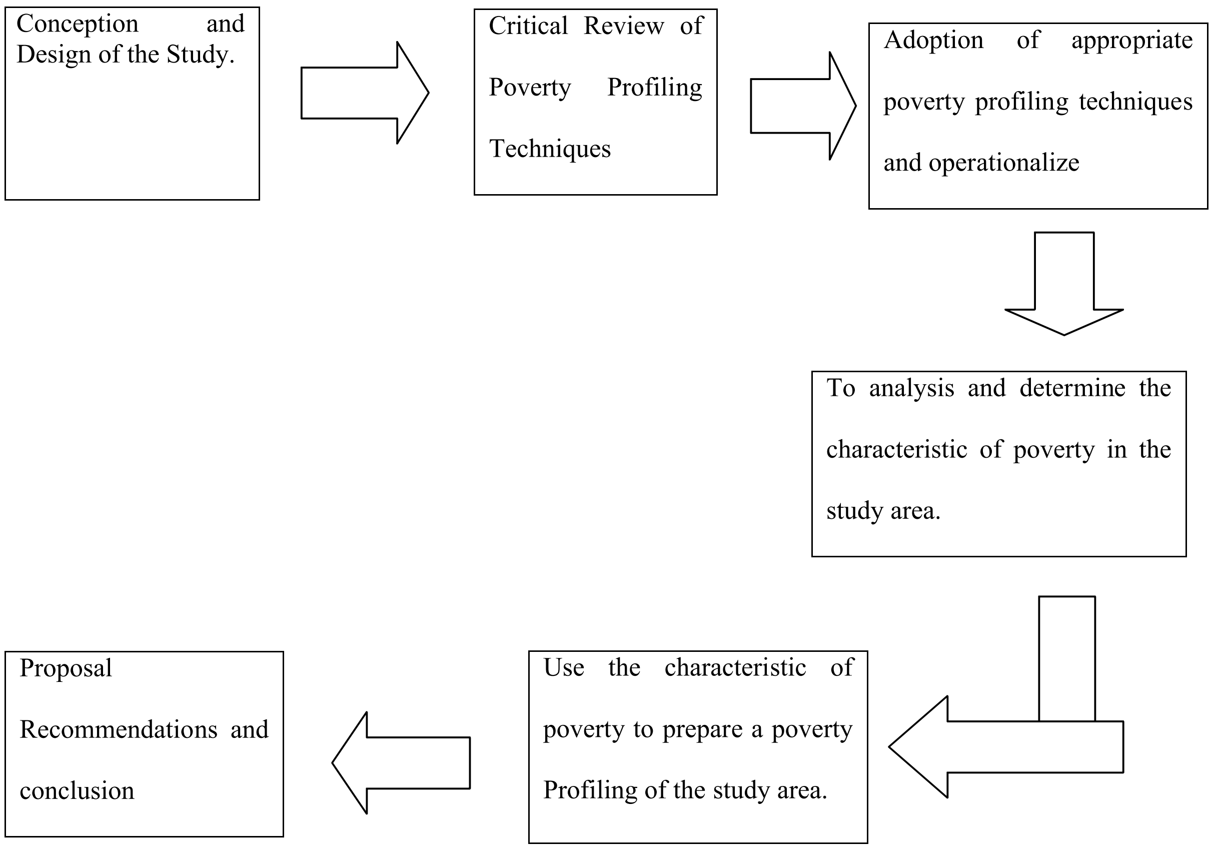
i) Poverty is multi-dimensional and therefore its analysis required handling using multiple indicators.

ii) Districts in a city have peculiar characteristics of poverty, and the need therefore exist to identify peculiarities across units.

The approach is considered suitable for Zaria Urban Area because Zaria has many districts and the importance exist for exploring the characteristic of poverty in each district so that appropriate strategies can be formulated for alleviation.

The chart below show the conceptual framework of the study from the conception to conclusion, which highlighted the different steps taken in completion of the research.

3.2 The Conceptual Framework of the Study



3.3 Data Required and their Sources

The data required for this study were obtained from both the primary and secondary sources.

(i) The primary sources: These were obtained through the administration of questionnaire, oral interviews and field observation in order to determine the socio-economic characteristics of the people the availability or access of urban facilities and utilities in the study area.

(ii) Secondary sources: Data were obtained through the following, Maps review of relevant literature, which include the unpublished and published material such as textbooks, journals, pamphlets, unpublished thesis, projects and internet source. .

Table 4 Data Required and their Sources.

Types of Data	Data Description	Source Data
Primary Data	Map of Zaria urban area showing districts, which will form the bases to identify those areas that are highly deprived.	Google Map
	Socio-economic characteristic of the people in the study area.	Field survey through administration of questionnaires and oral interview.
	Availability of urban utilities, services and Housing condition survey.	Through administration of questionnaires and personal observation.
Secondary Data	Population Data for all districts within the study area.	National Population Commission.
	Approaches adopted in Tackling poverty within the study area.	Ministry of Poverty Alleviation, Local Government and NGOs.
	Literature review. Review of concepts, criteria, techniques and case studies of selected city poverty profiles.	Text books, journals, pamphlets and internet source.

3.4 Methods of Data Collection

The data were collected through the following;

i) **General household survey and administration of questionnaire;**

Two level questionnaires were administered in the study area; one was used to determine the perception of poverty, its indicators and Basic Needs by the respondent and two applications those indicators to assess whether poverty varies in different districts in the study area. These were determined through socio-economic, housing condition survey and public facilities and utilities surveys to ascertain access, availability and reliability of public facilities, utilities and to determine the level of satisfaction of respondents in the study area.

ii) Personal interviews; Interviews were conducted with stakeholders and selected officials of Government Agencies in both State and Local responsible for poverty alleviation programs to determine various approaches employed by the government to tackling poverty in urban areas.

3.5 Sampling Technique and Sample Size.

A systematic random sampling technique was used in each district; questionnaires were distributed after any fourthly (40) household in each district until the numbers of specified samples are covered. The numbers of districts in Zaria Urban Area are five 5, questionnaires were administered in all the five Districts that include Zaria City, Tudun Wada, GRA, Sabon Gari and Samaru. The populations of these areas were projected from 1991 census figure to 2009 based on 3.5% percent National Average Growth Rate. Assumption was made based on the average family size of 6 which was then divided by the size of population of each area, and the sample size that was selected in each area were 2.5% percent of the total household in each area so selected. The total household sample size is 879 as shown in table 5.

Table 5 Districts, Population and Number of Samples.

S/NO	District	Population. (1991)	Projected Pop. (2009)	Household	Samples size
1	Zaria City (ZRC)	24,979	46,461	7743	193
2	Tudun wada (TW)	46,921	87,273	14545	363
3	GRA	1,258	2,340	390	10
4	Sabon Gari (SBG)	35,183	65,440	10907	272
5	Samaru Town (SMR)	8,831	16,426	2,738	68
Total		117172	129,909	21,224	879

Sources NPC 1991

3.6 Method of Data Analysis

The study made use of both absolute (monetary) poverty measure using Head Count Ratio (HCR) and relative poverty measures using the Fuzzy set technique.

Absolute (monetary) measure

The headcount ratio (*HC*) is the simplest way of measuring poverty. It gives the percentage of population, which is not above the poverty line. It can be formally defined as follows:

$$HC = P/N$$

Where P is the number of poor people (those below a poverty line z) and N is total population.

Relative poverty measure

The fuzzy set: The fuzzy set is characterized by a membership function depicting the levels of deprivation of various categories of indicators or needs. Chili (1995) asserted that poverty is not a discrete attribute characterized in term of presence or absence, but rather a vague (fuzzy) predicate that manifests in different shade, form and degrees, then the methodology framework that uses fuzzy- sets theory may be appropriate. A multi-dimensional concept of poverty analysis requires identification of some indicators of poverty. Unlike the one-dimensional approach, which takes cognizance of income or expenditure, the multidimensional approach introduces and analyzes a vector variables and attributes retained as indicators of some form of exclusion, deprivation or poverty (Costa, 2002).

3.7.0 CALCULATION, WEIGHTING, BENCH MARKING AND RANKING OF POVERTY INDICATORS

3.7.1 Calculation of Membership

The calculation of membership function or poverty level of a particular district P(X) a suitable definition of the characteristic vector X, that is defined as a 'n' dimensional fuzzy vector; that is, X = [x1, x2, ..., xn]T. where xk is a fuzzy variable that may represent any economical, cultural, social or environmental factor. As an example, xk may be family income, income per capita, access to educational, housing quality, access to health care, access to services as running water, electricity, etc. To calculate the membership function P(X) for the given characteristic vector X. A linear weighted sum of the n = number fuzzy components of X are defined as P(X) = F* wk.

Where F = (F/100) = m are scores determined by frequencies of responses in percentages, which are then divided by 100 to reduce it. This implies that as majority of people has access or obtain a particular need in Districts the estimation of membership function will be non- poor. Example, Halleröd (1994) and Deutsch and Silber (2005) give more importance to deprivation of goods considered as necessary by larger groups of the population, considering the percentage of frequencies taken into account.

3.7.2 Weighting of Poverty Indicators

While wk is weight, in assessing the status of poverty weight were assigned to the poverty indicators. Weights between 1-3 were assigned depending on the degree of importance of elements perceived by the respondents. This ensures that indicators are adequately represented and valued in the scoring of poverty status across.

The poverty level in a District was determined by the summations of scores obtained from the analysis of all the poverty indicators used. The resulting scores were then used in grading districts as very high, high, medium, and low and very low poverty level.

3.7.3 Bench Marking of Poverty Indicator

Poverty indicators were benchmarked to establish their minimum value or attributes below which deprivation is set in. The benchmarks were arrived by asking respondents professional and researcher value judgment as minimum threshold of attributes below which a feeling of deprivation set in.

3.7.4 Ranking of Poverty Indicators

The respondents were asked to rank the already established basic needs in order of priority or by the degree of importance, the respondents attached to each need from the highest to the lowest priority.

3.7.5 The Basic Needs Approach

The above approach was adopted and used in the analysis. This approach defines a minimum threshold for several dimensions of poverty classifying those households who do not have access to these basic needs. They include characteristics such as literacy, school attendance, piped water, sewage, housing, if a household is deficient in one or more of the categories, and they are classified as having unsatisfied basic needs. The choice of the basic needs approach was influence due to realization that if people are allowed to select what they value as basic needs then the poverty indicator to be use for the analysis will be as close possible to the general acceptable norm in the study area.

3.7.6 Background of the Study Area

Zaria Urban Area lies between latitudes 11,0751N and Longitudes 0743430E. The study area is the second largest town in Kaduna state. It is fast growing town, the 1991 population shows that Zaria has a population of about 1,000,582 at a growth rate of 5.48 percent. Sabon Gari Local Government was curved out of Zaria Local Government which resulted to the study area having two Local Governments Zaria and Sabon Gari within a continuous built up area only separated by river Kubani north of Zaria walled City. The study area has five (5) districts namely Zaria City, Tudun Wada, GRA, Sabon Gari and Samaru. Zaria City District is occupied by indigenous people and is made up of many wards and neighbourhoods which include Anguwan Iya ward, Amaru ward, Limancin Konar ward etc. Immediately after Zaria District to the north, is Tudun Wada District occupied by settlers from the immediate villages within the Zazzau Emirate council. The district has many wards which include the Tudun Wada, Gelllesu, Tudun Jukun, Tukur Tukur and Wusasa. GRA (Government Reserved Area) District which during the colonial period served as colonial administrators residents now occupied by elites. Sabon Gari District was planned and design by colonial administration on the wake of outbreak of bubonic plague in 1946 was aim to settle foreigner coming from different part of the country that was how the district own its name meaning “New Settlement”. The District has many wards which include Sabon Gari, Muchiya and Marmara District. Samaru District which was aimed to house workers of A.B.U. Ahmadu Bello University Zaria developed into a residential settlement. The District is divided into three wards namely Samaru, Hayin Dogo and Hayin Dan'yaro. The diversity and high rate of population growth above national average which led to population explosion and settlement expansion consequently over stretching both the physical and social infrastructure. The resultant effect is that some areas or settlements are highly deprived of utilities and services. The above findings make it a noteworthy to analysis poverty and prepare poverty profile so as to determine pattern and challenges in the study area.

