

**AN ASSESSMENT OF URBAN POVERTY IN POST-WAR
LIBERIA: A CASE STUDY¹**

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**SCHOOL OF ECONOMICS
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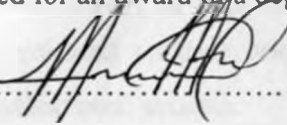
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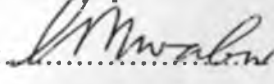
Declaration

This research paper represents my original work which has never previously been presented for an award of a degree at any other university

Signed:  Date: 8/8/2007

Musa Dukuly

This research paper has been submitted with our approval as university supervisors

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Signed:  Date: 9/8/2007

Susan A. Ayako

Dedication

This research paper is dedicated to my family, specifically to my mother, Marie Tom-gone Habar Comah, and daughter, Aaliyah Dukuly. Its dedication to my family is predicated on their priceless gift of unwavering and relentless support that led to my educational success.

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Irrespective of the numerous aforementioned recognitions, I take full responsibility for any flaws in the formulation of this paper. While it has been a delight assembling it, it is my conviction that it will contribute to the knowledge of developmental issue, particularly relating to poverty alleviation in post-war Liberia.

List of Acronyms / Abbreviations

AERC	African Economic Research Consortium
CBL	Central Bank of Liberia
CBN	Cost of Basic Needs
CMAP	Collaborative Masters Program
FAO	Food and Agriculture Organization
FEI	Food Energy Intake
FGT	Foster, Greer and Thorbecke
GEMAP	Governance and Economic Management Program
JFE	Joint Facility for Electives
NBL	National Bank of Liberia
NHDR	National Human Development Report
HDI	Human Development Index
HIPC	Heavily Indebted Poor Countries
IDP	Internally Displaced People
Ksh	Kenya Shilling
IPRSP	Interim Poverty Reduction Strategy Paper
LAMCO	Liberia Americo-Swedish Mining Company
LBDI	Liberian Bank for Development and Investment
LD	Liberian Dollars
MDGL	Millennium Development Goals of Liberia
MPEA	Ministry of Planning and Economic Affairs
NIOC	National Iron Ore Company
OECD	Organization for Economic Corporation and Development
SPSS	Statistical Package for Social Sciences
UNDP	United Nations Development Programme
UNICEF	United Nations Children Funds
UNHCR	United Nations High Commission for Refugees
USD	United States Dollars
WHO	World Health Organizations

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Abstract

As poverty remains pervasive and multifaceted in post conflict Liberia, it is essential to institute proactive strategies through a comprehensive research for tackling it. This study, whose objectives were to estimate the poverty lines and poverty measures, provides information on salient causes and effects of poverty in parts of Monrovia, and suggests ways for its alleviation. Primary data were used to construct the poverty lines using the FEI and CBN methods, and to estimate poverty indices for Monrovia. In addition, the determinants of poverty were analyzed using the binary logit and logistic models.

The study was conducted in Bushrod Island-Central Monrovia to identify factors and conditions contributing to poverty, and subsequently outline relevant information helpful for policy implementation towards more positive antipoverty policies. The methodology adopted involved the use of structural questionnaire to gather information on the status of household consumption expenditures and social characteristics, which are likely to induce poverty. Accordingly, 170 questionnaires were distributed to and administered by enumerators via a face-to-face interview, but 20 questionnaires were discarded due to incomplete responses. The study utilized a two stage sampling procedure due to time and financial constraints.

The main findings of the study are that both poverty and inequality are severe in parts of Monrovia and that household size, age of household head, education of household head, employment status, are the major determinants of poverty. While the overall FEI poverty rate was estimated at about 58% based on the poverty line of LD2301 per month, the overall CBN poverty rate, based on LD2481 per month, was found to be about 63%, and this increases with household size and declines with employment. Also, findings from the study show high poverty rate among the educated, which is possibly attributed to neglect for quality education by past regimes, low incentives for educated workers, high dependency ratio and the collapse of the formal sector. Other findings from the study include widespread lack of basic social services, such as electricity, piped water, health facilities, schools, and poor accessibility of public facilities. Generally, the recommendation provided calls for government to implement priority projects, including sustained peace initiatives and provision of social services to enhance economic growth and reduce poverty.

CHAPTER ONE: INTRODUCTION

1.1 Background

Poverty is pervasive in Liberia but it is more intense in the capital, Monrovia, due to rapid growth of its population, which is the result of massive rural-urban migration because of high insecurity in the rural areas. Prolonged civil conflict, mismanagement of resources, abuse of power and rampant corruption are significant contributing factors influencing the current pattern of poverty in the country. The Interim Poverty Reduction Strategy Paper of Liberia (IPRSP, 2006) outlined some of the long term causes of poverty in Liberia as inequitable distribution of returns from the rapid economic growth, bad governance, corruption, nepotism and visionless leaders. Recent causes of poverty were identified as the slow pace of recovery in the formal productive sector, persistent susceptibility of the domestic economy to global demand or price shocks, substantial damage to basic infrastructure and social services, weak institutions and very fragile productive capacity.

At the moment over 80 per cent of the population live below the thresh-hold of poverty as unemployment remains high (National Human Development Report, 2006). Regrettably the issue of poverty has received minimum focus and as a consequence there has not been a full fledged poverty study on Liberia up to date. The income poverty measures presented in most instances are based on a Quick Appraisal Survey. Given the fact that most of these surveys were conducted immediately following the end of the war, at the time the situation still remained unsettled, results must be considered preliminary and inadequate to clearly depict Liberia's poverty profile.

Poverty in Liberia, as in other countries, has many dimensions: high insecurity, deprivation, lack of access to jobs for young people, regular experience of hunger, discrimination, limited education or health care, exposure to malaria, tuberculosis and HIV/AIDS, and lack of basic needs. Majority of the urban poor in Liberia live in peri-urban and slum settlements characterized by inadequate and low quality services such as lack of safe drinking water, limited access to quality education and health services, lack

of electricity and insanitary living conditions. The absence of adequate facilities and regular clean water as well as electricity has led to poor health, poor education and poor nutrition that make them more susceptible to poverty.

With 80 per cent of households in Liberia estimated to be poor suggests that income or endowments to afford a minimum requirement of 2250 calories per capita per day, plus a few other essential non food commodities such as clothing and housing is lacking. Therefore, the effects from the civil war has caused many to be unemployed or if employed, income received is low thereby relying on remittances from external or internal sources; without it significant proportion of the population would have died from poverty induced by the extreme war.

Poverty has been and is still a major concern for individuals, organizations, institutions and governments the world over. Many poverty reduction programmes have been developed over time and across regions but despite these efforts, poverty continues to be a key impediment to both human and economic prosperity (OECD, 2002).

As such, the analysis of poverty through its effects affords numerous policy alternatives. First, irrespective of when or how frequently we survey households, we can identify those households that are more likely to remain poor. For instance, examination of the characteristics of households in poverty is helpful in identifying the most prudent way of tackling it. A finding along those lines can improve the efficacy of policies aimed at fighting poverty. Second, the welfare paths along which households move out of poverty and why they do so becomes clearer (Bigsten et al, 2003). Third, an assessment of welfare impact of recent growth strategies adopted by developing countries can be made by studying the poverty status of households (Dercon, 2002).

1.2 An Overview of Liberia's Economy

Since Liberia obtained its independence in 1847, the economy has been operating in a capitalistic pattern, with some attributes of mixed economic activities but at an infinitesimal level. The economy actually began attracting potential investors in the 1940's when the Government at the time launched its Open Door Policy to attract foreign investment, create employment and above all, accelerate growth. Significant results, in terms of massive employment and poverty alleviation were achieved on account of the establishment of viable concession companies such as Liberia Americo-Swedish Mining Company (LAMCO), Bong Mines, National Iron Ore Company, until 1980, when the economy began slumping due to the ushering of a military regime through a coup de tat. While steady economic growth rate averaging 4 to 7 per cent was experienced in the 1960s, GDP growth rate declined from 5 per cent in the early 1970s to less than 1 per cent in the 1980s and the external debt rose from USD750 million in 1979 to USD1.4 billion in 1985 (IPRSP, 2006). Thereafter, the country continued to experience intermittent political instability, which eventually led to the closure of some major investments thus stalling the economic growth.

In 1990, the country eventually plunged into a deadly civil war, which not only led to the collapse of the social fabric but also the entire economy. The consequences have been devastating: high unemployment, low income, a large number of orphans, breakdown of infrastructure and low investment. Recorded exports fell from USD440million in 1988 to USD2million in 1997. Today unemployment persists at 85 per cent. Average per capita income is today just USD120 annually (down from USD1, 269 in 1980) and the GDP a little under USD500 million (Mills, 2005).

Importantly, the Liberian economy relied heavily on the mining of iron ore and on the export of natural rubber prior to the civil war. Its principal forms of income were traditionally the great rubber plantations (about USD100 million annually) but some income was also provided by iron ore deposits and small alluvial diamond diggings. Based on NHDR (2006), the mining sector collapsed as evidenced by the decline from 12

percent share of GDP in 1988 to 0.82 per cent in 2004. Civil war and government mismanagement destroyed much of Liberia's economy, especially the infrastructure in and around Monrovia. Continued international sanctions on diamonds and timber exports have had limited growth prospects. While many businessmen fled the country taking capital and expertise with them, some have returned, but many are unlikely to return. Affluently endowed with water, mineral resources, forests, and a climate favorable to agriculture, Liberia had been a producer and exporter of basic products, primarily raw timber and rubber. Local manufacturing, mainly foreign owned, had been small in scope and fell from 50.5 per cent of GDP to 17.4 per cent (NHDR, 2006).