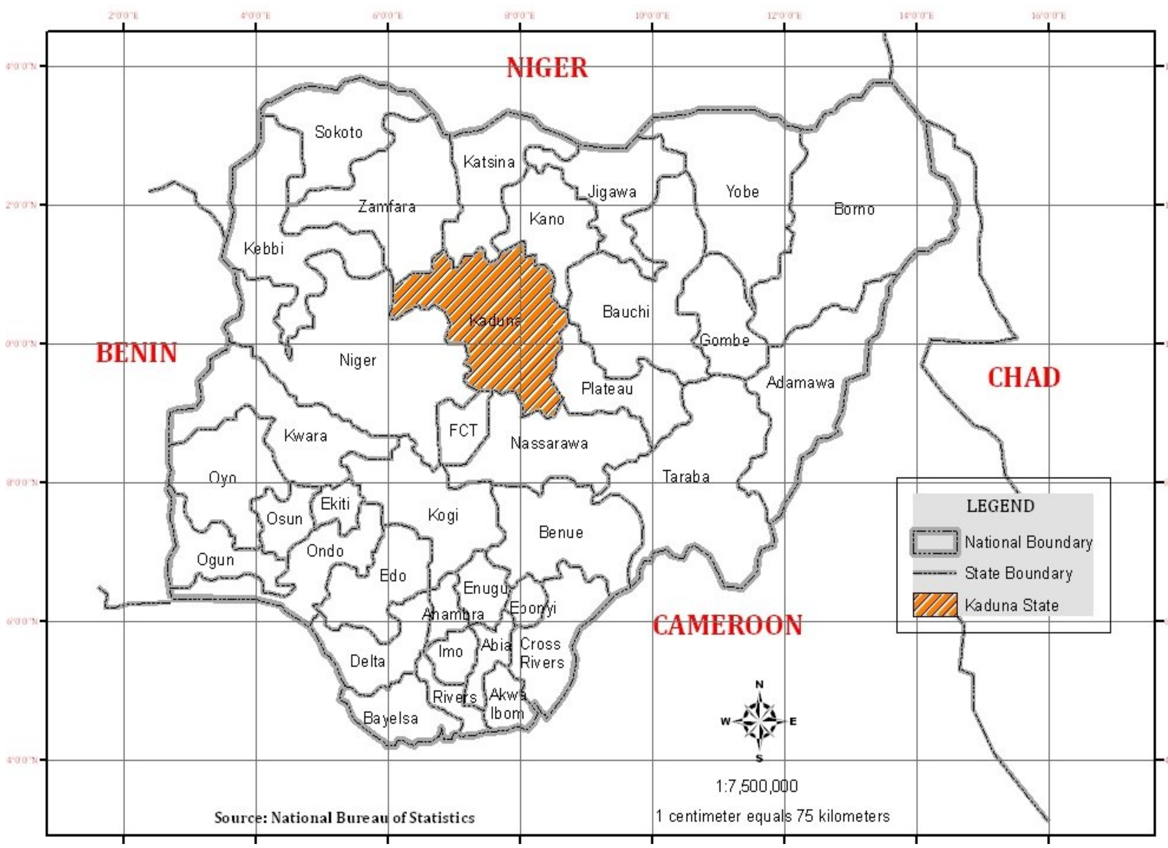


Figure i Map of Nigeria Indicating Kaduna State

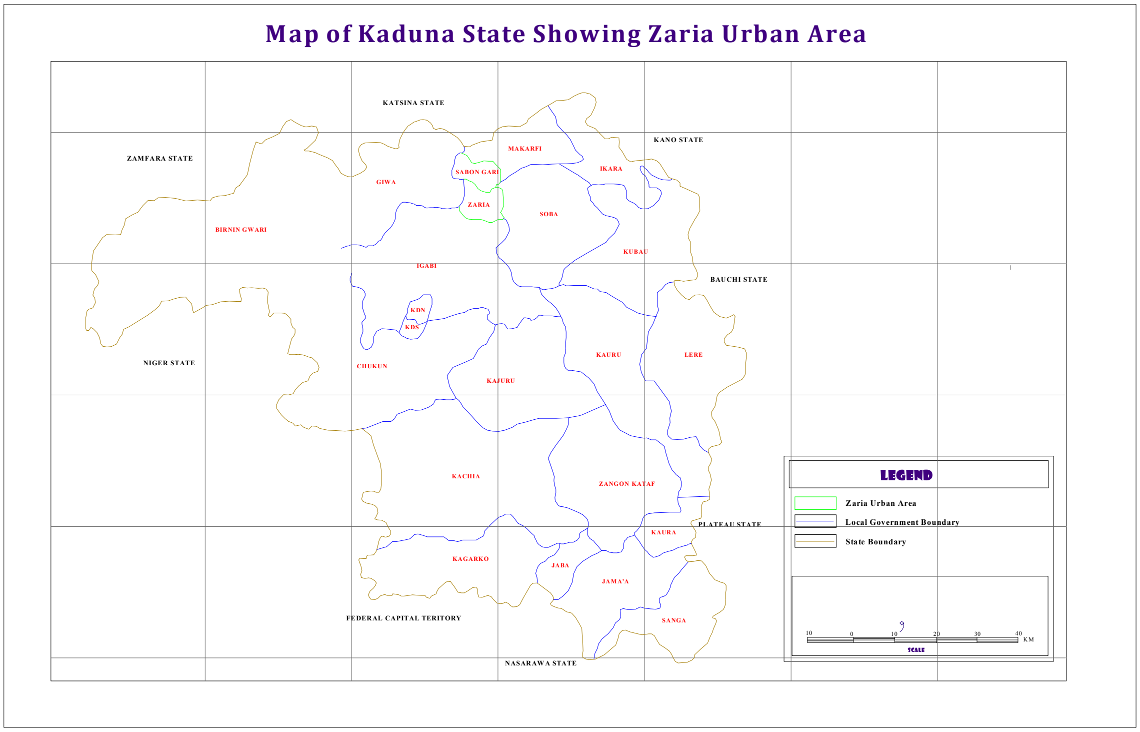


Figure ii Zaria and Sabon Gari Local Government Areas

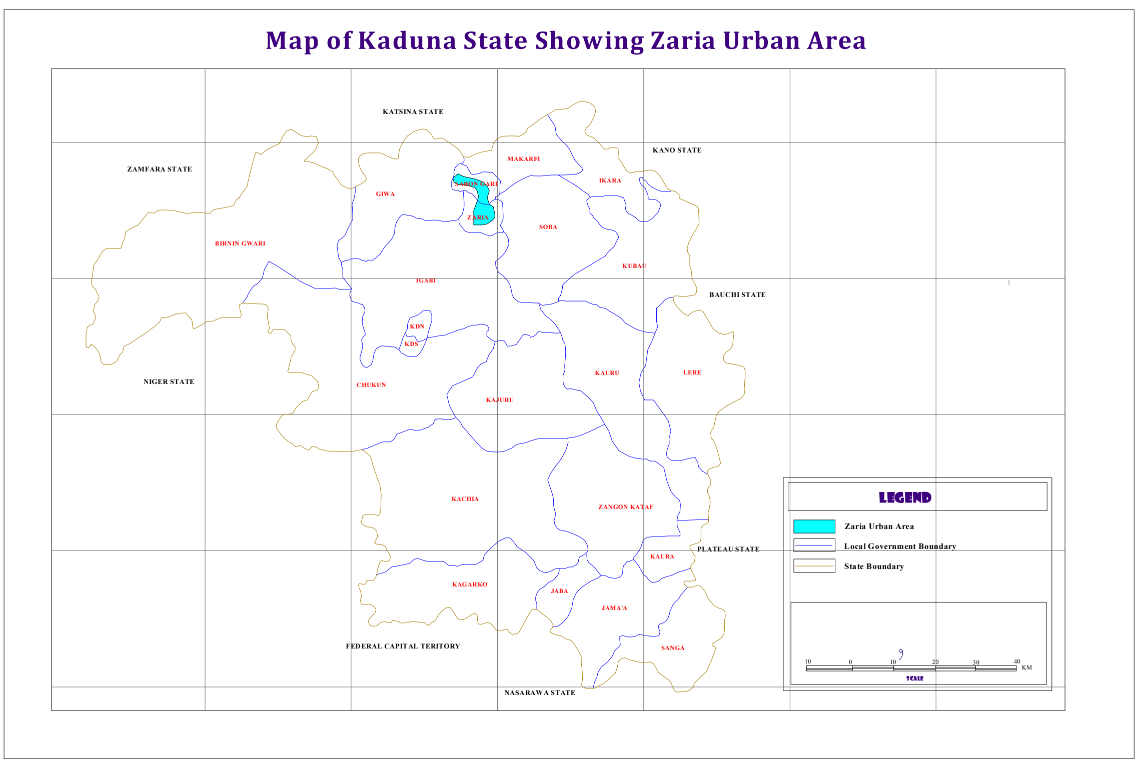


Figure iii Map of Kaduna State Indicating Zaria Urban Area

CHAPTER FOUR

ANALYSIS OF POVERTY PROFILE IN ZARIA URBAN AREA

4.10 MEASUREMENT OF POVERTY IN ZARIA URBAN AREA

As established in Chapter I, the Basic Needs approach is the basis for measuring poverty in Zaria. The approach defines a minimum threshold for dimensions of poverty to include (i) literacy and access to education; (ii) access to pipe borne water, (iii) Sewage, (iv) housing access and quality of living environment. In the study, the four poverty indicators, which usually the most referenced, were tasted against public opinion. Two additional indicators were established to include (i) security and access to electricity. The ranges of items identified are shown in table 6.

TABLE 6 Basic Needs and or indicators of poverty in Zaria Urban Area.

S/NO	NEEDS AND OR INDICATORS	NUMBER	PERCENTAGE
1	Means of livelihood (employment).	72	29%
2	Good quality house (shelter).	22	9%
3	Good quality and affordable education.	90	36%
4	Good quality and affordable health care.	5	2%
5	Access to good quality and reliable water supply.	12	4%
6	Access to reliable electricity.	7	3%
7	Security.	42	17%
	TOTAL	250	100%

Source Field Survey 2009.

4.11 The Ranking of poverty Indicators.

Ranking of indicators involved the determination of priorities out of the range of items already established as needs and or poverty indicators. Next, the respondents were asked to rank in order of priority from the Basic Needs items from the first to the least priority. The survey revealed that means of livelihood (employment) carry the highest percentage and access to health care services with lowest percentage, which entail that means of livelihood (employment), is the first priority and health care is the least priority in Zaria urban centre as shown in the table 7.

Table 7 The Ranking of poverty Indicators.

S/NO	NEEDS AND OR INDICATORS	NUMBER	PERCENTAGE	PRIORITIES
1	Means of livelihood (employment).	90	36%	1ST
2	Good quality and affordable education.	72	29%	2ND
3	Security.	42	17%	3RD
4	Good quality house (shelter).	22	9%	4TH
5	Access to good quality and reliable water supply.	12	4%	5TH
6	Access to reliable electricity.	7	3%	6TH
7	Good quality and affordable health care.	5	2%	7TH
	TOTAL	**250**	**100%**	

Source: Field survey 2009

4.12 Poverty Indicators Benchmarking

The benchmarks or minimum values are to guide the assessment was next considered. Most of these benchmarks or minimum thresholds were arrived at by asking individuals directly through participatory method as to what the respondents perceive as the minimum thresholds of attributes below which a feeling of deprivation sets in. These values are shown in table 8.

Table 8: Bench Marks of Poverty Indicators

S/No	**Variable**	**Minimum threshold**
1.	Unemployment rate	15% below the average unemployment rate for the whole study area.
2.	Income poverty	Poverty line of #16,000.00.
3.	Housing	Well maintained house with occupancy rate of 2.6 which is average for the whole area.
4.	Sanitation	Pit latrine or water closet with designated dumping site.
5.	Water supply	Connected to water main and receive water for 12 hours a day.
6.	Electricity supply	Connected to electricity and receive electricity for 12 hours a day.
7.	Health care services	Attended by a doctor and obtain drugs in the hospital or clinic.
8.	Education	50% of children attending government school and adequate teaching facilities.
9.	Security	A police station in an area.

Sources: Field survey 2009

To give adequate capture of prioritization in assessing the status of poverty weight were assigned to the Indicators as shown in table 9. Weights between 1-3 were assigned depending on the degree of importance of elements perceived by the respondents. This ensures that indicators are adequately represented and valued in the scoring of poverty status across Districts.

Table 9 Shows needs and or poverty indicators, ranks and weight.

S/No	NEEDS AND OR INDICATORS	RANK	WEIGHT
1	Means of livelihood (employment).	**1st**	**3**
2	Percentage of people above poverty line.	**1st**	**3**
3	Access to Good quality and affordable education.	**2nd**	**2**
4	Access to Security.	**3rd**	**1**
5	Access Good quality house (shelter).	**2nd**	**2**
6	Access to good quality and reliable water supply.	**2nd**	**2**
7	Access to reliable electricity.	**2nd**	**2**
8	Access to Good quality and affordable health care.	**2nd**	**2**

Source Field Survey

4.20 DESCRIPTION OF POVERTY INDICATORS IN ZARIA URBAN AREA

As explained in chapter two of this report, the major aim of poverty a profile is that of establishing status, and defining the patterns. A poverty profile therefore can be viewed simply a comprehensive poverty comparison showing variation of poverty across subgroups of society region of residence or sector of employment. To obtain objective information on poverty in various sectors of the study area, an attempt was made to estimate the characterization of various indicators based on membership. The results obtained is shown in table 10 indicating for instance, that Unemployment rate is widely spread with Sabongari and Zaria City having the highest rates of 30% and 23% respectively. The number of people whose earning falls bellows the monetary poverty line of Sixteen Thousand Naira (#16,000.00) per month (being the figure established from the survey) is high. Zaria City has the highest percentage of (51%) of its population below this line, while Sabongari has 49%, Tudun Wada with 32%, and Samaru with 43%. The degrees of deprivation in membership function in housing characteristics in the area shows the highest average occupancy ratio was recorded at Sabongari with 3.5 persons per room. Zaria city is next with 3.4 person per room, while Samaru, Tudun Wada and GRA had 3.3, 2.8 and 0.6 persons per room respectively. The profile also shows that the percentage of dilapidated buildings in the district is highest in Zaria city with (58%), Samaru (48%), Sabon Gari (46%) and Tudun Wada (42%).

A close look at the degree of poverty and poverty as reflected in various membership functions in access to services such a water, electricity, health care, education and security in the study area reveals that there is much problem with the services mentioned above. In Samaru, Zaria city and Sabon Gari, has the lowest percentage of, water connection in dwellings was established.

Although there is high percentage of electricity connections to dwellings in all districts, the power supply is unreliable occasioned by low voltage and upsurges, rationing, and power outages. In most areas, only few hours of electricity supply obtained per day, and sometimes are not given for upwards of two days. The deprivation measure concerning health care services in the study reflects the fact that a greater percentage of the populations have either a public hospitals or private clinics in their proximity even though the majority does not exploit these services. The small numbers that visit complain of not being not attended to or of not obtaining drug. In terms of satisfaction with health care services, the respondents were generally unsatisfied.

The level of deprivation as shown in the degree of the membership function in education is suggested that between 65% and 99% of children attend schools. In areas like the GRA greater percentage of children attend schools compared to other districts. However, only a small percentage of the children attend government schools. Their reasons were that most of government schools lack qualified teachers and adequate facilities that promote learning in the schools.

The level of deprivation as recorded in the degree of membership function in security shows that, the greater percentage of the population of the area felt generally unsafe even with the government-strengthened programme of security. Between 32% to 88% of the respondents responded that they have experienced crime, which reveals that there is high crime rate in the area. When Divisional Police Officers (DPOs) of various Police posts were asked whether they have adequate work force and equipment they lamented about the poor compliment of equipment and under staffing. A high percentage of dissatisfaction with security service in the community was therefore the major findings of the research.