Prior to 1989, twelve banks existed in the country but most closed down while some were declared insolvent during the war period. At the moment, only five commercial banks are operational: ECOBANK (Liberia) Limited, Liberia Bank for Development and Investment, International Bank (Liberia) Limited, Global Bank (Liberia) Limited and First International Bank (Liberia) Limited. In 1999, the National Bank of Liberia was transformed to the Central Bank of Liberia to efficiently and effectively conduct the country's monetary policy. Interestingly, banking activities are being restored in the rural areas to boost trade and investment after almost 15 years of non-banking there.

With an estimated population growth rate of 3 per cent and birth rate of 44.77 births/1000 population, Liberia population was 3.04 million in 2006. Urban population constitutes 58 per cent of the total population. Most of Liberia's three million people are supported by aid or by working in agriculture (about 80 per cent) or services (about 15 per cent). Additionally, with an estimated unemployment rate of about 85 per cent, the destruction of the health and education sectors has resulted to infant and maternal mortality estimated to be among the highest in the world, at 157 and 780 per 1000 live births respectively. The national literacy rate is around 37 per cent (Mills, 2005).

Although Liberia's domestic fighting among disparate rebel groups, warlords, and youth gangs was declared over in 2003, civil unrest is being abated. As at 2004, more than 300,000 persons were internally displaced while 320,000 persons were refugees in other

countries (UNHCR, 2004) but at the moment most of the IDPs and refugees are voluntarily being repatriated on account of the gradual return of stability to the country.

The country experienced the worst health and education effects since the inception of the insurgency in 1989. WHO (2003) indicates that malaria, diarrhoea, measles among others diseases were endemic and therefore causes of morbidity. Accordingly, UNICEF (2001) asserts that the country experienced 134 deaths per 1000 live births. While the health situation deteriorated, the education system was seriously affected. WATCHLIST (2004) reports that 80 per cent of the schools that existed prior to 1989 were destroyed and most of the youths were recruited as child soldiers. The MDG (2004) reports that 35 per cent of boys and 27 per cent of girls who begin grade one end in grade five.

With a new democratically elected government headed by President Ellen Johnson Sirleaf since January 2006, Liberia seeks to reconstruct its shattered economy. The Governance and Economic Management Program (GEMAP), which started under the 2003-2006 transitional government, was designed to help the Liberian Government raise and spend revenues in an efficient and transparent way. Success under GEMAP and solid economic performance will enable Liberia to attract investment and begin rebuilding its shattered economy. Accordingly, the new government has outlined major objectives of society that include political equity, social justice, human dignity, and high and growing per capita incomes for equitable distribution. At the moment, the country is gradually driving towards the path of economic recovery with consideration to many political and economic conditions. The current government, though faced with daunting tasks, is committed to its poverty reduction strategy as evidenced by its fight against corruption, implementation of good governance and reestablishment of foreign relations with the rest of the world.

Bushrod Island and Central Monrovia which are located in Monrovia (named after United States of America fifth president James Monroe in 1848) are reminder of the absence of progress and the impact of deliberate destruction. The potholes, limited generator-supplied electricity and the absence of drinking water for most inhabitants are manifestation of low standard of living which requires concerted efforts for speedy

economic recovery. However, the presence of United Nations Peacekeeping Force to provide security signals prospect for sustainable economic recovery evidenced by recent increase in economic growth to about 6 per cent.

1.3 Poverty: An overview

People define, view and experience poverty in different ways. Poverty is not only to be hungry and malnourished, to lack adequate shelter and housing, and to be illiterate, but also to be exposed to ill treatment and to be powerless in influencing key decisions affecting lives (GEMAP, 2003)². It signifies deficiency of social, economic, cultural and human rights, which an individual household or community holds as important for their existence, survival or well-being.

Manda et al (2000) indicates that poverty is multidimensional and manifests itself in various forms and may be defined in absolute or relative terms. Relative poverty is when one cannot purchase a bundle of basic needs available to a reference social group, e.g. people within a median income level. Sen (1985) views poverty even in a broader sense of capability deprivation. According to him, poverty exists when a person lacks the real opportunity of say: hunger, undernourishment, or homelessness.

Absolute poverty is a state where one cannot raise the income required to meet the expenditure for purchasing a specified bundle of basic requirements. It attempts to specify the level of absolute deprivation on the basis of norms, which identify the minimum requirements in terms of food and non-food universally considered adequate to satisfy the minimum basic needs. Hence the absolute poor are identified using an overall poverty line, which is the amount of expenditure required to meet the daily food requirement plus non-food needs. Overall poverty therefore encompasses those whose expenditure falls below the poverty line.

² See GEMAP Liberia, 2003

The hardcore poor are defined as those who would not meet their minimum calorie requirement even if they concentrated all their resources to realizing their food needs. This constitutes the minimum monthly consumption expenditure required to meet the recommended daily intake of 2250 calories from the chosen basket of food items. All the above definitions refer to material deprivation, and ignore other aspects of poverty such as unhappiness, and bad governance. This study adopts the material deprivation form of poverty.



Poverty has persisted even as various antipoverty initiatives have been put into place and implemented. Though actual studies have not been carried out to authenticate the statistical poverty level of Liberia, the World Bank³ (2006) has indicated that the poor constitutes about 85 per cent of the total population. This means that about 85 per cent of Liberians could not achieve the minimum expenditure to acquire the basic food and non – food items. The increase in poverty in the urban areas is easily observed from the rising number of people without adequate food and nutrition, or adequate access to basic necessities such as education, safe water and sanitation, employment, health facilities, electricity and decent housing.

The poor in Liberia are clustered in certain socio-economic categories that include the displaced, small farmers, slum dwellers, agricultural laborers, casual laborers, unskilled and semi skilled workers, female-headed households, the physically handicapped, HIV/AIDS orphans and street children. Certain occupations, such as subsistence farmers have a higher than average incidence of poverty. Slum dwellers and informal settlers are believed to account for significant proportion of the total poor in urban Liberia.

Women are believed to be more vulnerable to poverty in Liberia than men. For instance, more of the active female population work as subsistence farmers compared to men. Given that subsistence farmers are among the very poor, this relative dependence of women upon subsistence farming explains the extreme vulnerability of women. Besides, the impact from the war seriously affected women, driving some of them to several

³ See former World Bank President Paul Wolfowitz's remark in Monrovia: July 24, 2006(Analyst Newspaper, Liberia: www.analystliberia.com)

poverty related activities including prostitution. Since 1989, both rural and urban women were severely affected by poverty. This means that the development process affects women more and the area of residence plays a major role in the poverty status of women.

Inequitable access to the means of production (land and capital), the distribution of wealth, reduced access to economic goods and services and remunerative employment are all causes of poverty. Poverty adversely affects participation in social and political processes and denies life choices. Moreover, the poor are particularly vulnerable to natural disasters. The fight against poverty, ignorance and disease has been a major goal of the Government, especially following the end of the civil war. It is likely that efforts undertaken to-date to curtail poverty have been inadequate and the growth of poverty has not been significantly abated.

1.3.1 Urban Poverty

Almost half the world's population lives in cities. Some four billion people will soon be living in towns and cities in Africa, Asia and Latin America. As towns and cities swell across the developing world, so will urban poverty. Today in Sub-Saharan Africa, seven out of every 10 people in urban areas are living in slum conditions. In the year 2000 about half of the world's population lived in urban areas, in 1975 this was only 28 per cent. Developing countries urbanization was 25 per cent in 1970. This increased to 37 per cent in 1994 and it is estimated to be 57 per cent in 2025(UNDP, 2001)

Regarding urban poverty in Liberia, the boom towns of the past, centered on mining and rubber comprise of 85 per cent households poverty and 60 per cent living in severe poverty; in county headquarters which received significant proportion of IDPs, 75 per cent of households are poor and 40 per cent living in severe poverty; and in Monrovia about 50 per cent of households live below the poverty line while 22 per cent are living in severe poverty (IPRSP, 2006)

Some indicators of poverty in urban Liberia include: Inadequate income (and thus inadequate consumption of food, safe and sufficient water; and problems of indebtedness reducing income available for necessities); inadequate assets (including educational attainment and housing) for individuals, households or communities; inadequate shelter (typically poor quality, overcrowded and insecure); inadequate public services (piped water, sanitation, drainage, and roads) which increase health burden and often work burden; and inadequate basic services such as day care/schools/vocational training, health-care, emergency services, public transport, communications, law enforcement, limited or no safety net to ensure basic consumption can be maintained when income falls; also to ensure access to shelter and health care when these can no longer be paid for; inadequate protection including laws and regulations regarding civil and political rights, occupational health and safety, pollution control, environmental health, protection from violence and other crimes, and protection from discrimination and exploitation.

1.4 Research Problem

Despite massive international support directed to Post-war Liberia, and the Government efforts to mitigate poverty, it continues to be on the increase. Measures to substantially tackle poverty have been cumbersome due to multiple causes from prolonged civil conflict, mismanagement of resources, abuse of power and rampant corruption coupled with the failure of those concerned to identify and emphasize the true underlying causes of the problem. Real economic growth rate remains far below the world bank recommended rate per year⁴; and has been declining by two percent annually since 2000(MDGL, 2004). The President of Liberia recently alluded to the fact that the GDP had declined by 90 per cent since 1980s and exports declined by 95 per cent. At the moment over three quarters of Liberians live below the poverty line of USD1.00 per day with majority of those below the poverty line found in Monrovia where at least about one-third of the country's population is currently found.