Table 10: Poverty Indicators and Responses in Percentages

S/NO	INDICATORS/VARIABLES	ZRC (%)	TWD (%)	GRA (%)	SBG (%)	SMR (%)
1	**Employment rate**	77	79	100	70	81
2	**Percentage of population above poverty line.**	49	68	100	51	57
3	**HOUSING**					
I	Average occupancy ratio (percentage of population that has occupancy ratio below average of 3.00 for the area)	43	72	100	41	57
Ii	Percentage of buildings built with standard building materials.	45	77	100	58	54
Iii	percentage of un-dilapidated buildings.	42	58	100	54	52
iv	Percentage of buildings with CFO.	25	51	100	60	45
v	Percentage of buildings in secured areas.	87	86	100	90	95
vi	Percentage of dwellings that do Not channeled liquid waste to natural drain.	5	8	88	12	6
vi	Building with pit latrine or water closet.	78	97	98	90	87
viii	Designated dumping site.	14	21	57	10	22
ix	Percentage of HH that do Not dump solid waste on the street as a means of waste disposal.	11	39	97	13	12
xii	Level of satisfaction with quality of housing and environment (Responses satisfied and very satisfied).	89	90	99	85	97
4	**WATER**					
i	HH connected to water main.	23	65	100	54	12
ii	Receives tap water always (responses Yes).	4	8	5	3	0
iii	Percentage of population that receive water in a day above the 5 hours average of running water for the whole area.	14	60	84	43	00
iv	How many hours do you require running water in a day.	15	12	24	12	10
v	Source of water from well and bore hole.	98	79	43	88	95
vi	Does your wells dried off in dry season? (Responses NO)	15	25	87	19	10
vii	Level of satisfactions with water supply. (Very satisfied and satisfied)	2	39	37	15	3
5	**ELECTRICITY SUPPLY**					
i	HH connected to electricity	72	87	100	65	87
ii	Do you receives regular electricity supply? (YES)	4	6	45	4	8
iii	Percentage of population that receives electricity above the average of 7 hours of the whole area.	32	57	86	53	60
iv	How many hours do you require electricity supply in a day?	13	14	24	13	15
v	Do you have problem with power supply beside cuts e.g. low current rationing etc (Responses NO)	3	21	87	10	4

vi	Level of satisfaction (Responses YES)	6	13	6	3	7
6	**HEALTH SERVICES**					
i	Dwellings within waking distance to Hospitals/clinics	67	82	87	80	76
ii	% of population that go to government Hospital	82	59	34	70	64
iii	Attended by a doctor or medical personal.	65	61	34	63	67
iv	Do you obtain drugs in the Hospitals (YES)	3	5	6	3	8
v	Level of satisfaction with Health care services (Responses very Satisfied and satisfied).	3	22	12	9	12
7	**EDUCATION**					
i	% of HH who's children are attending schools.	73	88	100	83	78
ii	percentage of HHs whose children do attend government schools.	53	33	00	38	25
iii	Schools in the area that has adequate facilities.	41	46	76	45	32
iv	Have your children drop out of school (NO)	58	77	100	51	59
vi	Reason for drop out (can afford school fee NO)	33	35	100	27	34
v	Level of satisfaction (very un-satisfied and un-satisfied)	68	75	87	55	54
8	**SECURITY**					
i	Responses to safe neighbourhood.	3	25	97	15	78
ii	% of population that do Not experience crime.	54	74	80	35	45
iii	Is there a police station in your area (YES)	100	100	100	100	100
iv	Do you think that the number of police station and security personal in your area are adequate?(YES)	27	24	46	20	19
v	% of HH that thinks that they are adequately protected.	22	22	58	21	25
vi	Do you have adequate personal and equipment in your station? (DPOs of areas).	NO	NO	NO	NO	NO
vii	Level of satisfaction with security services (Very satisfied and satisfied)	12	16	33	20	23

Source field survey 2009

4.30 DISTRICT LEVEL ASSESSMENT OF POVERTY BY INDICATORS

The tables below show scores of poverty and deprivation by needs or indicators. The scores were obtained by dividing responses in percentage by 100 to minimize it which is then represented by (m), the number was then multiply by established weight represented by (wk). The summary will assist to making a comparison among districts in terms of access, availability and reliability of need or indicator.

4.31 Employment.

The result of estimation of the degree of membership function in unemployment rate has shown that unemployment varies with districts. Sabon Gari with the lowest Score of 2.10 has very high unemployment rate, Zaria city with the score of 2.31 has high unemployment rate followed by Tudun Wada with 2.37 has moderate unemployment rate while Samaru with 2.43 has low unemployment, rate and GRA with the highest score of 3.00 have the lowest unemployment rate. Table below shows level of employment by District and is presented in Figure (i) below.

Table 11 Employment Rate by Districts

S/N	INDICATOR	DISTRICTS				
		ZRC	TWD	GRA	SBG	SMR
		wk*m	wk*m	wk*m	wk*m	wk*m
X1	Employment rate	2.31	2.37	3.00	2.10	2.43
	TOTAL	**2.31**	**2.37**	**3.00**	**2.10**	**2.43**

Source Field survey 2009

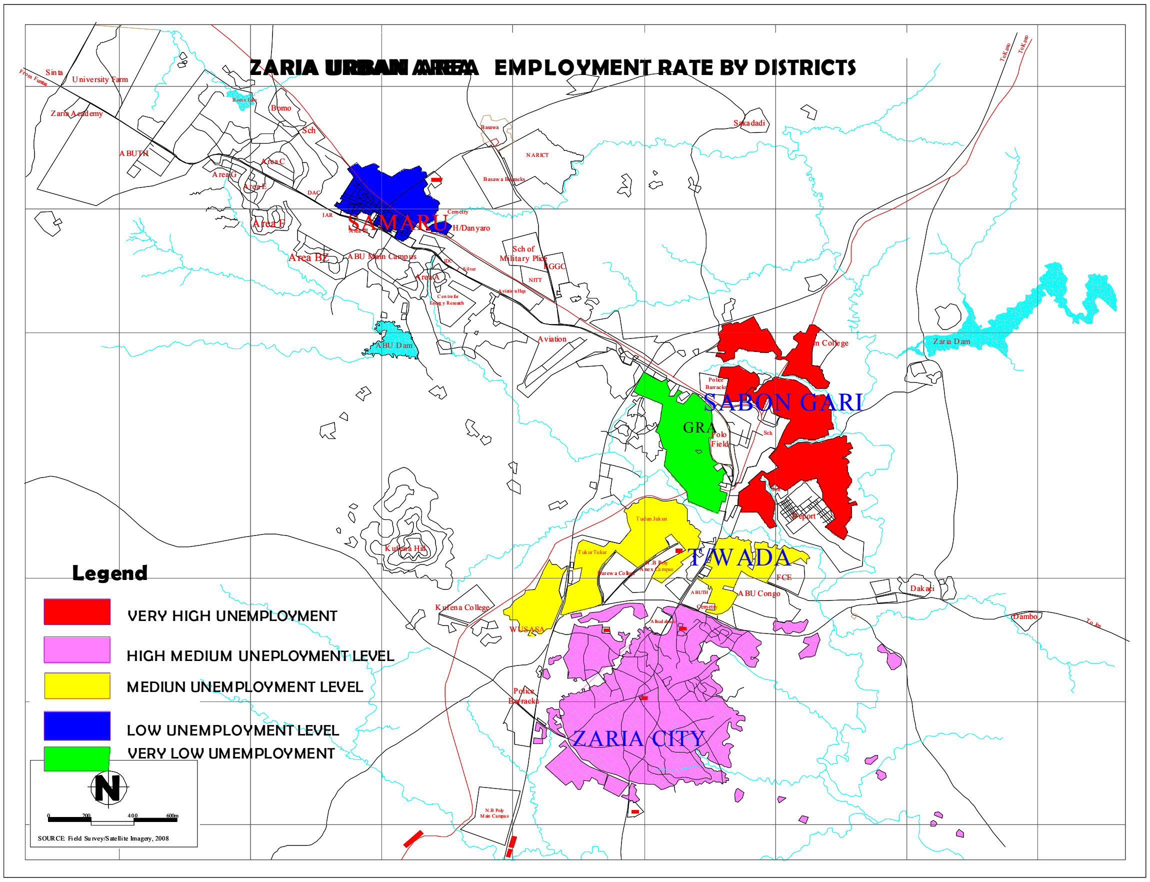


Figure iv Zaria Urban Area Unemployment by Districts Map

4.32 Population above poverty line.

The result of estimation of the degree of a membership function in the number of people above poverty line in the study area has shown that it is not evenly distributed. The lowest score of 1.47 was recorded in Zaria City, which indicate that a very highest number of people who's earning fall below poverty line is recorded there. The second lowest score is recorded in Sabon Gari with 1.50 with implies that the district has high number of people below poverty line. Samaru and Tudun Wada with 1.71 and 2.04 respectively which indicate medium and low number of people below poverty line while GRA has the highest score which indicate that all people in the area earned above the already established poverty line as shown in figure ii below districts and level of earning of the inhabitants.

Table 12 Population above poverty line by District.

S/N	INDICATOR	DISTRICTS				
		ZRC	**TWD**	**GRA**	**SBG**	**SMR**
		wk*m	**wk*m**	**wk*m**	**wk*m**	**wk*m**
X2	**Percentage of population above poverty line**	1.47	2.04	3.00	2.10	1.71
	TOTAL	**1.47**	**2.04**	**3.00**	**1.50**	**1.71**

Source Field survey 2009

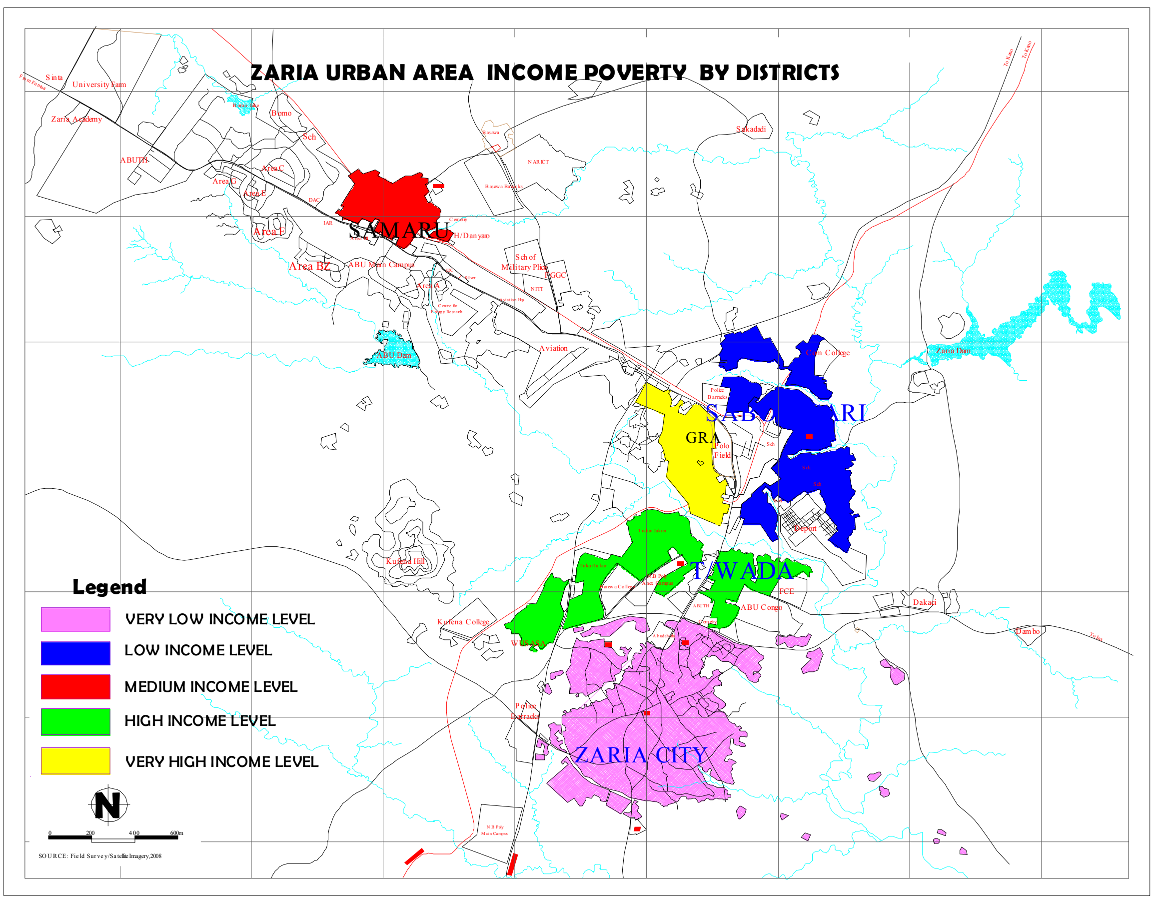


Figure v Zaria Urban Area Population above Poverty Line by Districts Map

4.33 Housing Quality

The level of degree of deprivation as reflected in the degree of a membership function in quality of housing or characteristics reveals that Zaria City has the lowest score of 11.66, which indicate very low housing quality; Sabon Gari has the second lowest score, which means that the district has the second low housing quality. Samaru and Tudun Wada with scores of 14.28 and 22.24respectively which indicate that the districts have medium and high housing quality , while GRA has the highest score of 25.64 which connote very high housing Quality as shown in figure iii below.

Table 13 Housing Quality by District

S/N	INDICATOR	DISTRICTS				
		ZRC	TWD	GRA	SBG	SMR
		wk*m	wk*m	wk*m	wk*m	wk*m
X3	**HOUSING**					
i	Average occupancy ratio (percentage of dwellings that has occupancy ratio below the average 3.00).	0.86	1.44	2.00	0.82	1.14
ii	Percentage of building built with standard building materials.	0.90	1.54	2.00	2.00	1.16
iii	Percentage of un-dilapidated buildings.	0.84	1.16	2.00	1.08	1.04
iv	Percentage of buildings without CFO.	0.50	1.02	2.00	1.20	0.90
v	Percentage buildings in secured areas.	1.74	1.72	2.00	1.80	1.90
vi	percentage of dwellings that Do Not waste channeled liquid waste to natural drain.	0.22	0.16	1.76	0.24	0.12
vii	Buildings with pit latrine or water closet.	1.56	1.94	2.00	1.74	1.74
viii	Designated dumping site.	0.28	0.42	1.96	0.20	0.20
ix	Percentage of HH that Do Not dump solid waste on the street as a means of waste disposal.	0.22	0.78	1.94	0.26	0.24
xii	Level of satisfaction with quality of housing and environment. (very satisfied and satisfied)	1.76	1.80	1.98	1.70	1.70
	TOTAL	**12.66**	**22.24**	**25.64**	**12.90**	**14.28**

Sources Field survey 2009.

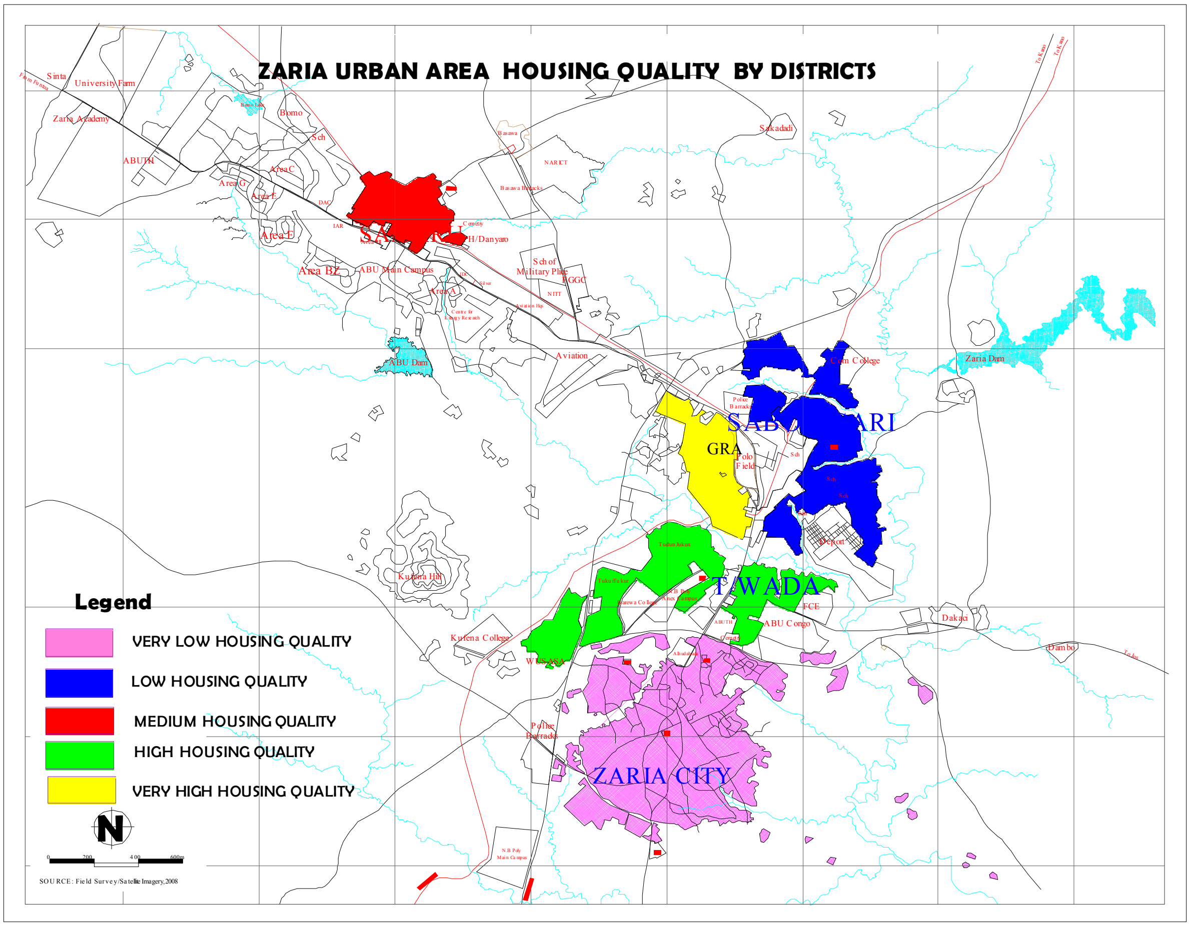


Figure vi Zaria Urban Area Housing Quality by Districts Map

4.34 Access to Water

A closer look at degree of poverty and deprivation as reflected in the membership function in access to water has shown very high degree of poverty and deprivation in access to water Samaru because the area has the lowest score of 0.40. Zaria City with second lowest score of 1.16 indicates that people in the area endure high degree of poverty deprivation in access to water. Tudun Wada with a score of 2.08 enjoy moderate access in water, Sabon Gari benefit from high access to water while GRA with the highest score connote that the district receives best water supply. The figure below shows access to water by districts.

Table 14 Access to Water by Districts.

S/N	INDICATOR	DISTRICTS				
		ZRC	TWD	GRA	SBG	SMR
		wk*m	wk*m	wk*m	wk*m	wk*m
X4	**ACCESS TO WATER**					
i	HH connected to water main.	0.46	1.30	2.00	1.08	0.24
ii	Receives Tap water always.(Responses YES)	0.08	0.16	0.10	0.06	0.00
iii	Percentage of population that receive tap water in a day above 12 hours.	0.28	0.28	1.68	0.86	0.00
iv	Does your wells dried off in dry season? (Responses No)	0.30	0.30	0.48	0.38	0.10
v	Satisfactions with water supply. (Responses Yes)	0.04	0.04	0.74	0.20	0.06
	TOTAL	**1.16**	**2.08**	**5.00**	**2.58**	**0.40**

Sources Field survey 2009.

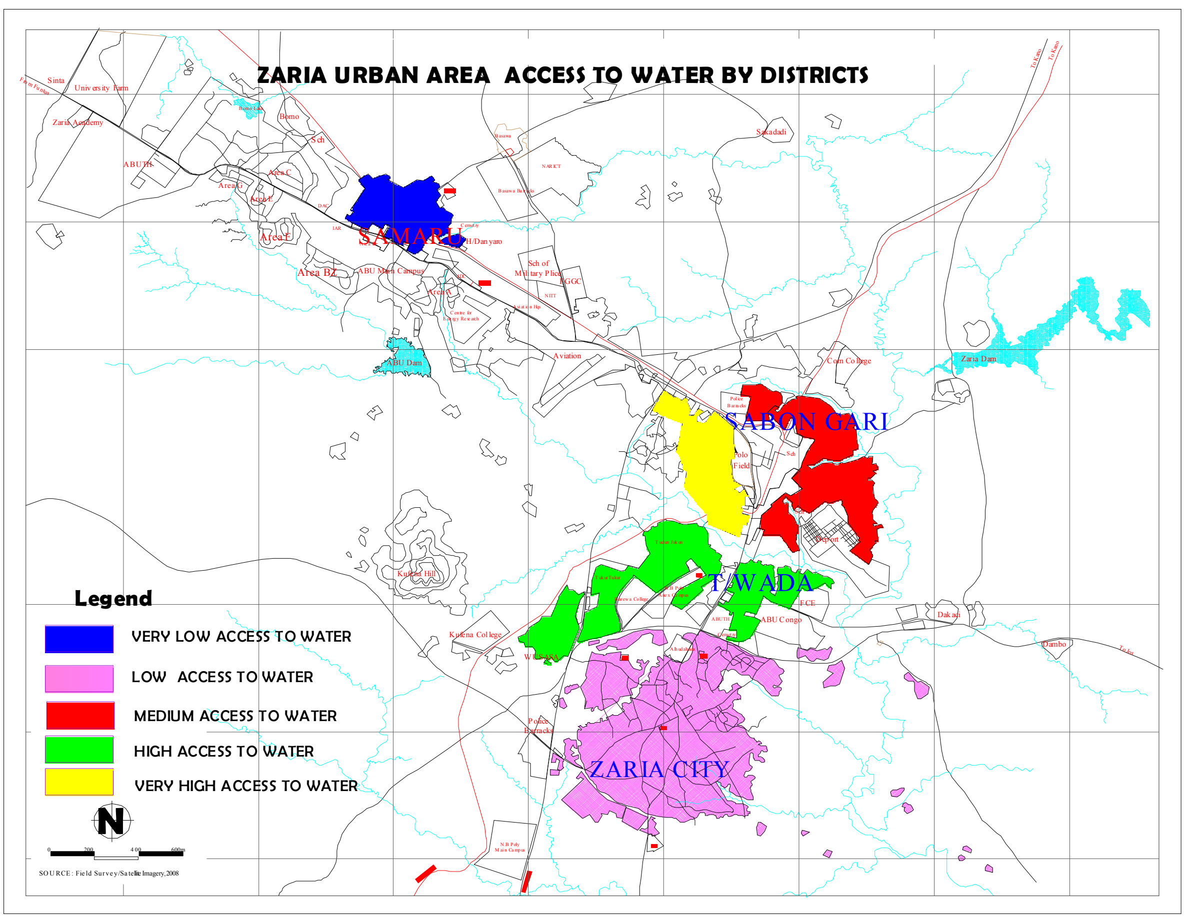


Figure vii Zaria Urban Area Access to Water by Districts Map

4.35 Access to Electricity.

The level of degree of deprivation as reflected in the degree of a membership function in access to electricity has revealed that there is disparity in electricity supply. Zaria City has the lowest score 2.34, which imply that there is very high degree of poverty and deprivation in access to electricity in the area. Sabon Gari with second lowest score of 2.70 indicates that there is high degree of poverty and deprivation in access to electricity. Samaru with a score of 3.44 which implies moderate access to electricity, Tudun Wada with a scores of 4.57 signify high access to electricity while GRA with highest score of 6.76 indicate that the district receives more electricity than any other districts in the area as shown in figure iv below.

Table 15 Access to Electricity by Districts

S/N	INDICATOR	DISTRICTS				
		ZRC	TWD	GRA	SBG	SMR
		wk*m	wk*m	wk*m	wk*m	wk*m
X5	**ELECTRICITY SUPPLY**					
i	HH connected to electricity?	1.44	1.74	2.00	1.30	1.74
ii	Do you receive regular electricity supply? (Reponses YES)	0.08	0.14	0.90	0.08	0.16
iii	percentage of population that received electricity above the of 7 hours for the whole area a day?	0.64	1.14	2.00	1.06	1.20
vi	Do you have problem with power supply beside cuts (e.g low current, rationing etc)?	0.06	0.06	1.74	0.20	0.20
v	Level of satisfaction with electricity supply (very unsatisfied and unsatisfied)	0.12	0.42	0.12	0.06	0.14
	TOTAL	**2.34**	**4.57**	**6.76**	**2.70**	**3.44**

Source Field survey 2009.

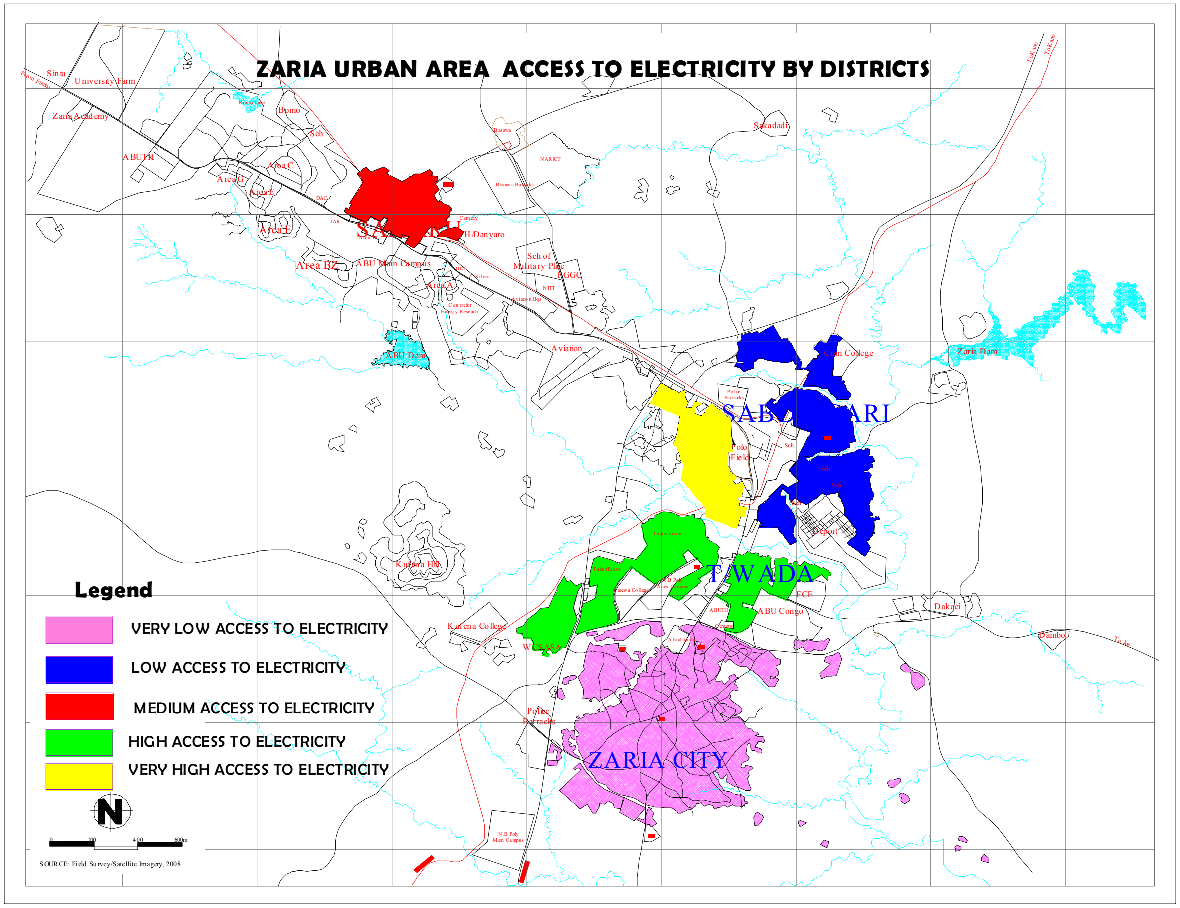


Figure viii Zaria Urban Area Access to Electricity by Districts Map

4.36 Access to Health Services.

The level of degree of deprivation as reflected in the degree of a membership function in access to health care services revealed that the score in all the areas do not vary much ranging from lowest of 3.48 in GRA to the highest of 4.76 highest in Tudun Wada. One interesting out come is that the highest score is not recorded in GRA this may be attributed to the fact that majority of respondents there do not have confidence in government hospital in other words they do not go to government hospitals or clinics when they are sick or their relatives.

Table 16 Access to Health Services by Districts

S/N	INDICATOR	DISTRICTS				
		ZRC	TWD	GRA	SBG	SMR
		wk*m	wk*m	wk*m	wk*m	wk*m
X6	HEALTH CARE SERVICES					
i	Dwelling within walking distance to Hospital/clinic	1.12	1.64	1.74	1.60	1.28
ii	% of population that go to Government Hospitals	1.64	1.18	0.68	1.40	1.24
iii	Attended by a doctor or medical personal.	1.30	1.21	0.70	1.26	1.34
iv	Do you obtained drugs in Hospitals/clinics	0.06	0.10	0.12	0.06	0.16
v	Level of satisfaction with Health Services(Responses Yes)	0.06	0.44	0.24	0.18	0.24
	TOTAL	**4.18**	**4.57**	**3.48**	**4.50**	**4.26**

Source Field Survey 2009.