⁴ See World Bank requirement for growth. Despite the recent increase in growth, the huge foreign and domestic debts served as constraints to poverty alleviation.

An overwhelming majority of people, mainly the youth, are either unemployed or employed in the informal sector⁵. Moreover, the World Bank President confirmed that the average Liberian at the moment was living below the international poverty line of USD1.00 per day, calling the situation an alarming picture of deprivation and suffering. Today, the average Liberian survives on just USD120 a year. That is barely US30 cents a day. The dependency ratio (defined as ages less than 14 years and more than 65 to the working population ages more than 14 and less than 65) was 92 per cent implying that for every 100 people in the labor force there were 92 persons to be fed, clothed, educated and provided medical care (MPEA, 2000). Furthermore, the human development indicators remain unsatisfactory as indicated by the NHDR(2006) that Liberia is one of the least developed nations with human development index of 0.276 (1999) a decline from 0.311(1996) and slightly improved to 0.319(2005).

Significant proportions of children from poor households in the country are delivered outside of health facilities. Malnutrition is higher in the poor households than in non-poor household. Rates of stunting, wasting and underweight are also higher among children from poor households⁶. Access to health care services by the poor through the availability, affordability and physical accessibility of drugs and consultations are difficult to attain thereby making it tedious to escape from poverty.

Amidst the numerous poverty related problems, the current Government has just instituted a poverty reduction strategy that will deal with issues such as security reform, agriculture revitalization, creating the environment for employment and human resource development. The strategy aims to curtail the increase in the incidence of poverty and to eradicate it on a systematic basis (IPRSP, 2006). The plan outlined the characteristic of the poor, and contains information as to who are the poor as well as the extent of the poverty. Moreover, the plans aim to substantially mitigate poverty and ambitious, as it may seem, may be achievable so long as more focus is paid to implementation

⁵ See President Ellen Johnson Sirleaf speech delivered in Belgium to the European Union Parliament in September 2006(Excerpt: Analyst Newspaper, Liberia: www.analystliberia.com)

⁶ This information is based on the assumption that several medical staff fled the country and many health centers close down due to the war.

mechanisms through timely donor support. These mechanisms in turn will largely depend on a well informed policy environment that incorporates sound advice from policy analysts and researchers in the field of poverty.

Though actual statistics are not available, based on sheer observation it is believed that more than two thirds of the urban poor in Liberia do not have access to safe drinking water as evidenced by the destruction of the country's water power plant. Sanitation and water disposal services in the city are also scarce. Households without access to sanitary facilities are on the increase.

Interestingly, the country once classified in the middle income category in the 1970s is regarded as one of the poorest nations in the world today, thereby falling in the category of countries with the highest incidence of poverty. According to the MDG Report on Liberia (2004), the poor in Liberia live in severe poverty, that is, on about USD11 a month for an average household size of six, or on USD33 per month for those slightly better off. The increase in the poverty incidence in the country should attract the focus of the relevant stakeholders and development partners to augment the fight against poverty by strengthening existing anti-poverty measures necessary to effectively deal with these challenges. At the moment the country is engulfed with a debt of more than three billion United States Dollars (Mill, 2005), consequently leading to its classification as one of the heavily indebted poor countries (HIPC). Therefore, the strides to achieve the Millennium Development Goals focus by 2015 remains a major obstacle and challenge thereby making it a debatable policy issue for serious study.

Given the multiplicity of these poverty related problems, an in-depth and comprehensive study which depicts the broad based statistical poverty profile of not only the entire country, but also the city is yet to be done. Past studies have been based on quick appraisal survey which is inadequate to reflect the various dimensions of poverty. This study therefore seeks to determine the extent of Poverty (including food poverty), assess its manifestation and propose policy measures that may be undertaken to reduce the incidence of poverty in those areas. In consideration of the foregoing, this study seeks to provide answers to the following research questions:

1. What does the food poverty line manifest relative to household poverty?
2. What is the level, depth and severity as well as the determinants of poverty in the Bushrod-Central Monrovia?
3. Does the current poverty profile of Bushrod-Central Monrovia suggest an intensive poverty reduction strategy?

1.5 Objectives of the Study

The specific objectives of the study are to:

1. Estimate the Food and Absolute Poverty Lines for the Bushrod-Central Monrovia
2. Measure the level, depth and severity as well as determinants of Poverty in the Bushrod-Central Monrovia, and
3. Draw up policy recommendations to form the basis of Antipoverty Initiatives

1.6 Justification of the Study

Many studies have indicated that poverty is overwhelmingly a rural phenomenon in majority of developing countries, specifically African countries. However, though minimal studies have been done on urban poverty, those implemented have also reflected the existence of poverty at the urban level. For instance, widespread urban poverty, where half or more of the urban people are living below the relevant poverty lines, is evident in six African Countries: Central Africa Republic (with a head-count ratio of 50per cent), Ethiopia (53per cent), Guinea-Bissau (53per cent), Swaziland (59per cent), Tanzania (50per cent) and 54per cent in Zambia. In addition, Nigeria, Madagascar and South Africa also record high incidence of poverty. As such, these countries should collaborate in developing broad policies for combating urban poverty (Ali et al, 2002). In Liberia poverty was highly prevalent in the rural areas prior to the civil war but the situation seems different today as a result of massive rural-urban migration.

In Pre and post war era of the country, minimal study so far, to the best of my knowledge, has been done regarding the measure and profile of poverty at the urban level in Liberia, specifically, Monrovia. Past studies were carried out mainly during the war era, but this study seeks to identify the contemporary poverty pattern in Monrovia since several changes between the war period to present have been made.

Moreover, in view of the alarming poverty level in the country, this research seeks to examine poverty at the household level in Central Monrovia and Bushrod Island, and provide appropriate policy recommendations essential for the efficacy and strengthening of government efforts in its postwar poverty alleviation strategy. Essentially, the study provides some facts and knowledge about the segment of household languishing in poverty in the city and helps to improve the Government's strategies regarding poverty alleviation. Moreover, the uniqueness of this study is that, it captures expenditure rather than income in estimating the poverty line, it considers the urban setting and highlights post-conflict poverty situation.

1.7 Scope of the Study

This study focused on two small segments of Monrovia City: Central Monrovia and Bushrod Island because most of the rural-urban migrants are believed to settle in these two locations. Monrovia is situated far west of the country, along the Northern Atlantic Ocean and covers an area of 10 sq. km (4 sq.mi). Besides, those two areas remain of high essence since they constitute several slum and semi-slum settlements. Central Monrovia contains slums such as Westpoint and semi-slums such as Soniwein, Buzzi Quarter and Slipway; Bushrod Island contains Slums such as SKD Community, Logan Town (Zinc Camp), Sawmill (around Freeport). In fact, Westpoint-an area located in Central Monrovia is believed to be the country's largest slum settlement with a dense population.

1.8 Government Poverty Plan and IPRSP

Cognizant of the high wave of poverty affecting the country, the Government recently launched its Interim Poverty Reduction Strategy Paper (2006) outlining the causes, effects as well as the potential remedies it intends to institute in addressing poverty. Unlike previous governments which were likely faced with minimal challenges tackling poverty, the current government is undertaking numerous poverty reduction policy measures to address the rising poverty occasioned by the country's prolonged civil war. As explained earlier, the war significantly affected every sector of the economy thereby making the need for an intensive pro-growth economic recovery strategy imperative. Despite the myriad tasks, the current government is committed and immensely working towards poverty alleviation as evidenced by institutionalization of vital reforms through its Interim Poverty Reduction Strategy Paper (IPRSP, 2006) to mitigate corruption, ignorance, illiteracy, diseases, crime, international isolation and persistent deficit. While the IPRSP seeks to deal with issues, viz: security reform, agricultural revitalization, sound environment for employment and human resource development, the process must be systematic incorporating necessary pre-conditions.

As a manifestation of the government's commitment, all concessions agreements initiated and entered into by previous governments in the last ten years have been reviewed for possible ratification, cancellation or continuity to ensure accountability and transparency. Also, new legislations are being introduced, while those which existed in the past are being reviewed for possible amendment to promote growth and development. This is intended to ensure that counties which are sources of major resources benefit, in terms of development. To encourage and induce private investment for employment creation, the government is also working towards attracting foreign direct investments. A case in point is Mittal Steel, which has just entered into a billion dollar iron ore agreement with the Government to invest in Liberia.

Regarding security and judicial reforms, the Government is making concerted effort to professionalize its security system to conform to international standard. While the security sector is being structured to reflect regional and ethnic balance, and to prioritize training, the rule of law and administration of justice is being strengthened to prioritize accountability. However, much is still required on account of the prolonged breakdown

of law. But the laws must be made transparent and efficient to ensure expeditious resolution of disputes, especially commercial disputes which is the key for business development. In short, the laws must be changed consistent with the dynamics of society. To further address the infant stability, the government is prioritizing increase of youth participation in development programs to minimize their idleness. However, they intend to effectuate this by focusing on security recruitment. This is also inadequate to address the high unemployment rate as expanding the private investment domain remains the best alternative to abate unemployment.

In terms of social service reforms, major roads are being reconditioned and improved to enhance intra-country trade and investment. Regarding provision of electricity and water, only parts of the city are receiving electricity and pipe water, but further efforts are in progress to extend water and electricity to the entire country. Health centers, which have been closed for almost fifteen years in other parts of the country are now being activated at a low scale level to address health problems. Consistent with the universal Millennium Development Goal, education, which is as an engine of development, has been accorded major support as evidenced by the provision of free primary education, reduction in tuitions for secondary students and increased government funding of the university budget to boost tertiary education. However, this must be complemented with attractive incentives for educated workers. Nevertheless, the IPRSP did not regard the formulation of an institutional framework to address regulations, productions and distributions of the provision of the various social services. These can be earmarked for future commercialization.

Importantly, though implementation of the Government's poverty alleviation is on course, the pace remains very slow on outcome, occasioned by the country's huge debt burden and numerous development tasks. Therefore, its realization and achievability requires attracting massive foreign support to accelerate the process. The lifting of the ban on diamond and timber exports is a significant step towards relieving some of the Government's financial constraints. To this effect, the IPRSP (2006) asserts that the effectiveness of the interim strategy on reducing the high levels of poverty depends on how well the capacity crisis facing the nation and the demand for job opportunities are addressed. Though the IPRSP laid the framework and strategy to addressing Liberia's

post-war problems, the timely fulfillment of donor's commitment and more comprehensive research is required to successfully complement it.

1.9 Organization of the Study

In Chapter one, an introduction of the study is provided accounting for the background, overview of poverty, and overview of Liberia's Economy. The chapter also highlights the problem statement, objectives, justification of the study and brief outlook of the IPRSP. Chapter two discusses the theoretical and empirical literature as well as provides an overview of literature. Chapter three presents the theoretical framework, methodology used for estimation, followed by description of the model, data collection technique and econometric packages used for estimation. Chapter four provides empirical results and interpretations of sample statistics. This chapter also highlights procedural derivation of the FEI and CBN poverty lines, followed by FGT poverty indices. Finally, Chapter five presents findings, summary and recommendations.

CHAPTER TWO: LITERATURE REVIEW

2.1 Theoretical Literature

Several factors are inimical to development in urban areas thereby giving rise to the existence of poverty. These include high insecurity, deprivation, environmental degradation, poor urban infrastructure, low levels of investment in people, ethnic and tribal discrimination, neglect of efficient provision of social services and lack of basic needs. The urban poor are in most ways more vulnerable to external shocks and policy changes as they produce little of their own food and are thus more vulnerable to changes in market prices. To the extent that reforms eliminate poorly targeted entitlements without installing new initiatives characterized by improved targeting, the urban poor stands to lose, albeit less than the non-poor. Accordingly, it is important to recognize the fact that there cannot be economic development without consideration to poverty mitigation. Meier (1994) warned against a limited definition of economic development, such as one that does not include the reduction of massive poverty.

Poverty can be viewed as the inability to attain a minimum standard of living. Lipton and Ravallion (1995) state that poverty exists when one or more persons fall short of a level of economic welfare deemed to constitute a reasonable minimum, either in some absolute sense or by the standards of a specific society.

Any definition of poverty includes a given level of welfare below which a person will be considered poor. Therefore, poverty in this case is termed as a situation where a population or section of the population is unable to meet its bare subsistence essentials of food, clothing and shelter in order to maintain minimum standards of living and Weinberg (2005) considers poverty as an in-or-out state: families with income above a specified threshold, and all their constituent individuals, are out of poverty; those below are in poverty. Accordingly, it is necessary to determine how to assess welfare. In this light, there are mainly three approaches in literature: the welfarist approach, the basic needs approach and the capabilities approach.

The welfarist approach is based on comparison of well-being solely on individual utilities, which are based on social preferences, including poverty comparisons (Ravallion, 1993). Some problems related with this approach are the need to make inter-personal utility comparisons to obtain social welfare functions, the validity of full-information and unbounded rationality assumptions on the part of the consumers, as well as the possible conflicts between individual maximization and valuable social objectives (Ravallion, 1993).

The basic needs approach concentrates on the degree of fulfillment of basic human needs in terms of health, food, education, water, shelter and transport (Streeten et al., 1981). The main argument behind the basic needs approach is the possible low correlation between income and the degree to which these needs are satisfied.

The capabilities approach, associated with Sen (1985) considers commodities not as ends, but as means to desired activities. In this approach, poverty is interpreted as lack of capability. The application of this approach is cumbersome, but an attempt to apply it has been made in the UNDP Human Development Reports. This approach has been criticized on account that it does not clearly recognize the role individual preferences play in welfare. Therefore, it is the opposite extreme to the welfarist approach.

Chambers (1983) has indicated that a household can be characterized as poor when it has minimum assets or when its hut, house or shelter is small and made of wood, bamboo, mud, grass, reeds, palm fronds or hides, its meager furnishings include only mats or hides for sleeping and perhaps a bed, cooking pots and a few tools, and there is no toilet. The household has no land or has land that does not assure or barely assures subsistence. It has no livestock or has only small stock. The household's stocks and flow of food and cash are low, unreliable, seasonal and inadequate. Returns to the family labour are low and job opportunities are limited. These situations make the household so vulnerable that such a family is especially prone to sickness and death.

2.2 Poverty Measurement

A poverty measure is an aggregate indicator of a dimension of poverty. Two approaches used to derive poverty lines are the Cost of Basic Needs (CBN) and the Food-Energy-Intake (FEI) methods. The CBN method aims at computing the cost of basic needs whose common indicators include food, shelter, clothing, basic education, health status among others. The FEI method is the alternative to the CBN method, under this method the poverty line is obtained by finding the expenditure (or income) level at which the expected value of calorie intake, conditional on expenditure, equals the pre-determined food energy requirement.

The FEI and CBN poverty lines have inherent weaknesses when used as the bases for welfare comparisons. The FEI poverty line is computed under the strong assumption that food expenditure and calorie are not independently observed. It is imperative to note that the use of fixed food weights-to-calories for the whole country over time and over the entire income profile might be inappropriate due to changing food quality and food preparation method, hence household calorie availability has to be adjusted for various food losses that occur before the food is consumed. The weakness of CBN poverty line is compounded by the fact that there is no agreement on an anchor for estimating the non-food component of the poverty line, hence the tendency to arbitrary determination of the level of poverty.

One poverty measure that has been found manageable in presenting information on the poor is the Foster, Greer and Thorbecke (FGT) measure developed by Foster et al (1984). This measure is used to quantify the elements of poverty namely; the level, depth and severity (also known respectively, as incidence inequality and intensity) of poverty.

In the context of Liberia, specifically Monrovia, substantial poverty studies have not been done. However, according to the MDG Report (2004), the poor in Liberia live on about USD11 a month per household of six persons which is far below the conventional poverty line of USD1 a day. The report further indicated that over three-quarter (76.2per

cent) out of 2.7 million of Liberians are living below the national poverty line while about 52 per cent live in abject poverty. UNDP (2001) estimated Liberia's poverty status constructing poverty profiles. The study revealed that about 80 per cent of Liberia's population is poor while 85 per cent is unemployed but the data and the methodology employed were neither mentioned nor discussed.

2.2 Empirical Literature

Early estimates of poverty in Liberia were based mostly on the Rural Household Survey and Urban Household Survey, which is a rapid appraisal method that is qualitative in nature. It takes into account individual perception of poverty and does not use quantifiable measures. Food Energy Intake (FEI), Cost of Basic Needs (CBN) and FGT approaches are used to capture the quantifiable and measurable indicators of poverty lines in many countries.

Using the 1974-75 Ghana Household Budget Survey, Kyreme and Thorbecke (1991) estimated a cross section regression model for Ghana. In their model, the dependent variable was the total calorie gap for each household in the Survey and the explanatory variables were a set of economic, demographic and geographic location variables. They found that income and education of household are inversely related to household calorie gap.

Rodriguez and Smith (1994) used a logit regression model to estimate the effects of different economic and demographic variables on the probability of a household being in poverty in Costa Rica. The data used was from a national household income survey carried out in 1986. Among other results they found that the probability of being in poverty is higher the lower the level of education and the higher the child dependency ratio.

Based on the estimation of the determinants of poverty in Mauritania, Coulombe and McKay (1997) used multivariate analysis to analyse the determinants of poverty in Mauritania considering household survey data for 1990. They estimated a multinomial

logit model for the probability of being in poverty depending on household specific economic demographic explanatory variables. They found that low education, living in a rural area and high burden of dependence significantly increase the probability of a household being poor.

Tadesse (1998) in his study on Ethiopia showed the trends in urban poverty between 1995 and 1997 using subjective poverty and objective (consumption) poverty lines. The findings show that poverty slightly increased according to the consumption poverty lines. Moreover, the results reflected heterogeneous trends across cities in Ethiopia. Also a study by Kedir and McKay (2003) on Ethiopia using urban household survey data covering period 1994-1997 demonstrated the existence of chronic urban poverty. Results from the study revealed that chronic poverty in urban setting is associated with high dependency rates, large household size, lack of education, homelessness and other demographic factors of household.

Mwabu et al (2000) used the Food Energy Intake (FEI) and Cost of Basic Needs (CBN) to estimate the food and overall poverty lines for all provinces and for the whole country of Kenya. The welfare survey data of Kenya, constituting random sample of 10857 households and 59,183 individuals was used for the analysis. Using both CBN and FEI poverty lines to develop profiles, the study shows that pastoralists have the highest incidence of poverty, followed by subsistence farmers. Skilled private workers were found to be less poor relative to unskilled, possibly because the former receive fringe benefits such as free or highly subsidized housing, medical care and have greater opportunities to earn extra income from rent seeking activities. The authors also observed that for education level to rise, the government should invest more in education. Agricultural workers have the highest incidence of poverty followed by persons engaged in non agricultural or casual work. Evidence based on the data shows that employed persons in the different sectors who are non poor have other sources of income, better pay, and own property as well. The FGT(1986) and Sahn (1994) were followed as a basis of deriving food and overall poverty lines from the regression equation shown as,
$$\text{Log}(\text{food Expenditure}) = \alpha + \beta(\text{calories}) + \varepsilon .$$

Results indicated that rural absolute poverty ranges between 40 and 47 per cent and that of urban absolute poverty rate is around 29 per cent. Food poverty rate is between 38 and 47 per cent in rural areas and around 25-29 per cent in urban areas. Increase consumption by the poor, policies that enhance growth and provide broad-based employment were recommended as key factors to poverty reduction program.