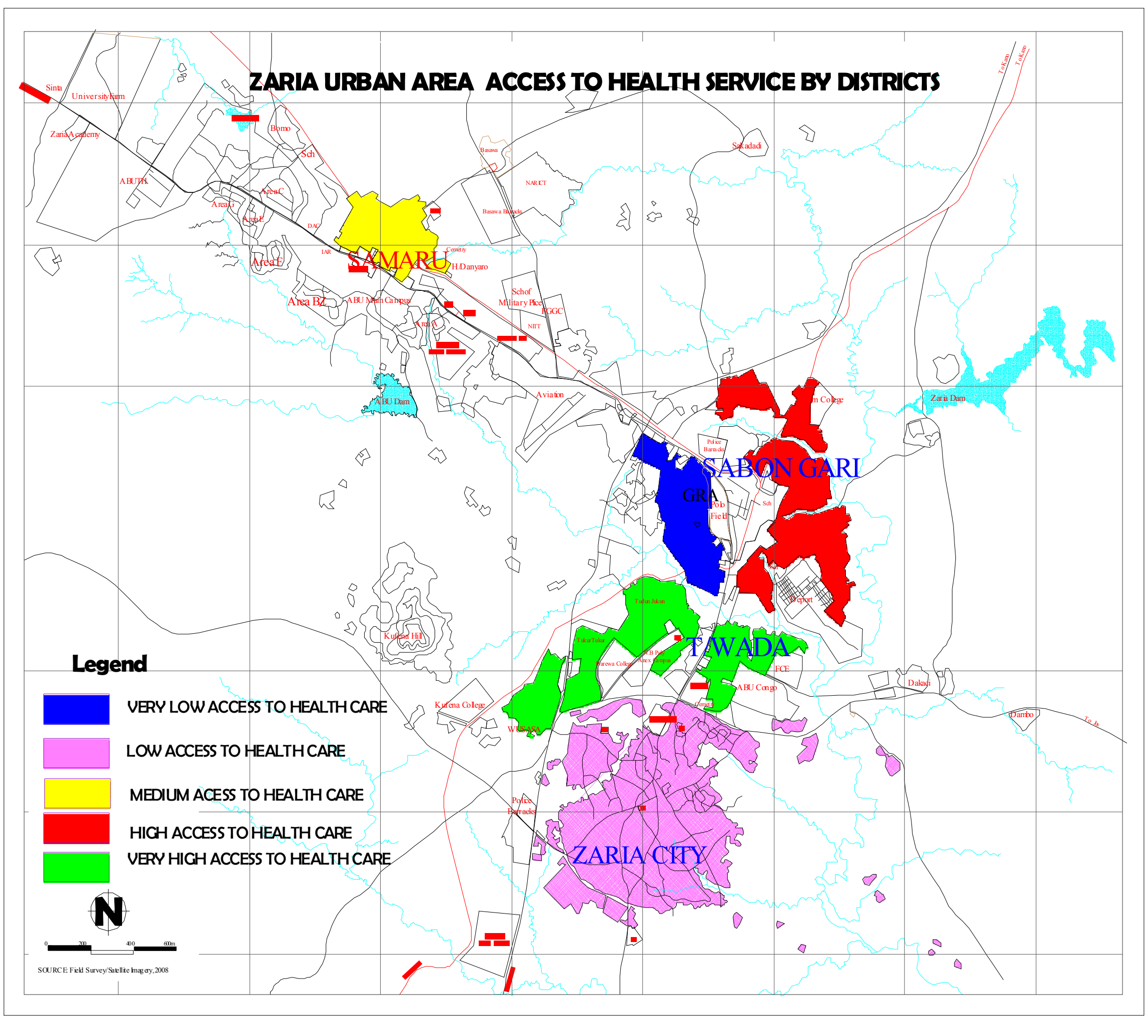


Figure ix Zaria Urban Area Access to Health Care by Districts Map

4.37 Access to Education.

The level of degree of deprivation as reflected in the degree of a membership function in access to education revealed that Samaru has the lowest score of 5.60 that indicate very high poverty in education. Sabon Gari has the second lowest score of 5.98, which indicate high poverty in education followed by Zaria City that connotes moderate poverty in education. GRA with second highest score of 7.26 suggest low poverty in education while Tudun Wada with the highest score of 7.28 indicates very high access to education.

Table 17 Access to Education by Districts

S/N	INDICATOR	DISTRICTS				
		ZRC	TWD	GRA	SBG	SMR
		wk*m	wk*m	wk*m	wk*m	wk*m
X7	EDUCATION					
i	% of HH who's children attending School	1.46	1.76	2.00	1.66	1.56
ii	% of HHs whose children are Not attending government schools	0.94	1.26	0.00	0.76	0.50
iii	% of Schools in the area that has adequate facilities	0.82	0.92	1.52	0.90	0.64
iv	Have your children drop out of School. (yes)	1.16	1.52	2.00	1.02	1.18
v	Reason for dropping out. (Can afford school fees)	0.66	0.70	2.00	0.54	0.68
vi	Level of satisfaction with Educational service (Responses No)	1.36	1.12	1.74	1.10	1.08
	TOTAL	**6.40**	**7.28**	**7.26**	**5.98**	**5.64**

Sources Field survey 2009.

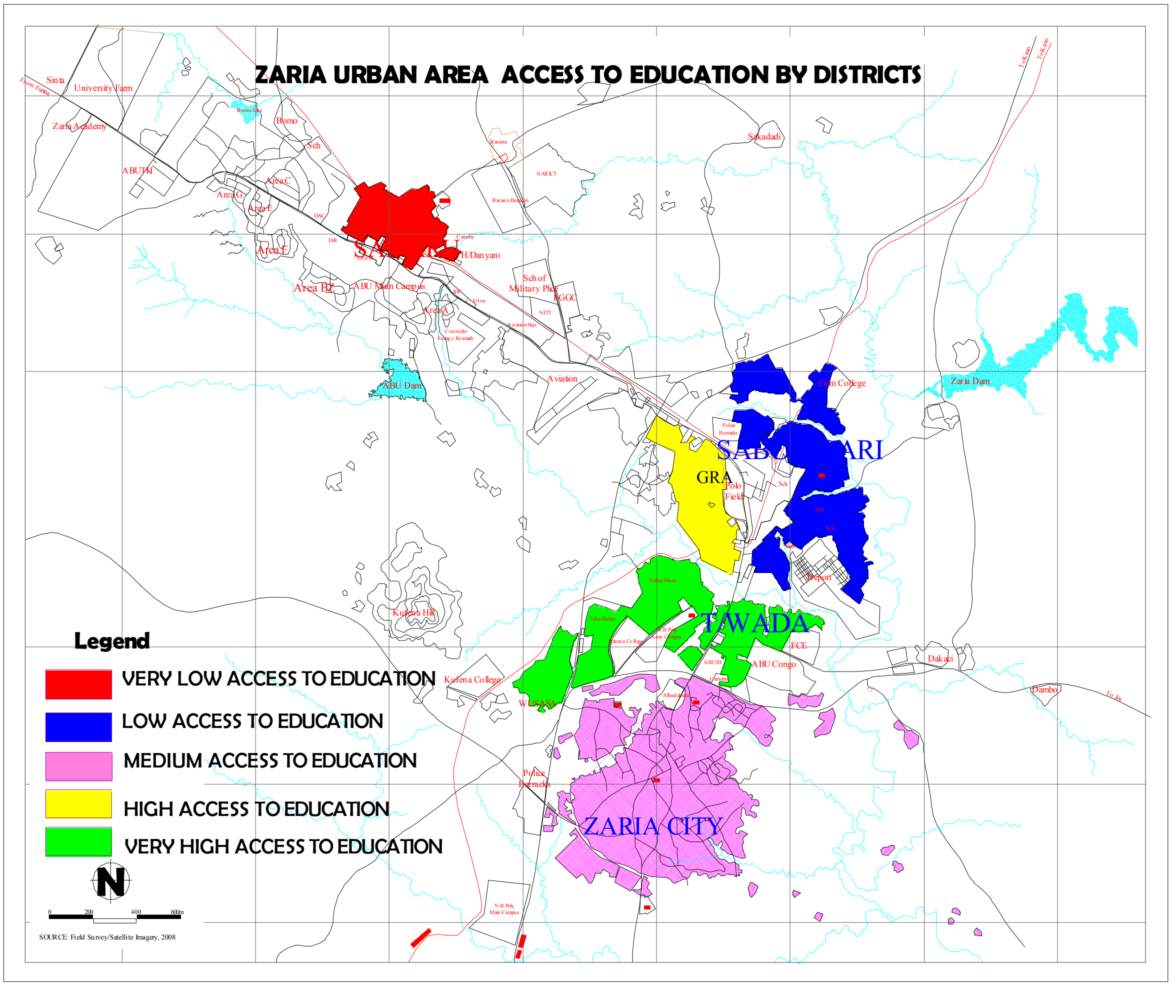


Figure x Zaria Urban Area Access to Education by Districts Map

4.38 Access to Security.

The level of degree of deprivation as reflected in the degree of a membership function in security revealed that Sabo Gari has the lowest score of 2.05, which connote very high poverty and deprivation in access to security. Zaria City with second lowest score of 2.18 signifies high poverty and deprivation in access to security. Tudun Wada with the third lowest score implies that here is moderate poverty and deprivation in access to security. Samaru with second highest score means there is high access to security in the district while GRA with the highest score of 4.38 suggest very high access to security. In general there is lack security in all the districts, this can be attributed to under staff and unequipped security personal and the believe that the respondents are not adequately protected.

Table 18 Access to Security by Districts

S/N	INDICATOR	DISRICTS				
		ZRC	TWD	GRA	SBG	SMR
		wk*m	wk*m	wk*m	wk*m	wk*m
X8	**SECURITY**					
i	% of response for safe neighbourhood.	0.03	0.25	0.97	0.15	0.78
ii	% of population that do Not experience crime	0.54	0.74	0.80	0.35	0.45
iii	Is there a police post in your area? response (Yes)	1.00	1.00	1.00	1.00	1.00
iv	Do you think the number of police post and personal in your area are adequate? Response Yes).	0.27	0.24	0.24	0.29	0.19
vi	% of HH that think they are not adequately protected	0.22	0.22	0.46	0.21	0.25
vii	Do you have adequate personal and equipment in your station? (to the DPO of the area)	00	00	0.58	0.00	0.00
viii	Level of satisfaction with security services (Responses Yes).	0.12	0.16	0.33	0.20	0.23
	TOTAL	**2.18**	**2.61**	**4.38**	**2.05**	**2.90**

Sources Field Survey 2009.

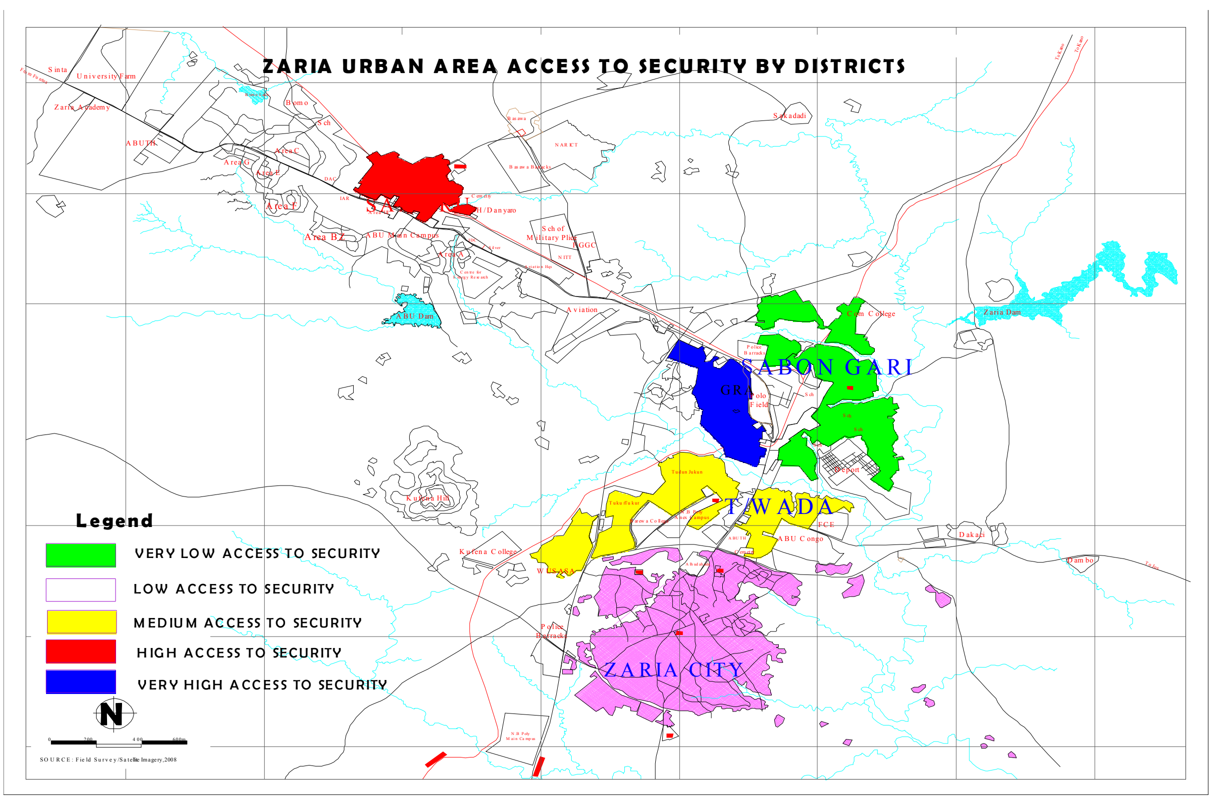


Figure xi Zaria Urban Area Access to Security by Districts Map

4.40 DISTRICT LEVEL ASSESSMENT POVERTY BY MULTIPLE CRITERIA

Tables 11-15 below show the results of the estimations of membership function depicting the level of poverty and deprivation of various indicators or needs with scores. The scores were arrived at by dividing the percentage of responses from measurement of access, availability and reliability of various indicators in each district by one Hundred (100) to reduce the figure the multiplying weights previously established to determine the score. This will serve as a guide to which indicator or need that should be given more consideration in alleviation or intervention.

4.41 Establishing the Poverty Status of Zaria City

The result of the estimation of membership functions of various poverty indicators in Zaria district shows that the percentage of population bellow poverty line is very low and has the lowest score of 0.00, which signify that there are many people that their earning falls below the poverty line. Access to water has the second lowest score of 0.25 which depict high deprivation level in access to water of which majority of the respondents are not connected to water supply for those that are connected rarely receive water and in much cases their wells dried up during dry season. The unemployment rate scores of 0.50 shows that there is high unemployment rate in the area. Access to electricity score of 1.00 which also signify high deprivation level in electricity supply with few hours of light and low voltage.