In Tunisia, Ghazouani and Goaid (2001) performed a study relating to the determinants of urban and rural poverty. The study, whose objective was to identify some of the key contributory causes of poverty in Tunisia among urban and rural households, was inspired by the Deaton(1990) approach which uses a cluster data set that allows for the use of econometric panel data procedures based on the logit and probit models.

The combined results showed that in urban and rural areas, the main factors which contribute to poverty include education of household head, child dependency ratio, ratio of male to female employees in the household, socio-professional category of the head, family residence, type of lodging, the share of food budget assigned to cereal products and regional dummies.

Kabubo-Mariara and Kiriti (2002) performed a study to analyse the impact of structural adjustment programmes on poverty and economic growth in Kenya. They derived poverty measures using the 1992 and 1994 welfare monitoring surveys with the application of the CBN approach.

The study, which computed indexes of macroeconomic performance with changes in poverty to assess the impact of macroeconomic policies on poverty, results indicate that regional food poverty lines ranged from Ksh420 per adult equivalent per month to Ksh617 in 1992 and Ksh597 to Ksh880 in 1994, implying a decreased poverty between 1992 and 1994. Moreover, the outcomes indicate that poverty measures are more sensitive to changes in mean income than to changes in the distribution of income. The study recommended targeting of poor families (through bursary schemes, fee waivers,

scholarship and grants) since children from affluent families are opportune learning as oppose to their counterparts.

Kimalu et al. (2002) observed that poverty is multidimensional and can be manifested in many forms. Some groups in the population face a combination of predicaments associated with poverty such as, low income, illiteracy, premature death, early marriage, large families, malnutrition, illness and injury, which locks them into very low standards of living. They used the FGT poverty measure to quantify the level, depth and severity of poverty. They found rural poverty to stand at 59.56 per cent in 2000. The study also identified proximate indicators of poverty to include the immediate determinants for consequences of poverty. The study identified the proximate indicators of poverty as demographics, income, expenditure, health, education, water and sanitation, agricultural production, environment, insecurity, corruption and national governance. What follows is a brief elaboration of some of their findings.

Overall, and on average, the poor have larger households than the non-poor, lack of family planning awareness was identified as the determinant of large families and poverty, as large families tend to devote a large share of their budget on food, leaving little for education and other investments. The results indicate that households with more than seven members were the poorest with poverty levels of 69.43 per cent, while households with four to six members had poverty rate of 55.82 per cent for rural areas.

According to the study, two thirds of the rural poor had no access to safe drinking water, 72.2 per cent of the poor households had no access to sanitary facilities. Yield per acre for the non-poor is considerably higher than that of the poor, owing to differences between the two groups in accessing fertilizers, quality land, credit, irrigation and other agricultural inputs. Insecurity among the poor manifests itself in such forms as illness and injury, crime and domestic violence, crop failure, fluctuations in food prices and low demand for labor.

Okurut et al (2002) carried out a study to identify key factors accounting for differential poverty at the regional level in Uganda. The research specific objectives were: to estimate the national and regional food poverty lines, to identify poor households, to compare the socio-economic and demographic characteristics of the poor households between and within the regions, to compute poverty indexes based on National and Regional poverty lines, to identify the key determinants of regional poverty, and to derive policy implications for poverty alleviation in Uganda. The study, which employed primary data and an Integrated Household Survey of 1992, used the FGT methodology to estimate the poverty lines and indexes. Furthermore, the logistic model was used to analyse the determinants of poverty. Results of the study showed that Northern Uganda was the poorest region with the largest level of poverty and worst inequality. The study concluded with recommendation that it is incumbent upon government to use the regional poverty lines for planning and allocation of budget to alleviate poverty.

Alemayehu et al (2005) undertook a study to determine the household level of poverty in Kenya using a binomial and polychotomous logit model in their analysis. They used data from the Kenya Welfare Monitoring Survey of 1994. The authors found that the most influential factors accounting for poverty status, using the income based estimation, were the education level of household, size of the household, engagement in agricultural activities, while the size of the land holding was considered insignificant. Furthermore, results from the consumption model indicated fairly similar results with regard to attainment of education.

2.3 Overview of the Literature

The literature provides several distinct definitions of poverty, and suggests that poverty is a broad based phenomenon. The survey gives an insight into the methods used in measuring poverty, proximate indicators of determinants of poverty. Studies confirm that though poverty is more pronounced in rural areas, it is also prevalent in urban areas.

A brief review of the CBN and FEI methods of calculating poverty lines were done, and their merits and demerits considered. The major weakness, as indicated in the literature, suggests that for the CBN methods there is less agreement on an anchor for estimating

the non – food component of the poverty line. Therefore, Ravallion (1994) points to the criticism of the various procedures used for determining basic non-food consumption in the CBN on account for either arbitrariness or biasness. Hence there tends to be much arbitrariness in determining the level of poverty. In such a case, there are as many poverty lines as there are assumptions used to determine the level of non-food component. This is applicable even for the same data set. Thus CBN poverty lines may be inappropriate for guiding policy. The application of the Food –Energy Intake (FEI) method to derive poverty line represents only on infinitesimal level of basic needs, below which a decent material lifestyle is not possible and will form a basis for policy recommendation of anti-poverty initiatives at study area.

An overview of both theoretical and empirical literature is also very informative and underscores the need for knowing the poverty situation at a more disaggregated level not only at the district level, constituency level or even village level but also at the urban level. Differences between poverty lines across regions cause problems when comparing poverty rates across provinces and districts due to regional differences in terms of endowments, inter-regional variations in consumption level, preferences and command over goods all of which affect a household's poverty status. A key conclusion is that poverty analysis at the national and provincial level may not be the most ideal as a basis for poverty alleviation or intervention.

The theoretical and empirical literatures are applied in this study not only to derive the poverty line, determinants of poverty but also the level, depth and severity of poverty in Bushrod-Central Monrovia. To the best of my knowledge, no attempt has been made to derive and decompose poverty measures among socio- economic groups such as gender, marital status, education, household size and age group of the household head in the city. Besides, most poverty related studies pertaining to urban poverty are carried out in the developed countries. This study endeavors to analyse the magnitude of poverty with specific consideration to a postwar urban setting.

CHAPTER THREE: METHODOLOGY

3.1 Theoretical Framework: Poverty Measurement

Poverty is defined in many contexts depending on the existing welfare conditions unique to a given society. To measure poverty requires the identification of the poor as the first problem. The poor refers to those who lack resources to obtain the minimum necessities of life. Therefore, the level of income that is sufficient to buy the so-called minimum necessities of life defines the poverty line. In this regard, different approaches and methods have been advanced by different economists for the determination of the absolute poverty line, which are henceforth discussed in turn.

3.1.1 Basic Needs Approach

Many studies in poverty defined families to be in primary poverty if their total earnings are insufficient to obtain the minimum necessities for basic physical efficiency. Thus the empirical literature indicates how various studies estimated the minimum monetary costs of food that would satisfy average nutritional needs of families of different sizes. These costs of basic needs considered in estimating the poverty line given the size of the household. This poverty line based on the concept of physical subsistence involves a number of serious problems.

The approach to specifying poverty line based on the concept of physical subsistence is called the absolute approach to measuring poverty. An alternative approach is the "relative approach" but the problem of poverty in developing countries mostly relates to absolute poverty which is used in this study. The poverty line under the relative approach changes with the average earnings of the wage and salary earners, thus suiting developed countries. In the developing countries, the focus is more on the absolute standard of living than the relative standard of living because the essence is to ensure that nobody in the society should have a standard of living that is below the minimum necessary for physical efficiency. Drawbacks associated with the relative approach is that it may show a reduction in poverty when people's income may be falling all around, resulting in a fall of the standard of living of the poor as well as the non-poor. A poverty measure based on a relative approach is, in fact, a measure of inequality. Poverty should then be viewed as

an issue of inequality. If that is our view of poverty, then it is unnecessary to specify poverty lines. Thus, the construction of poverty lines should take account of differences in individual needs. This leads us to suggest the following axiom:

Axiom 1: The poverty line should be independent of individual needs

If two persons A and B have the same income but person A has greater needs than person B, then clearly, person A will be poorer than person B using the same poverty line for both persons.

Axiom 2: If two persons A and B have the same needs and face the same prices, then person A should not have higher poverty line than person B because person A has more expensive tastes than person B. Ravallion and Bidani (1994) define a poverty profile to be inconsistent if it classifies one of two households deemed to have exactly the same standard of living but located in different regions, as poor and the other as non-poor. Thus, consistency requires that the poverty line be fixed in terms of level of living required, e.g. by society.

Axiom 3: If person A enjoys a higher standard of living than person B, then the real poverty line for person A cannot be higher than that of person B. The real poverty line is the nominal poverty line adjusted for regional costs of living differences. This axiom implies that the difference in regional poverty lines for persons with the same needs should be entirely attributed to difference in regional costs of living. The richer regions generally have more expensive tastes, which should not entitle them to have a higher real poverty line. Axiom 3, in fact, follows from Axiom 2. The “absolute” approach to measuring poverty implies that real poverty line is fixed over time. Thus, the poverty line should change over time only because of changes in prices.

Axiom 4: A person on the poverty line in period t , denoted by Z_t , should have exactly the same standard of living as the person on the poverty line in period $t+1$, denoted by Z_{t+1} . This axiom implies that the poverty line should be adjusted over time by means of the true cost of living index. Thus the observed differences in poverty line measure would reflect no

real change in the poverty line. Hence the standard of living implied by the poverty line does not change over time.

3.1.2 Nutritional Requirements

The first step in the construction of poverty lines is to specify the food requirements of individuals or families. An individual may be regarded as non poor if he or she has access to an adequate source of food. Ideally, the construction of food poverty lines must take into account all the six nutrients⁷. This is almost an impossible task. Our focus in this study is on calorie (energy) deficiency. Recent research in this area suggests that in many developing countries, diets are such that protein requirements are met if calorie needs are met.

3.1.3 Food Energy Intake Method

Greer and Thorbecke (1986) proposed a method of computing the food poverty line at which a person's food energy intake is just sufficient to satisfy a given required number of person's daily calories. They estimated the following cost-of-calorie function:

$$\ln(X) = \alpha + \beta C + u \quad (1a)$$

Where X is the expenditure on food basket that is actually consumed by a person, C is the number of calories that are obtained from that food basket, and u is the error term. If the population is divided into k homogeneous groups or regions, then one can estimate equation (1a) for each of these regions. If R is the recommended calories requirement, which is the same for all regions, then the food poverty line is estimated separately for each region as

$$Z = e^{(\alpha' + \beta' R)} \quad (1b)$$

Where α' and β' are the coefficient estimates of α and β , respectively and e represents numerical value of 2.718. A person is identified as poor if that person food expenditure is less than the food poverty line. This poverty line can be interpreted as the food expenditure level at which a typical individual's nutritional needs will be met. The corresponding poverty line could then be interpreted as the total income or expenditure

⁷ The nutrients are protein, vitamin, water, carbohydrate, fat and mineral

level at which a typical individual's nutritional needs will be met (Greer and Thorbecke, 1986). Ravallion and Bidani (1994) describe this approach as Food Energy Intake (FEI) method.

The FEI method is simple and has modest data requirements. This method does not pre-empt the researcher's subjective concept of what constitutes a palatable, but inexpensive diet. Therefore, it becomes more realistic to derive the food expenditure from the calorie-expenditure relationship in the population. Based on given information on food expenditure and calories consumption, it is possible to estimate the cost of acquiring a given number of calories by using the cost-of-calories function. However, this approach does not take into account non-food needs, but it has been widely used in contemporary poverty studies. A few among these are Mwabu et al (2000), Okurut et al (2002), and Kabubo-Mariara and Kiriti (2002). Mwabu et al (2000) notes that the FEI method has become an accepted methodology for developing countries, because the data are easily available to complement it.

3.1.4 Food Ratio Approach

This approach considers food as the main determinant factor for the absolute poverty line. The Engel function is used in the derivation of the poverty line by considering a certain type of food-income ratio as poverty threshold. Comparatively, families are considered poor if the actual food-income ratio is higher than the threshold, and non-poor provided the ratio is lower than the threshold. While the strength of this approach is that the problem of defining the minimum nutritional needs is avoided, Glewwe and Gaag (1990) found that Engel's observation may not always hold for the poorest household in developing countries. The approach holds less attraction as a poverty measurement technique.

This study used the food-needs in determining the poverty line and also considered the estimated relationship between calories intake and total consumption expenditures for arriving at absolute poverty line. The relationship can be expressed as,

$$C = \alpha + \beta \ln E \quad (3.0)^8$$

Where C is daily calorie intake per adult equivalent and E is monthly consumption expenditure per adult equivalent. Mwabu et al (2000) used the functional equation (3.0) in estimating the calorie-expenditure relationship.

Thereafter, the next step was to measure the incidence of poverty based on the number of people below the poverty line and its severity. Further detail regarding this approach is explained in the model.

3.2 Estimation Issues: Computing Poverty Lines and Indices

The methodology adopted in this study was employed for Kenya by Mwabu et al (2000), for Uganda by Okurut et al(2002) to estimate the determinants of poverty and the construction of poverty lines following FGT(1984, 1986). This study adopted the methodology as a basis to measure the poverty line, level, depth and severity in Bushrod-Central Monrovia based on its relative accuracy. This study focused on expenditure rather than income as an indicator of welfare. This is because, firstly, measuring income may pose a lot of problems than measuring consumer expenditure. Secondly, expenditure can be captured by first assessing computed expenditure over the previous few weeks. It is easy for a household head to remember the food items consumed over the last seven days and compute expenditure on each food item using prevailing market prices.

3.2.1 Poverty Line Estimation

Basic minimum requirements are divided into food and non-food components. Thus, overall poverty line is derived from the summation of the food expenditure level, associated with the required food energy intake (FEI), and the non-food expenditure allowance.

This study used the Food–Energy Intake (FEI) method. Thus poverty line represents only the minimum levels of basic needs below which a decent material lifestyle is not possible. However, there is no agreement to date in literature on how to determine the

⁸ This equation is fully derived in section 3.2.1

non-food allowance component of minimum basic needs. In this study, the method adopted is the mean non-food household spending in the range of the poverty defined by a band of negative 20per cent and positive 10per cent, respectively, on the lower and upper sides of the food poverty line. This is designed to give more weight to the food spending of the poor in the lower side of the Food Poverty Line.

The common procedure of estimating the FEI is to run a regression of the cost of a basket of commodities consumed by each household on the calorie equivalent or food energy implied from the basket of goods. Next step involves computing the cost of purchasing a basket of commodities which would be considered adequate to yield the basic energy intake. Preferably, the FEI could be computed by taking a sub-sample of households with total consumer expenditure that is equivalent or close to the stipulated calorie level and compute a simple average. The FEI approach will yield the total consumer expenditure associated with the basic calories intake, since food expenditure is the dependent variable in the regression equation.

3.2.2 FEI Poverty Line

The Foster, Greer and Thorbecke (FGT, 1984) model was adopted in this study to measure poverty. The various steps are as follows:

Total value of food consumed (Q_j^*) by each household is given as;

$$Q_j^* = W_j^* + T_j^* \quad (1.0)$$

Where

T_j^* = Value of own production consumed

W_j^* = value of purchased food consumed by each household which is obtained by the quantities of different food types purchased (d_i) by the prices per unit (p_i). Thus,

$$W_j^* = \sum_{i=1}^n d_{ij} p_{ij} \quad (1.1)$$

where

W_j^* = value of purchased food consumed by the jth household

d_{ij} = the quantity of the ith food items purchased by the jth household

p_{ij} = the local price paid by the jth household for the ith food item

The product of own production, N_{ij} , (i.e, which includes donations of food), and the local prices (p_{ij}) gives the value consumed by the household (T_{ij}). T_{ij} can be considered as the imputed value of consumption. Thus,

$$T_j^* = \sum_{i=1}^n N_{ij} p_{ij} \quad (1.2)$$

The adult equivalent (A_j) for each household is proxied by the age range of the household. This study adopts the equivalence scale developed by Anzagi and Bernard (1997) as noted in Mwabu et al (2000). Both cite from FGT (1986), which gives age groups 0-4years a consumption weight of 0.24, 5-14years a weight of 0.65 and ages 15+ years a weight of one. The importance of this scale is that it does not assign specific weight to male or female thus making it easy for estimation.

The total value of food consumed per adult equivalent is derived by dividing the total value of food by household adult equivalent:

$$Q_j = \frac{Q_j^*}{A_j} \quad (1.3)$$

where

Q_j^* = total value of food consumed by the jth household

A_j = adult equivalent of jth household

Q_j = total value of food consumed per adult equivalent units

The different types and quantities of foods consumed by the different households were converted into calories, C_j , using the calories equivalents following West et al (1988).

The regression model used to estimate parameters and useful in determining food poverty lines is given as:

$$\ln Q_j = \alpha + \beta C_j \quad (1.4)$$

where

Q_j =j's household total food expenditure per adult equivalent

C_j =j's household total calorie consumption per adult equivalent

α and β = parameters to be estimated

The food poverty line, Z_f , which is the estimated cost of acquiring the calories recommended as a daily allowance is estimated using the equation:

$$Z_f = e^{(\alpha + \beta R)} \quad (1.5)^9$$

Where

Z_f =Food poverty line

R= Recommended daily allowance of calories per adult equivalent of 2250

3.2.3 CBN Poverty Line

In the estimation of the “cost of basic needs”, three steps are considered. The first step selects the minimal food basket necessary for decent living. In the second step, the food basket is valued, and its cost denoted as Z_f . In the third step an analogous estimate of the required non-food expenditures denoted as Z_{nf} is computed and added to Z_f to obtain the total CBN poverty line, Z

3.2.4 Poverty Measures (FGT)

Based on the above analysis and the FGT (1984), the various measures of poverty (P_α) are computed using the formula below:

$$P_\alpha = 1/N \sum_{i=1}^q (1 - Y_i / Z)^\alpha \quad (1.6)$$

Where

P_α is a measure of absolute poverty, including food poverty,

Y_i is the total expenditure of household, expressed in per adult equivalent ($i=1 \dots N$),

⁹ The lower case letter 'e' in equation (1.5) represents natural log of value 2.718

Z is the overall poverty line, expressed in per adult equivalent,

q is the total number of poor households.

α is the FGT parameter, which may be interpreted as a measure of poverty aversion, $\alpha \geq 0$.