Table 19: Zaria City District Poverty and Deprivation Level

S/N	INDICATORS	PERCENTAGES (%)/100 = m	WEIGHT (wk)	wk*m
X1	**Unemployment rate**	0.77	3	2.31
		SUB-TOTAL	**2.31**	
X2	**Percentage of population above poverty line**	0.49	3	1.47
		SUB-TOTAL	**1.47**	
X3	**HOUSING**			
i	Average occupancy ratio (percentage of dwellings that has occupancy ratio below the average 3.00).	0.43	2	0.86
ii	Percentage of building built with standard building materials.	0.45	2	0.90
iii	Percentage of un-dilapidated buildings.	0.42	2	0.84
iv	Percentage of buildings without CFO.	0.25	2	0.50
v	Percentage buildings in secured areas.	0.87	2	1.74
vi	percentage of dwellings that Do Not waste channeled liquid waste to natural drain.	0.11	2	0.22
vii	Buildings with pit latrine or water closet.	0.78	2	1.56
viii	Designated dumping site.	0.14	2	0.28
ix	Percentage of HH that Do Not dump solid waste on the street as a means of waste disposal.	0.11	2	0.22
xii	Level of satisfaction with quality of housing and environment. (very satisfied and satisfied)	0.88	2	1.76
		SUB-TOTAL	**12.66**	
ACCESS TO SERVICES				
X4	**WATER**	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
i	HH connected to water main.	0.23	2	0.46
ii	Receives Tap water always.(Responses YES)	0.04	2	0.08
iii	Percentage of population that receive tap water in a day above the average 5 hours for the whole area.	0.14	2	0.28
iv	Does your wells dried off in dry season? (Responses No)	0.15	2	0.30
v	Satisfactions with water supply. (Responses Yes)	0.02	2	0.04
		SUB-TOTAL	**1.16**	
X5	**ELECTRICITY SUPPLY**	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
i	HH connected to electricity?	0.72		1.44
ii	Do you receive regular electricity supply?	0.04	2	0.08
iii	percentage of population that received electricity above the of 7 hours for the whole area a day?	0.32	2	0.64
vi	Do you have problem with power supply beside cuts (e.g low current, rationing etc)?	0.03	2	0.06
v	Level of satisfaction with electricity supply (very unsatisfied and unsatisfied)	0.06	2	0.12
		SUB-TOTAL	**2.34**	
X6	**HEALTH CARE SERVICES**	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
i	Dwelling within walking distance to Hospital/clinic	0.56	2	1.12
ii	% of population that go to Government Hospitals	0.82	2	1.64
iii	Attended by a doctor or medical personal.	0.65	2	1.30
iv	Do you obtained drugs in Hospitals/clinics	0.03	2	0.06

v	Level of satisfaction with Health Services(Responses Yes)	0.03	2	0.06
		SUB-TOTAL	**4.18**	
X7	**EDUCATION**	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
i	% of HH who's children attending School	0.73	2	1.46
ii	% of HHs whose children are Not attending government schools	0.47	2	0.94
iii	% of Schools in the area that has adequate facilities	0.41	2	0.82
iv	Have your children drop out of School. (yes)	0.58	2	1.16
v	Reason for dropping out. (Can afford school fees)	0.33	2	0.66
vi	Level of satisfaction with Educational service (Responses No)	0.68	2	1.36
		SUB-TOTAL	**6.40**	
X8	**SECURITY**	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
i	% of response for safe neighbourhood.	0.03	1	0.03
ii	% of population that do Not experience crime	0.54	1	0.54
iii	Is there a police post in your area? response (Yes)	1.00	1	1.00
iv	Do you think the number of police post and personal in your area are adequate? Response Yes).	0.27	1	0.27
vi	% of HH that thing that they are not adequately protected	0.22	1	0.22
vii	Do you have adequate personal and equipment in your station? (to the DPO of the area)	0.00	1	00
viii	Level of satisfaction with security services (Responses Yes).	0.12	1	0.12
		SUB-TOTAL	**2.18**	
		GRAND TOTAL	**28.23**	

Sources Field survey 2009.

4.42 Establishing the Poverty Status of Tudun Wada

The result of the estimation of membership functions of various poverty indicators or needs in Tudun Wada district show the percentage of population below poverty line with the lowest score of 0.15 and unemployment rate scores 0.5 which signify that the most immediate problem in Tudun Wada is unemployment rate and many people live below average poverty line. The result of the estimation of the membership function has shown that only small percentage of the population enjoy access to pipe born water some settlements like Tukur Tukur, Wusasa and Danmagaji and some part of Tudun Jukun do not receive water at all throughout the year and their wells dries off during dry season. The result has also indicated that there low access to health services and very low satisfaction in security in the District.

Table 20: Tudun Wada Poverty and Deprivation Level

S/N	INDICATORS	PERCENTAGES (%)/100 = m	WEIGHT (wk)	wk*m
X1	**Employment rate.**	0.79	3	2.37
		Sub Total	**2.37**	
X2	**Percentage of population above poverty line**	0.68	3	2.04
		Sub Total	**2.04**	
X3	**HOUSING**			
i	Average occupancy rate(Percentage of population that has occupancy ration below the average).	0.72	2	1.44
ii	Percentage of building built with standard building materials.	0.77	2	1.54
iii	Percentage of un-dilapidated buildings.	0.58	2	1.16
iv	Percentage of buildings without CFO.	0.51	2	1.02
v	Percentage buildings in secured areas.	0.86	2	1.72
i	Percentage of dwellings that do Not channel liquid waste to natural drain.	0.08	2	0.16
ii	Buildings with pit latrine or water closet.	0.97	2	1.94
iii	Designated dumping site.	0.21	2	0.42
vi	Percentage of that do Not dump solid waste on the street as a means of waste disposal.	0.39	2	0.78
vii	Level of satisfaction with quality of housing and environment either satisfied or fairly satisfied	0.90	2	1.80
		SUB-TOTAL	**22.24**	
	ACCESS TO SERVICES	**PERCENTAGE S (%)/100 = m**	**WEIGHT (wk)**	**wk* m**
X4	**WATER**			
i	HH connected to water	0.65	2	1.30
ii	Receives tap water always.(Response YES)	0.08	2	0.16
iii	Percentage of population that receives tap in a day above the average of 5 hours for the whole area.	0.14	2	0.28
iv	Does your wells dried off in dry season? (Responses No)	0.15	2	0.30
vii	Satisfactions with water supply. (Responses Yes)	0.02	2	0.04
		SUB-TOTAL	**2.08**	
X5	**ELECTRICITY SUPPLY**	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
i	HH connected to electricity?	0.87	2	1.74
ii	Do you receive regular electricity supply? (Reponses YES)	0.07	2	0.14
iii	percentage of population that received electricity above the of 7 hours for the whole area a day?	0.57	2	1.14
vi	Do you have problem with power supply beside cuts (e.g low current, rationing etc)?	0.03	2	0.06
v	Level of satisfaction with electricity supply (very unsatisfied and unsatisfied)	0.21	2	0.42
		SUB-TOTAL	**3.50**	
X6	**HEALTH CARE SERVICES**	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
i	Dwelling within walking distance to Hospital/clinic	0.82	2	1.64
ii	% of population that go to Government Hospitals	0.59	2	1.18
iii	Attended by a doctor or medical personal.	0.61	2	1.21
iv	Do you obtained drugs in Hospitals/clinics	0.05	2	0.10
v	Level of satisfaction with Health Services(Responses Yes)	0.22	2	0.44
		SUB-TOTAL	**4.57**	
X7	**EDUCATION**	**PERCENTAGES**	**WEIGHT**	**wk*m**

		(%)/100 = m	(wk)	
i	% of HH who's children attending School	0.88	2	1.76
ii	% of HHs whose children are Not attending government schools	0.63	2	1.26
iii	% of Schools in the area that has adequate facilities	0.46	2	0.92
iv	Have your children drop out of School. (yes)	0.77	2	1.52
v	Reason for dropping out. (Can afford school fees)	0.35	2	0.70
vi	Level of satisfaction with Educational service (Responses No)	0.56	2	1.12
		SUB-TOTAL	**7.28**	
X8	**SECURITY**	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
i	% of response for safe neighbourhood.	0.25	1	0.25
ii	% of population that do Not experience crime	0.74	1	0.74
iii	Is there a police post in your area? response (Yes)	1.00	1	1.00
iv	Do you think the number of police post and personal in your area are adequate? Response Yes).	0.24	1	0.24
vi	% of HH that thing that they are not adequately protected	0.22	1	0.22
vii	Do you have adequate personal and equipment in your station? (to the DPO of the area)	0.00	1	00
viii	Level of satisfaction with security services (Responses Yes).	0.16	1	0.16
		SUB-TOTAL	**2.61**	
		GRAND TOTAL	**42.28**	

Source Field survey 2009.

4.43 Establishing the Poverty Status of GRA

Although, GRA enjoy the best water, electricity and other services provided in the city. The result of the estimation of degree of deprivation in GRA district shows that much is needed to be done on the issues of water and electricity supply, it is the area where the lowest score of 3.5 and 2.1. There is high level of dissatisfaction with the supply of these services in GRA. The result of the estimation of the membership function in security also show much needed to be done, the out come of the study show that 80% think that neighbourhood is not safe and 67% are either unsatisfied or very unsatisfied with security service in the district.

Table 21: GRA District Poverty and Deprivation Level

S/N	INDICATORS	PERCENTAGES (%)/100 = m	WEIGHT (wk)	wk*m
X1	**Employment rate.**	1.00	3	3.00
		SUB-TOTAL	**3.00**	
X2	**Percentage of population above poverty line**	1.00	3	3.00
		SUB-TOTAL	**3.00**	
X3	**HOUSING**			
i	Average occupancy rate(Percentage of population that has occupancy ration below the average).	1.00	2	2.00
ii	Percentage of building built with standard building materials.	1.00	2	2.00
iii	Percentage of un-dilapidated buildings.	1.00	2	2.00
iv	Percentage of buildings with CFO.	1.00	2	2.00
v	Percentage buildings in secured areas.	1.00	2	2.00
i	Percentage of dwellings that do Not channel liquid waste to natural drain.	0.88	2	1.76
ii	Buildings with pit latrine or water closet.	1.00	2	2.00
iii	Designated dumping site.	0.98	2	1.96
vi	Percentage of that do Not dump solid waste on the street as a means of waste disposal.	0.97	2	1.94
	Level of satisfaction with quality of housing and environment either satisfied or fairly satisfied	0.99	2	1.98
		SUB-TOTAL	**25.64**	
	ACCESS TO SERVICES	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
X4	**WATER**			
i	HH connected to water	1.00	2	2.00
ii	Receives tap water always.(Response YES)	0.05	2	0.10
iii	Percentage of population that receives tap in a day above the average of 5 hours for the whole area.	0.84	2	1.68
iv	Does your wells dried off in dry season? (Responses No)	0.24	2	0.48
vii	Satisfactions with water supply. (Responses Yes)	0.37	2	0.74
		SUB-TOTAL	**5.00**	
X5	**ELECTRICITY SUPPLY**	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
i	HH connected to electricity?	1.00	2	2.00
ii	Do you receive regular electricity supply? (Reponses YES)	0.45	2	0.90
iii	percentage of population that received electricity above the of 7 hours for the whole area a day?	1.00	2	2.00
vi	Do you have problem with power supply beside cuts (e.g low current, rationing etc)?	0.87	2	1.74
v	Level of satisfaction with electricity supply (very unsatisfied and unsatisfied)	0.06	2	0.12
		SUB-TOTAL	**6.76**	
X6	**HEALTH CARE SERVICES**	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
i	Dwelling within walking distance to Hospital/clinic	0.87	2	1.74
ii	% of population that go to Government Hospitals	0.34	2	0.68
iii	Attended by a doctor or medical personal.	0.34	2	0.70
iv	Do you obtained drugs in Hospitals/clinics	0.06	2	0.12
v	Level of satisfaction with Health Services(Responses Yes)	0.12	2	0.24
		SUB-TOTAL	**3.48**	

X7	EDUCATION	PERCENTAGES (%)/100 = m	WEIGHT (wk)	wk*m
i	% of HH who's children attending School	2.00	2	2.00
ii	% of HHs whose children are attending government schools	0.00	2	0.00
iii	% of Schools in the area that has adequate facilities	0.76	2	1.52
iv	Have your children drop out of School. (NO)	1.00	2	2.00
v	Reason for dropping out. (Can afford school fees)	1.00	2	2.00
vi	Level of satisfaction with Educational service (Responses No)	0.87	2	1.74
		SUB-TOTAL	**7.26**	
X8	**SECURITY**	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
i	% of response for safe neighbourhood.	0.97	1	0.97
ii	% of population that do Not experience crime	0.80	1	0.80
iii	Is there a police post in your area? response (Yes)	1.00	1	1.00
iv	Do you think the number of police post and personal in your area are adequate? Response Yes).	0.24	1	0.24
vi	% of HH that thing that they are not adequately protected	0.46	1	0.46
vii	Do you have adequate personal and equipment in your station? (to the DPO of the area)	0.58	1	0.58
viii	Level of satisfaction with security services (Responses Yes).	0.33	1	0.33
		SUB-TOTAL	**4.38**	
		GRAND TOTAL	**52.52**	

Sources Field Survey 2009.

4.44 Establishing the Poverty Status of Sabon Gari

A closer look at degree estimation of poverty and deprivation level in Sabo Gari district. The result has shown that percentage of population below poverty line and unemployment rate has the lowest scores of 0.25 and 0.50 respectively. This implies that there is high number of population that area unemployed and living below the poverty. Access to water and electricity with 0.75 this also imply that there is high deprivation level in both water and electricity supply. There is also need for improvement in security in the area, the score after weighting of all measure used in assessing security is 1.15 with high number of people experiencing crime and inadequate police post and personal.

Table 22: Sabon-Gari District Poverty and Deprivation Level

S/N	INDICATORS	PERCENTAGES (%)/100 = m	WEIGHT (wk)	wk*m
X1	**Employment rate.**	0.70	3	2.10
		SUB-TOTAL	**2.10**	
X2	**Percentage of population above poverty line**	0.51	3	1.50
X3	**HOUSING**	**SUB-TOTAL**	**1.50**	
i	Average occupancy rate (Percentage of population that has occupancy ration below the average).	0.41	2	0.82
ii	Percentage of building built with standard building materials.	1.00	2	2.00
iii	Percentage of un-dilapidated buildings.	0.54	2	1.08
iv	Percentage of buildings with CFO.	0.60	2	1.20
v	Percentage buildings in secured areas.	0.90	2	1.80
i	Percentage of dwellings that do Not channel liquid waste to natural drain.	0.12	2	0.24
ii	Buildings with pit latrine or water closet.	0.90	2	1.74
iii	Designated dumping site.	0.10	2	0.20
vi	Percentage of people that do Not dump solid waste on the street as a means of waste disposal.	0.13	2	0.26
	Level of satisfaction with quality of housing and environment either satisfied or fairly satisfied	0.85	2	1.70
		SUB-TOTAL	**12.90**	
	ACCESS TO SERVICES	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
X4	**WATER**			
i	HH connected to water	0.54	2	1.08
ii	Receives tap water always.(Response YES)	0.03	2	0.06
iii	Percentage of population that receives tap in a day above the average of 5 hours for the whole area.	0.43	2	0.86
iv	Does your wells dried off in dry season? (Responses No)	0.19	2	0.38
vii	Satisfactions with water supply. (Responses Yes)	0.15	2	0.20
		SUB-TOTAL	**2.58**	
X5	**ELECTRICITY SUPPLY**	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
i	HH connected to electricity?	0.65	2	1.30
ii	Do you receive regular electricity supply? (Reponses YES)	0.04	2	0.08
iii	percentage of population that received electricity above the of 7 hours for the whole area a day?	0.53	2	1.06
vi	Do you have problem with power supply beside cuts (e.g low current, rationing etc)?	0.10	2	0.20
v	Level of satisfaction with electricity supply (very unsatisfied and unsatisfied)	0.03	2	0.06
		SUB-TOTAL	**2.70**	
X6	**HEALTH CARE SERVICES**	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
i	Dwelling within walking distance to Hospital/clinic	0.80	2	1.60
ii	% of population that go to Government Hospitals	0.70	2	1.40
iii	Attended by a doctor or medical personal.	0.63	2	1.26
iv	Do you obtained drugs in Hospitals/clinics	0.03	2	0.06
v	Level of satisfaction with Health Services(Responses Yes)	0.09	2	0.18
		SUB-TOTAL	**4.50**	

X7	EDUCATION	PERCENTAGES (%)/100 = m	WEIGHT (wk)	wk*m
i	% of HH who's children attending School	0.83	2	1.66
ii	% of HHs whose children are attending government schools	0.38	2	0.76
iii	% of Schools in the area that has adequate facilities	0.45	2	0.90
iv	Have your children drop out of School. (NO)	0.51	2	1.02
v	Reason for dropping out. (Can afford school fees)	0.27	2	0.54
vi	Level of satisfaction with Educational service (Responses No)	0.55	2	1.10
		SUB-TOTAL	**5.98**	
X8	**SECURITY**	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
i	% of response for safe neighbourhood.	0.15	1	0.15
ii	% of population that do Not experience crime	0.35	1	0.35
iii	Is there a police post in your area? response (Yes)	1.00	1	1.00
iv	Do you think the number of police post and personal in your area are adequate? Response Yes).	0.20	1	0.29
vi	% of HH that thing that they are not adequately protected	0.21	1	0.21
vii	Do you have adequate personal and equipment in your station? (to the DPO of the area)	0.00	1	0.00
viii	Level of satisfaction with security services (Responses Yes).	0.20	1	0.20
		SUB-TOTAL	**2.05**	
		GRAND TOTAL	**30.71**	

Source Field Survey 2009.