3.2.5 Headcount Ratio

The next measure of poverty is the head count ratio which refers to ratio (or share) of the number poor individuals to the population. It indicates the proportion of individuals (or households) below the poverty line i.e. the proportion of the population that cannot afford to purchase the predetermined basic basket of goods. The headcount ratio therefore indicates the level of poverty within the population.

3.2.6 Poverty Gap

The depth of poverty is captured by the index represented by $\alpha = 1$, which measures the average difference between the poverty line and the actual income/expenditure of each poor household. This measures the shortfall of the average expenditure of the poor relative to the poverty line. It provides information on how much poor people are relative to the poverty line hence the depth of poverty. It can be used to estimate the resources required to bring the expenditure of every poor person up to the poverty line, thereby eliminating absolute poverty. The poverty gap is, however, insensitive to the effect of income distribution among the poor, on poverty.

3.2.7 Poverty Severity

This measure reflects the degree of inequality among the poor. Poverty severity is measured by the square of the poverty gap, and it increases more than proportionately with the poverty gap.

3.3 Determinants of Poverty: Predicting Poverty at the Household Level

The logit model is used in this study to derive the determinants of poverty since the data used in this study were cross-sectional. The model ensures that the probability lies in the interval of 0 and 1.

The regression form of the model is as follows;

$$Y_i^* = \alpha + \beta X_i + \varepsilon \quad (2.0)$$

Where

Y_i^* represents a latent variable which is assumed to be normally distributed i.e. $\varepsilon \sim N(0, \sigma^2)$

but Y_i is not.

Vector X_i represents values of attributes e.g. education, sex of household head, marital status of the household head, household size, age of the household head, assets (e.g. land)

Y_i denotes the observable value, which takes on the value 1 or 0. In this study, $y = 1$ for the poor household, while $y = 0$ for the non-poor households.

$$Y_i = \begin{cases} 1 & \text{if } Y_i^* > 0 \\ 0 & \text{if } Y_i^* \leq 0 \end{cases} \quad (2.1)$$

The cumulative logistic probability function is derived as follows

$$P_i = F(Y_i^*) = F(\alpha + \beta X_i) \quad (2.2)$$

$$= 1 / (1 + e^{-Y_i^*})$$

$$= 1 / (1 + e^{-(\alpha + \beta X_i)}) \quad (2.3)$$

Multiplying both sides of the equation (2.3) by $(1 + e^{-(\alpha + \beta X_i)})$ we obtain

$$(1 + e^{-(\alpha + \beta X_i)}) p_i = 1 \quad (2.4)$$

dividing by p_i and subtracting 1 we get

$$e^{-Y_i^*} = \frac{1}{p_i} - 1 = \frac{1 - p_i}{p_i} \quad (2.5)$$

thus taking the reciprocal we get $e^{Y_i^*} = \frac{p_i}{1 - p_i} \quad (2.6)$

Considering log of both sides of the equation gives $Y_i^* = \ln \frac{p_i}{1-p_i}$ or

$$\ln \frac{p_i}{1-p_i} = Z_i = \alpha + \beta x_i \quad (2.7)$$

The ratio $\frac{p_i}{1-p_i}$ is called the odds ratio and $\ln \frac{p_i}{1-p_i}$ is called the log-odds or logit index which acts as dependent variable. This ratio gives the odds that the household is poor. The log-odds indicates that the predicted probability will lie between 0 and 1. However, the predicted odds ratio lies between 0 and infinity.

Equation(2.3) is vital since it indicates the probability of a given household being poor or otherwise. Therefore, this equation was estimated in the study to analyse the determinants of poverty based on the social profile of the household.

3.4 Data

3.4.1 Study Site

The study sampled population resident in Bushrod-Central Monrovia. These areas were considered because it is believed that significant segment of those who fled the war from the rural part of the country are sheltered there. Monrovia, the capital of Liberia, has an estimated area and population of 10sq.km (about 4 sq.mi) and 1 million respectively. Central-Monrovia and Bushrod Island are located in Montserrado County which is one of the sixteen political sub-divisions of the country. Its major inhabitants consist of the Americo-Liberians¹⁰, indigenous people from other parts of the country and other foreign nationals. The activities that influencing settlement pattern in Monrovia are industrial production and urban infrastructure, such as electricity, better health and education facilities.

3.4.2 Data Collection Techniques

This study relied on qualitative and quantitative primary data which was collected through an administered questionnaire to establish the determinants of poverty as well as households expenditure patterns. Questionnaires were administered via face-to-face

¹⁰ These are settlers repatriated from America around 1600s and 1800s

interviews with the respondents' households. The survey instruments covered areas like household composition, expenditure, employment status and asset ownership as well as physical characteristics and basic food compositions of the residents and services available to the residents of the households. We initially embarked on collecting data from 200 households, but collected data from 170 households. Due to poor response from some of the households, we nullified 20 households whose responses were improper, thereby considering 150 households for analysis. The samples were selected through a two-stage sampling process due to the scope of the study, time and financial limitations. This method allows for the selection of sampling cluster by sub-location. Ten enumerators, whom received short term training in data collection procedures, implemented the data collection.

3.4.3 Data Analysis

The data were analysed using Stata software package. Estimates were employed at the poverty lines, measures and determinants of poverty.

CHAPETER FOUR: EMPIRICAL RESULTS AND THEIR INTERPRETATIONS

4.1 Sample Statistics

About 61 per cent of the sample households were selected from the Bushrod-Island and 39 per cent from Central-Monrovia. The results presented in this section highlight the poverty level, depth and severity of poverty as well as the main characteristics of the poverty.

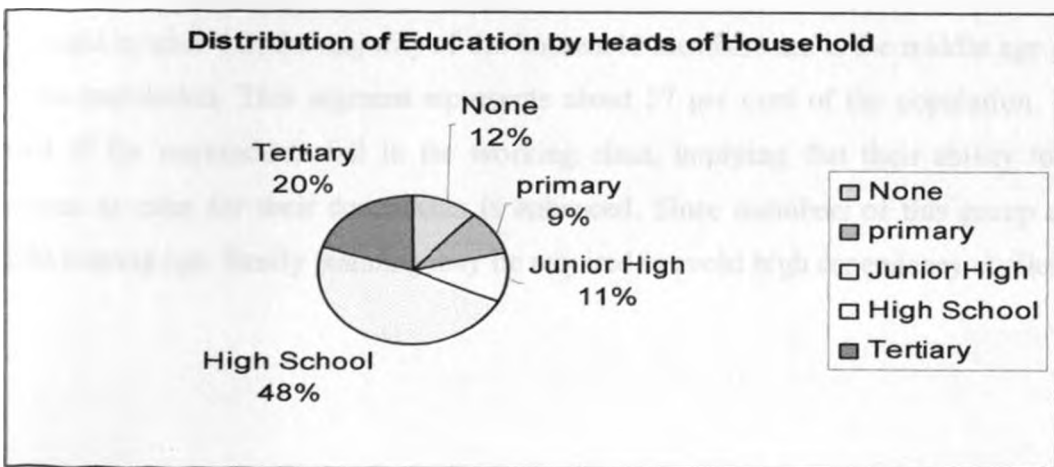
4.1.1 Educational Level and Gender

Table 4.1: Educational Level of Household Head by Gender

Level	Female Frequency	Male Frequency	Total Frequency	Per cent (%)
None	9	9	18	12
Primary	3	11	14	9
Junior High	2	14	16	11
High School	4	68	72	48
Tertiary	1	29	30	20
Total	19	131	150	100

Source: survey data

Figure 4.1: Pie chart of Education Distribution of Household Head



Source: Survey data

As indicated in the above table and chart, the level of education of the respondent indicates that most household heads in the study areas have some education. Households with at least high school and tertiary education constitute 48 per cent and 20 per cent, respectively, while those with primary education account for 9.3 per cent of the households interviewed. Interestingly, the illiterate segment represents 12 per cent of the total sample, of which female headed households constitutes 5.3 per cent of the illiterate sample.

4.1.2 Age Distribution

Table 4.2: Age Distribution of Household Members

Age in years	Female Frequency	Male Frequency	Total Frequency	Percent (%)
Less than or equal to 18 years	257	229	486	41.86
Between 18 and 64 years inclusive	327	332	659	56.76
Above 64 years	10	6	16	1.38
Total	594	567	1161	100

Source: survey data

As noted in table 4.2, the majority of the household members are in the middle age group of the population. This segment represents about 57 per cent of the population. Thus, most of the respondents fall in the working class, implying that their ability to earn income to cater for their dependents is enhanced. Since members of this group are in child bearing age, family planning may be required to avoid high dependency challenges.

4.1.3: Gender and Marital Status

Table 4.3: Marital status of Household Head by Gender

Status	Female Frequency	Male frequency	Total frequency	Percent (%)
Single	3	7	10	6.7
Married	6	124	130	86.4
Widowed	10	0	10	6.7
Total	19	131	150	100

Source: survey data

The responses of household heads indicate that majority of household heads are married, as represented by about 87 per cent with male reflecting the largest married proportion of about 96 per cent. While married men outnumbered the women, the results show that there are 6.7 per cent each of widowed and unmarried. Having households headed by single parents has an effect of shifting more burdens to society and further escalating poverty because catering for themselves and children is difficult. However, married certificates were not depicted to authenticate marital status. Therefore, it is possible that many people are loosely defined into marriage relationship, which portends economic and emotional security for children in the future.