4.45 Establishing the Poverty Status of Samaru

The level of poverty and deprivation as reflected in degree of membership functions in Samaru district show low score in access to water, which connote high level of deprivation in access to water, followed by percentage of population bellow poverty line, and unemployment rate score of 0.15 and 0.50. This implies that greater numbers of population are unemployed and live bellow the established poverty line.

The tables below show the overall scores of poverty and deprivation index obtained from summation of scores of various indicators or needs of districts in the study area, the scores were arrived at by assessing the degree of access, availability reliability of infrastructure and other facilities, economic opportunities density of population and housing characteristics. The summation of weight or scores was used to rank each district as being non-poor, relative poor, poor and extremely poor.

Table 23: Samaru District Poverty and Deprivation Level

S/N	INDICATORS	PERCENTAGES (%)/100 = m	WEIGHT (wk)	wk*m
X1	**Employment rate.**	0.81	3	2.43
		SUB-TOTAL	**2.43**	
X2	**Percentage of population above poverty line**	0.57	3	1.71
		SUB-TOTAL	**1.71**	
X3	**HOUSING**			
i	Average occupancy rate (Percentage of population that has occupancy ration below the average).	0.57	2	1.14
ii	Percentage of building built with standard building materials.	0.58	2	1.16
iii	Percentage of un-dilapidated buildings.	0.52	2	1.04
iv	Percentage of buildings with CFO.	0.45	2	0.90
v	Percentage buildings in secured areas.	0.95	2	1.90
i	Percentage of dwellings that do Not channel liquid waste to natural drain.	0.06	2	0.12
ii	Buildings with pit latrine or water closet.	0.87	2	1.74
iii	Designated dumping site.	0.10	2	0.20
vi	Percentage of that do Not dump solid waste on the street as a means of waste disposal.	0.12	2	0.24
	Level of satisfaction with quality of housing and environment either satisfied or fairly satisfied	0.85	2	1.70
		SUB-TOTAL	**14.28**	
	ACCESS TO SERVICES	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
X4	**WATER**			
i	HH connected to water	0.12	2	0.24
ii	Receives tap water always.(Response YES)	0.00	2	0.00
iii	Percentage of population that receives tap in a day above the average of 5 hours for the whole area.	0.00	2	0.00
iv	Does your wells dried off in dry season? (Responses No)	0.10	2	0.10
vii	Satisfactions with water supply. (Responses Yes)	0.03	2	0.06
		SUB-TOTAL	**0.40**	
X5	**ELECTRICITY SUPPLY**	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
i	HH connected to electricity?	0.87	2	1.74
ii	Do you receive regular electricity supply? (Reponses YES)	0.08	2	0.16
iii	percentage of population that received electricity above the of 7 hours for the whole area a day?	0.60	2	1.20
vi	Do you have problem with power supply beside cuts (e.g low current, rationing etc)?	0.10	2	0.20
v	Level of satisfaction with electricity supply (very unsatisfied and unsatisfied)	0.07	2	0.14
		SUB-TOTAL	**3.44**	
X6	**HEALTH CARE SERVICES**	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
i	Dwelling within walking distance to Hospital/clinic	0.64	2	1.28
ii	% of population that go to Government Hospitals	0.62	2	1.24
iii	Attended by a doctor or medical personal.	0.67	2	1.34
iv	Do you obtained drugs in Hospitals/clinics	0.08	2	0.16
v	Level of satisfaction with Health Services(Responses Yes)	0.12	2	0.24
		SUB-TOTAL	**4.26**	

X7	EDUCATION	PERCENTAGES (%)/100 = m	WEIGHT (wk)	wk*m
i	% of HH who's children attending School	0.78	2	1.56
ii	% of HHs whose children are attending government schools	0.25	2	0.50
iii	% of Schools in the area that has adequate facilities	0.32	2	0.64
iv	Have your children drop out of School. (NO)	0.59	2	1.18
v	Reason for dropping out. (Can't afford school fees)	0,34	2	0.68
vi	Level of satisfaction with Educational service (Responses No)	0.54	2	1.08
		SUB-TOTAL	**5.64**	
X8	**SECURITY**	**PERCENTAGES (%)/100 = m**	**WEIGHT (wk)**	**wk*m**
i	% of response for safe neighbourhood.	0.78	1	0.78
ii	% of population that do Not experience crime	0.45	1	0.45
iii	Is there a police post in your area? response (Yes)	1.00	1	1.00
iv	Do you think the number of police post and personal in your area are adequate? Response Yes).	0.19	1	0.19
vi	% of HH that thing that they are not adequately protected	0.25	1	0.25
vii	Do you have adequate personal and equipment in your station? (to the DPO of the area)	0.00	1	0.00
viii	Level of satisfaction with security services (Responses Yes).	0.23	1	0.23
		SUB-TOTAL	**2.90**	
		GRAND TOTAL	**30.92**	

Source Field survey 2009.

4.50 TOWN LEVEL ASSESSMENTS OF POVERTY: SUMMARY OF RESULT

The summation of scores obtained for various districts of Zaria urban based on poverty analysis is shown on table 25 is the basis for the ranking of districts based on the access availability, reliability of physical as well as social infrastructural services. The categories are either being very high, high, moderate, and low and very low poverty level.

Table 24: Poverty and Deprivation Summary Table for Zaria Urban Area 2009

S/N	INDICATORS	DISTRICTS				
		ZRC	TWD	GRA	SBG	SMR
		wk*m	wk*m	wk*m	wk*m	wk*m
X1	Unemployment rate	2.31	2.37	3.00	2.10	2.43
X2	Percentage of population above poverty line	1.47	2.04	3.00	2.10	1.71
X3	Housing Quality	12.66	22.24	25.64	12.90	14.28
X4	Access to Water	1.16	2.08	5.00	2.58	0.40
X5	Access to Electricity	2.34	4.57	6.76	2.70	3.44
X6	Access to Health services	4.18	4.57	3.48	4.50	4.26
X7	Access to Education	4.18	4.57	3.48	4.50	4.26
X8	Access to Security	2.18	2.61	4.38	2.05	2.90
	TOTAL	30.48	44.60	54.74	33.43	33.68

Source Field Survey 2009

Table 25: Ranking Districts Based on Poverty and Deprivation Level

Districts	Poverty and deprivation Index	Ranking
Zaria city	30.48	**5**
Tudun Wada	44.60	**2**
GRA	54.74	**1**
Sabon Gari	33.43	**4**
Samaru	33.68	**3**

Source Field Survey 2009

The major aim of poverty profiling is to identify areas where the poor are concentrated, not only poor in monetary terms but also in terms of access, availability and reliability of basic facilities and utilities. This will help in designing appropriate strategies for alleviation. The result of poverty profile of Zaria urban area poverty has shown that poverty varies from one District to another. This variation may be attributed not only to income and unemployment level but are associated to access, availability and reliability of both physical and social infrastructural facilities. Although there is high dissatisfaction level with regard to supply of facilities in the area. The result of the estimation of membership function across all the indicators has shown that GRA has the highest score of 54.74. This indicates that people in the District are not only economically buoyant with incomes far above the established poverty line, but also enjoy the best access and reliable supply of services in the area, which connote very lower poverty and deprivation level. Tudun Wada with second highest score of 44.60, which specify that inhabitant in the area enjoy to some extent from services and other needs or indicators of poverty used in the analysis. The wide gap between GRA and Tudun Wada may be attributed to the fact that some areas in the District are highly deprive of some services like pipe borne water and electricity. Areas in the District like Tudun Jukun and Wusasa do not received running tap water as shown in table 14 and presented in figure iv. Although Tudun Wada District has shortcoming in aspect of water, electricity supplies and housing quality as shown in table and represented in figure the result of the analysis, connote low poverty level. Samaru district with third highest score of 33.68 the score indicate the District did relatively better in some indicators like money metric, housing, and electricity while the area did worst access to water and education. The results of the analysis foretell moderate poverty and deprivation level. Sabon Gari with the fourth score of 33.43 which show that inhabitants in the district are in high deficient in all needs or poverty indicators like employment, housing, and water. This means that there is high poverty and deprivation in the district. Zaria city with the lowest score of 30.48, which indicate that inhabitant in the district, are deficient in all needs or poverty indicators used in analyzing poverty in Zaria urban area.

The map below show poverty map of Zaria urban area.

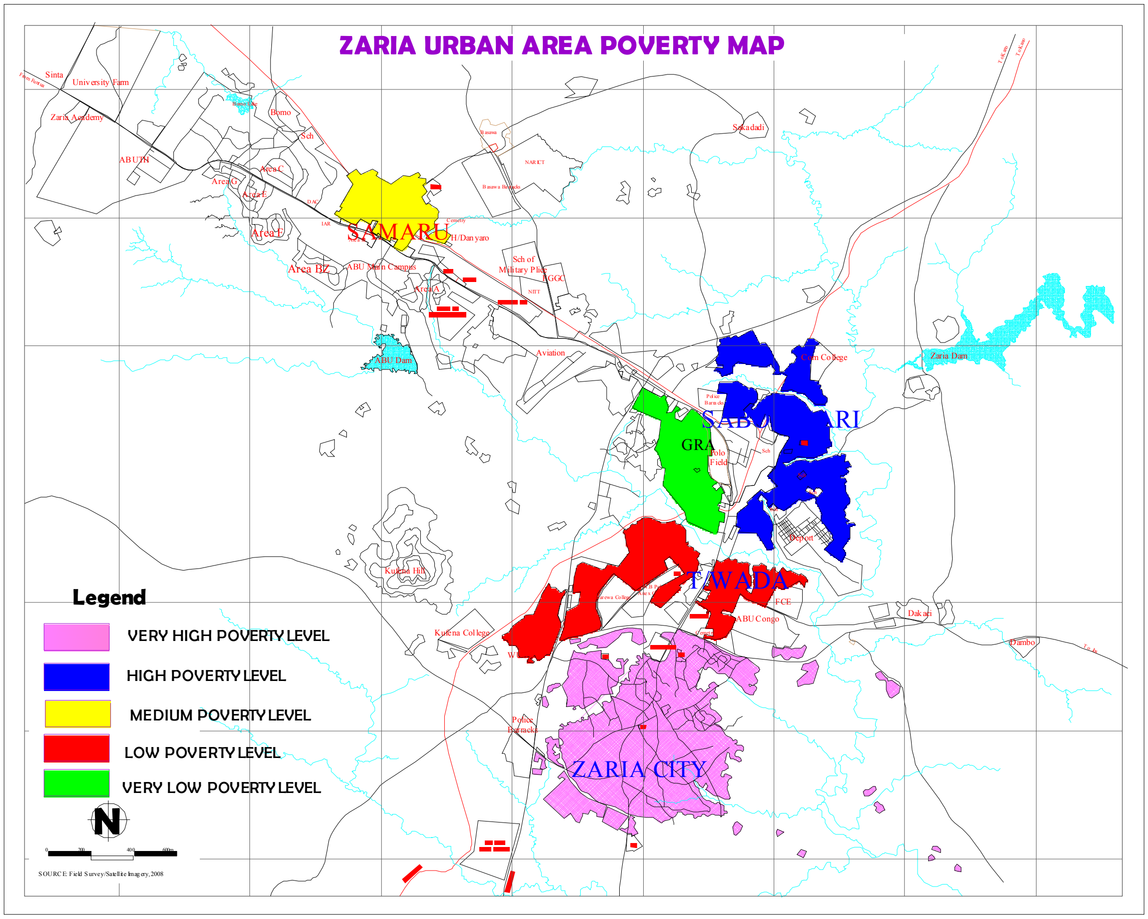


Figure xii Zaria Urban Area Overall Poverty Map

CHAPTER SIX

URBAN MANAGEMENT CHALLENGES OF POVERTY PROFILE AND RECOMMENDATIONS.

6.1 SUMMARY OF FINDINGS.

The study was anchored on the argument that poverty is multi-dimensional and that the wellbeing of an individual depends not only on income, but also on access to health, education, adequate housing, security etc. Second was that regionally based poverty analysis does not provide sufficient detailing and capture of poverty indicators. Such does not only subsume issues, but also limit utilization in specific city attempts to tackle the problem of poverty. The study set out to analyse the characteristics of poverty in Zaria urban area disaggregated along defined spatial units using the basic needs approach. The choice of the Basic Needs approach is to avoid the shortcomings of the money metric methods used by economist, and which have limited value in assisting urban managers with basic decision data.

The results of estimation of the memberships function in economic opportunities obtained in various Districts have shown considerable inequality in the distribution of poverty in Zaria Urban Area. With the money metric indicator of poverty, the findings of the study is that the worst off are Zaria City with 51% percent of the population below the poverty line and 23% unemployed; and Sabon Gari with 49% of the population below the poverty line and 30% unemployed. The result of the estimation of the membership function regarding housing quality suggests Zaria city and Samaru as the worst followed by Sabon Gari and Tudun Wada. GRA is the best on this indicator. The result of the membership function depicting deprivation on social services shows water distribution being distributed highly unevenly. While some Districts enjoy moderate water supplies, some Districts are highly deprived. Generally, access to water is poor in all Districts including the GRA, which in conventional analysis usually is categorized as non-poor based on money metric indicator. This finding indicates that there is no relationship between income and access to services like water and electricity. It also indicates that the poor are not only deprived in income terms but are also, in other dimensions. A closer look at the membership function for electricity also shows that access is unevenly. There is high deprivation in all districts. GRA receives the longest hours of light, but there general dissatisfaction with the of supply. The results of the estimation of the of membership function in health and education has shown that majority of the population have access to both services. However, majority do not send their children to government schools due the fact that the such schools have deficiencies in qualified teachers and equipments, conducive learning environment and because the building condition is deplorable with blown off roofs or collapsing walls. The estimation of the membership function in security also shows that there is inadequate security in the all Districts.

The overall rating of all the districts was based on summation of scores obtained from the analysis of poverty in the study area. The scores show that GRA District has the highest score of 54.74, which denote that people in the area enjoy much better access, availability and reliability to all the poverty indicators used in the analysis, thus very low poverty level. Second is Tudun Wada with score of 44.60, although there short comings with some of indicators of poverty used in the analysis, the score signify that people in the area benefit better from indicators used in the analysis hence low poverty. Next is Samaru with score of 33.68, the District enjoy only but few of the indicators used in poverty analysis therefore, the result suggest moderate poverty. The overall rating show Sabon Gari with score of 33.43 which is the second lowest score indicate that people in the area enjoy only but very few indicators used in poverty analysis accordingly, this entail high poverty. The last in the overall rating is Zaria City District with score of 30.48, the people in the District lacks access, availability and reliability to nearly all the poverty indicators used in the analysis thus the rating means very high poverty.

6.20 URBAN MANAGEMENT CHALLENGES OF POVERTY PROFILE OF ZARIA URBAN AREA

6.21 Lessons learnt an urban management perspective

The lessons learnt from the study is that poverty exists and varies across the Districts of in Zaria urban area. The variation is in not only in money metric terms, but also in terms of access, availability and reliability of infrastructure and services. In the context of the study, city based multi-dimensional poverty analysis used gives snapshot information to urban managers on diverse elements such as employment, access to (and availability) of both physical and social infrastructure, which cannot be obtained from conventional poverty analysis. Through this, poverty profiles become useful in provides insights and helps policy makers and urban managers in identifying areas for specific forms of interventions. City poverty profile provides crucial and up-to-date information on what city managers and other developers actors in the private and voluntary sectors of the economy required when developing city policy programme targeting poverty.

6.22 Urban Management Challenges of the Profile

The implications of the results obtained suggest that there many urban management challenges that have been identified from the profile. Poverty profile assists in identifying specific needs or challenges of a particular town or district, which is necessary for the design of strategy for poverty alleviation. Therefore, to address these challenges the approach stresses on the need to re-address the current general income increase to specific poverty reduction through provision of health care services, skill development, education, water supply and electricity. This approach will ensure that challenges of urban development are fully understood and address so that the intended target population benefit from the programme and alleviate absolute poverty more effectively. This will help in no small way by reducing of resentment in communities and promote the feeling that they are reaping the dividend of democracy and good governance.

6.23 Urban Management recommendations Targeting Poverty Indicators

6.24.1 Zaria District

The result of the estimation of the membership functions of all the poverty indicators used in the analysis has shown that Zaria City District has the lowest score of 30.48. These findings suggest that people in the District lack access, availability and reliability to nearly all the poverty indicators used in the analysis. The alleviation strategies in these are multidimensional strategy, multidimensional because people in the District are highly deprived in many indicators. Since people in the District have priority, and from the analysis the district has the highest number of people whose earning fall below the established poverty line and has the highest number of un-employed person. The alleviation strategy should to tackle the priority of the people, which is to improve the economic opportunities in the area. The outcome of the analysis has also show that people in the District are highly deprived of water supply. Large areas in the District do not receive water at all, effort should be made to improve water supply in the area. Another indicator that is worst off in the District is housing quality; effort should be made to help people improve their housing quality. Another important finding is there is low satisfaction in security and lack of adequate equipment and personal in the District. Effort should be made to increase more outpost, personal and equipment to improve security.

6.24.2 Tudun Wada District

The result of the estimation of the membership functions of all the indicators used in the analysis has shown that Tudun Wada came second with score of 44.60. Even though the District came second, there are shortcomings in some of indicators. The most striking problem in the district is water, some area in the district do not receive tap water at all, this more noticeable in Tudun Jukun, Gaskiya, Tukur Tukur and Wusasa and Dan magaji settlements. Another major finding is that, there is high dis-satisfaction in security and there is only two Police Stations located in Tudun Wada and Danmagaji. The alleviation strategy should be to providing water to these settlements and increase more Police outpost, security personal and equipments.

6.24.3 GRA District

The result of estimation of the membership functions has shown that GRA District has the highest score of 54.74, which denote that people in the area enjoy much better access, availability and reliability to all the poverty indicators used in the analysis, thus very low poverty level. Although people in the District enjoy best access to all poverty indicators used in the analysis. However, there is general dissatisfaction with water supply. Another major finding is the low level of satisfaction with security and the general feeling that people in the District are not adequately protected despite the fact that the police headquarter is located in the District. Effort should be made to improve water supply and improve security in the District.

6.24.4 Sabon Gari

The result of estimation of the membership functions has shown that Sabon Gari with score of 33.43 which is the second lowest score indicate that people in the area enjoy only but very few indicators used in poverty analysis accordingly, this entail high poverty. The indicators that people in the district are highly deprived in are income, housing, water supply and security. The alleviation strategy should tackle these specific problems, which include improvement in economic opportunities, improve water supply, loans to improve housing quality, additional police outpost, security personal and equipments to improve security in the District.

6.24.5 Samaru District

The result of estimation of a membership functions has shown that Samaru with score of 33.68, the District enjoy only but few of the indicators used in poverty analysis therefore, the result suggest moderate poverty. The worst performance of all the indicators is water supply, housing quality and there is a general dissatisfaction in security and high rate of crime in the District. Efforts should aim at providing water, improve housing quality, and improve security by providing more police out post and equipment.

6.25 General Recommendations

Based on the recognition that poverty is a multi-dimensional phenomenon, the following recommendations are offered.

1. If anti-poverty programmes often seek to improve the lives of the people, the use of single poverty indicator should be discarded in favour multi-dimensional analysis.
2. Poverty profile should cover the entire town and should be disaggregated to district level so that alleviation strategies would tackle specific problems identified in the specific project areas.
3. Participatory poverty analysis should be encouraged so that respondents will be allowed to identify needs and poverty indicators. In that, way the benchmarks set will be as close possible to generally acceptable norm in the area.
4. Different towns or districts have peculiar characteristics in poverty manifestations. Accordingly, poverty alleviation programmes should be based on their poverty profile, which highlights peculiar circumstances.

6.3 Conclusion

Most of social turmoil that is being experienced in our society nowadays can be attributed poverty. The unrest in Niger Delta, civil unrest in Jos may be attributed to poverty. In April 2009, there was a demonstration in Sabon Gari district that turned violent which led to the loss of life and destruction of properties. The reason for the disturbance was that people where trying to voice their anger for lack of electricity supply in their area.

For any poverty alleviation programme to be effective and successful especially, for a government and interested organizations trying to tackle the menace of poverty in our cities, poverty alleviation programmes should be based on multi-dimension, city wide and should be disaggregated to districts level base poverty profile. That city wide and disaggregated to district level poverty profile if produced from well structured data sets, are necessary for ranking cities or districts according to their level of welfare for better policy targeting and thus achieving results better than that from uni-dimensional, small area and regional base profile.

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DEPARTMENT OF URBAN AND REGIONAL
A.B. U. ZARIA

I am a postgraduate student of the Department Urban and Regional Planning A.B.U. Zaria conducting a research on the subject **ANALYSIS OF POVERTY PROFILE OF ZARIA URBAN AREA.**

Kindly assist me to fill in the Questionnaire bellow, all information collected will be use strictly for research purposes and will be treated as confidential. Thanks.

SECTION (A) SOCIO-ECONOMIC INDICATOR

Sex of the respondent Male □ Female □

Age of the respondent 15-20□ 21-25□ 26-30□ 31-35□ 36-40□ 41-45□ 45-50□ 51 and above □

Number of House hold in the compound Specified: ____________________

Number of children/wife Wives:________________

What is your primary occupation?

1= Unemployed □	9 = Student □
2= Casual Labourer □	10 = Pensioner□
3 = Clerk □	11 = Hawker □
4 = Civil Servant □	12 =Street vendor □
5 = Trader □	13 = Doctor/Healer/traditional Doctor □
6. Farmer □	14 = Security/Guard □
7= Handcraft □	15 = Landlord □
8= Mechanic □	16 = Others specify __________________

Do you have secondary or tertiary source of income? Yes □ No □

If Yes, why do you think you require secondary or tertiary job _____________________________
____
______

Monthly income from primary occupation.

0 = Less than 5,000 □	1 = 5,000 – 10,000 □	2 = 11,000 – 15,000 □
3 = 16,000 – 20,000 □	4 = 21,000 – 25,000 □	5 = 26,000 – 30,000 □
6 = 31,000 – 35,000 □	7 = 36,000 – 40,000 □	8 = 41,000 – 45,000 □
9 = above 50,000 □		

Monthly income from secondary and or tertiary occupation.

0 = Less than 5,000 □	1 = 5,000 – 10,000 □	2 = 11,000 – 15,000 □
3 = 16,000 – 20,000 □	4 = 21,000 – 25,000 □	5 = 26,000 – 30,000 □
6 = 31,000 – 35,000 □	7 = 36,000 – 40,000 □	8 = 41,000 – 45,000 □

9 = above 50,000 □
Dependency ratio: How many people are under your care: Give number _________

SECTION (B) HOUSING INDICATOR
Number of Rooms: (Given) ____

Number of people in the house ____

Construction materials used for the building.

Mud □ Cement Block □ Mud Blocks □ Bricks □

General condition of the building

Sound and properly mentioned □ Dilapidating □ Dilapidated □

Are you satisfied with the quality of house you are living in?

Very satisfied □ Satisfied □ Fairly Satisfied □ Unsatisfied □ Very unsatisfied □

Is the population living in unauthorized housing? (Observation) Yes□ No □

Is the population living in precarious zones (prone to disaster)? (Observation) Yes□ No □

SECTION (C) SANITATION
Type of toilet:

In house toilet: □ Bucket latrine □ Pit-latrine: □ VIP latrine: □ Near by bush □

Do you have to share toilet (with more than one HHD)?

Yes: □ No: □

What is the main method of disposal Of HHD waste and garbage; Dump it on street: □

Waste is dump at specified dumping site □ Waste is picked up: □ Waste is Burn : □ Others □

What is the minimum waste disposal equipment should be placed in your area? __________

Are you satisfied with quality of environment you are living in?

Very satisfied □ Satisfied □ Fairly Satisfied □ Unsatisfied □ Very unsatisfied □

SECTION (D) ACCESS TO WATER

What is your main source of water?

Piped water directly to house: □ Outside tap (within yard, but outside house)□. Piped water to

(public) collection point: □ Bore hole: □ well □ Buy □

If from well do you use to get water throughout the year? Yes □ No □

If you buy how much water do you buy in a day? (Give amount) ___________________________

If you receive pipe water in the house for how many hours in a day and how much do you pay? (Give

hours and amount)____

What is the minimum hours of running water do you require in a day? 1-5 hrs □1-10 hrs □1-15□
24hrs □.

Are you satisfied with quantity and quality of water you received?

Very satisfied □ Satisfied □ fairly Satisfied □ Unsatisfied □ Very unsatisfied □

SECTION (E) ACCESS TO ELECTRICITY

Is you house connected to Electricity supply?
Yes □ No □

If yes, how many hours do you receive light in a day and how much do you pay in a month?

(Give number of hours and amount)____

What are the minimum hours of light do you require in a day? 1-5 hrs □ 1-10 hrs □
1-15 hrs □ 24 hrs □

Is there any problem with electricity supply in your area? Yes □ No □

If Yes specify ____

Are you satisfied with electricity supply on your area?

Very satisfied □ Satisfied □ Fairly Satisfied □ Unsatisfied □ Very unsatisfied □

SECTION (F) ACCESS TO HEALTH SERVICES

Have your children and you needed health services during the last four (4) month?
Yes: □ No: □

If yes, what for what? (List reasons) ____

If you or your children and wife or wives are sick where do you obtain medical service?

Government Hospital □ Private clinic □

If Government Hospital/clinic you attended by a doctor Yes: □ No: □

If drug is prescribed to you, do you obtain it in the Hospital or you buy

Obtain in the Hospital □ Buy □

If private clinic, why (Give reason(s)____

How far is your house away from nearest government hospital/clinic?_______________________

What is or are the minimum services you require in a hospital/clinic ________________________

Are you satisfied with quality of Health services you received?

Very satisfied □ Satisfied □ Fairly Satisfied □ Unsatisfied □ Very unsatisfied □

SECTION (G) EDUCATION
Educational level of House Hold Head (HHH) Primary □ Secondary □ Tertiary □

Others specify
____

Do your children go to school?
Yes: ☐ No: ☐

Which school do your children attend? Government ☐ Private ☐

If private why
____

Does the school have adequate facilities and staff (such as teachers, desks Chairs, blackboards,

lighting, books, etc observation)? Yes: ☐ No: ☐

What is the number of pupils per class and yearly enrolment
____

Have any of your children dropped out of school?
Yes: ☐ No: ☐

Why have they dropped out?

Could not afford school fees: ☐ Child (ren) could not cope: ☐ others: ☐

What are the minimum requirements you like to be put in place in government and private

Schools?
____

Are you satisfied with quality and quantity of education services in your area?

Very satisfied ☐ Satisfied ☐ Fairly Satisfied ☐ Unsatisfied ☐ Very unsatisfied ☐

SECTION (H) SECURITY
Is your neighbourhood safe?
Yes: ☐ No: ☐

Have you experienced crime/theft and/or other violence?
Yes: ☐ No: ☐

If yes what kind of crime/theft and or violence?____

How far is the nearest Police Station from your area of resident? Give distance ______________

Number of police officers on duty in a particular time in an area__________________________

Do you think you and your family are adequately protected?
Yes: □ No: □

What are the minimum-security measures you think should be put in place for you to feel secured in your neighbourhood?

____

Are you satisfied with security measures put in place in your neighbourhood?
Very satisfied □ Satisfied □ Fairly Satisfied □ Unsatisfied □ Very unsatisfied □