4.1.4 Residence of households

Table 4.4: Monrovia born residents, by Gender

Is this your birth Place?	female	male	total	Percent (%)
No	14	93	107	71.3
Yes	5	38	43	28.7
Total	19	131	150	100

Source: survey data

Responses from household heads regarding their birthplace suggest that majority were not born in Monrovia, that is, 71.3 per cent. This shows that most of the households must

have migrated to Monrovia due to internal conflict which halted availability of social services and lack of employment opportunities outside Monrovia. Hence, the large influx to Monrovia has the tendency of aggravating poverty since most of the migrants do not have professional skills. However, while some of the internal migrants are returning to their towns and villages, others might not.

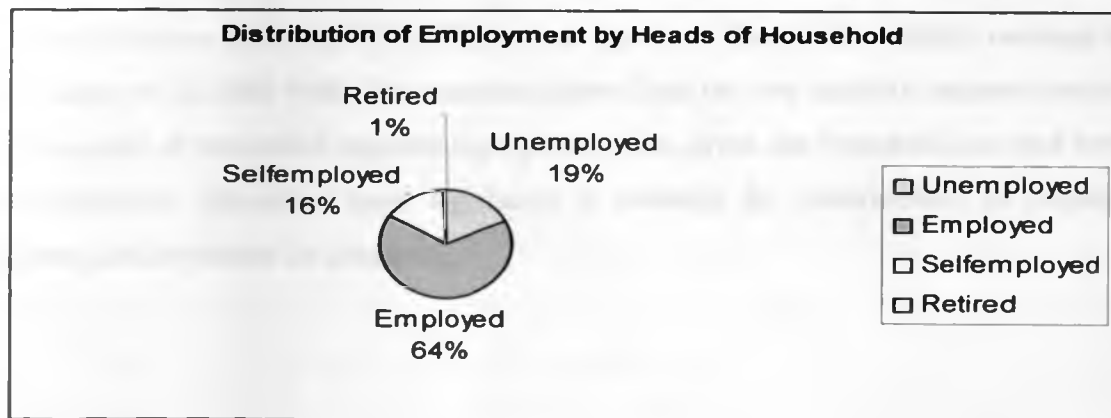
4.1.5 Employment and Gender

Table 4.5: Employment status of Household Head by Gender

Employment Status	Female	Male	Total	Percent (%)
Unemployed	3	25	28	18.7
Employed	12	85	97	64.5
Self Employed	4	20	24	16
Retired	0	1	1	0.7
Total	19	131	150	100

Source: survey data

Figure 4.5: Pie Chart Distribution of Employment status of Household Head



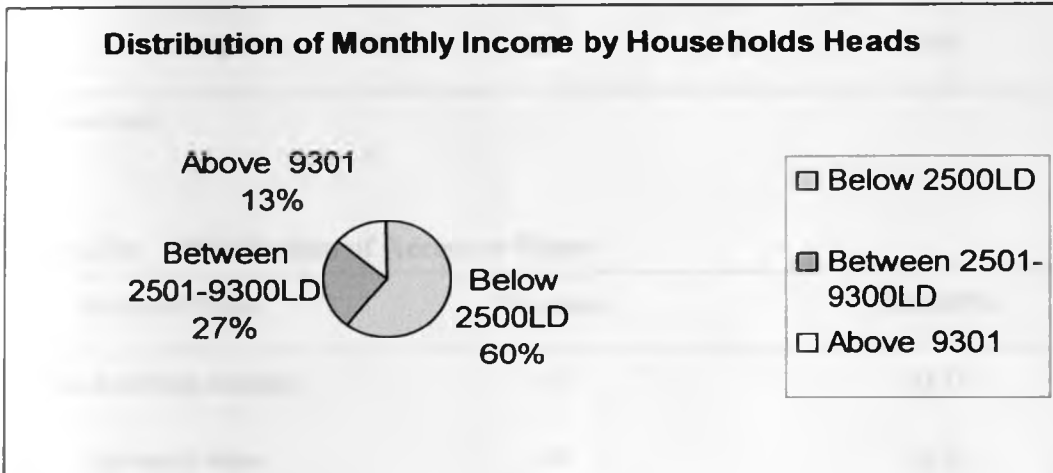
Source: Survey Data

Though most of the household heads are educated, table and chart 4.5 show that about 65 per cent are employed and 16 per cent are self-employed. Conversely, about 19 per cent are unemployed with males accounting for 92 per cent of the unemployed. The implication for the high males unemployed implies that most of them are likely to be

poor due to high unemployment rate and low level of education. Moreover, the fact that about 75 per cent of the household heads have an education attainment below the tertiary level indicates that they are unlikely to obtain a well-paid jobs in private or public sectors.

4.1.6 Distribution of Monthly Income

Figure 4.6: Pie Chart for Income Distribution



Source: survey data

Though a significant proportion of households is educated and employed, chart 4.6 does not only depict a high unequal distribution of income but also a low monthly income of LD2500 or less for 60 per cent of household heads. While 13 per cent accounts for those with monthly income above LD9301, 27 per cent represents those with monthly earnings in the range of LD2501-9300. The assertion drawn from the low monthly income received by the majority of households suggests a high poverty rate, given the household size and level of education. Therefore, wage legislation is essential for consideration to augment income and to reduce the inequality.

4.1.7 Distribution of Water and Electricity

Table 4.7a: Distribution of Access to Electricity

Do you have electricity?	Frequency	Percent (%)
No	96	64
Yes	54	36
Total	150	100

Source: survey data

Table 4.7b: Distribution of Access to Water

Sources of Water	Frequency	Percent(%)
Tap in walking distance	92	61.33
Tap outside home	44	29.33
Piped into Home	14	9.33
Total	150	100

Source: survey data

Table 4.7a shows that 64 per cent of respondents do not have electricity. The remaining 36 per cent of households gets electricity through private means from a limited public supply. Also, table 4.7b reveals that 61.33 per cent of households sourced water from a walking distance and 29.33 per cent have tap water outside their homes while 9.33 per cent have water piped into their homes. The effect is that the lack of adequate electricity supply impedes substantial investment opportunities while the absence of safe drinking water poses health hazard through water borne diseases.

4.1.8 Distribution of toilet facilities in different types of houses

Table 4.8: Distribution of toilet facilities

Type of toilet	Type of house				Total
	Concrete	Mat	Mud Block	Zinc	
Latrine	54	2	13	20	89
Septic System	26	0	0	1	27
Sewage System	8	0	2	0	10
None	12	2	2	8	24
total	100	4	17	29	150

Source: survey data

It is noteworthy that the kind of toilet accessible to particular household has impact on the health status of that family. Therefore, table 4.8 indicates that latrine or pit toilet is very common in concrete, mat, mud block or zinc houses, accounting for 89 out of 150 households or 59.33 per cent with the bulk of it (60.67 per cent) being found in concrete houses. Sewage system and septic system toilets representing 24.6 per cent of the toilets are found in others types of houses except most mat houses. Importantly, only 16 per cent of all the houses do not have toilets. Large segment of the different houses have pit latrine because it is difficult to maintain flush toilets in houses due to lack of piped water.

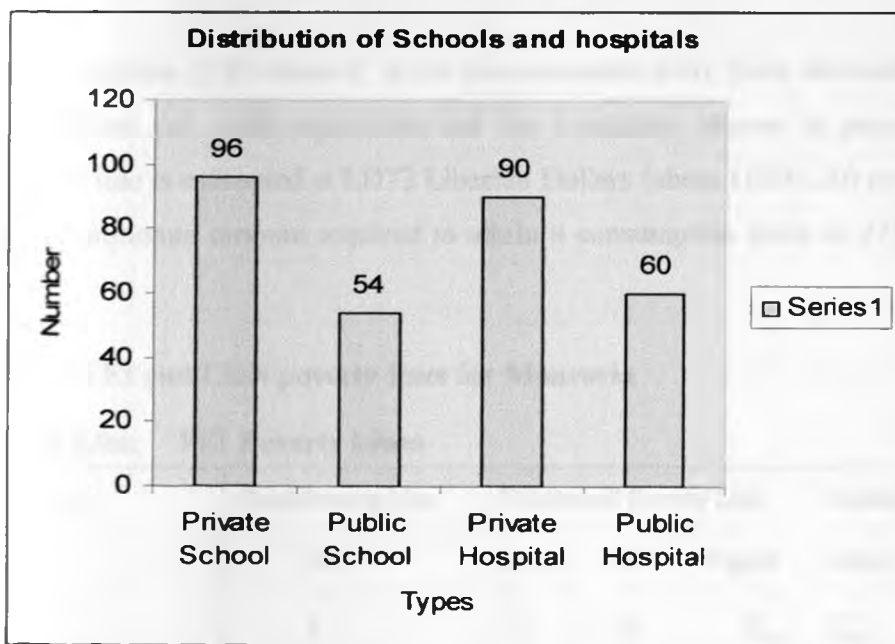
4.1.9 Access to Schools and hospitals

Table 4.9: Distribution of Access to hospitals and schools

Type of medical	Type of school		
	Private	Public	Total
Private	68	22	90
public	28	32	60
Total	96	54	150

Source: survey data

Figure 4.9: Histogram of Distribution of Access to hospitals and schools



Source: Survey data

The availability of schools and hospitals in communities is highly essential for the attainment of a healthy society. From the survey indicated in the chart and table 4.9, the total of 90 private hospitals and 96 private schools, accounting for 60 per cent and 64 per cent, respectively, are accessible to households. There are 60 public hospitals accounting for 40 per cent of hospitals and a total of 54 public schools accounting for 36 per cent in the study area. The households with access to the mix of public hospitals

and private schools as well as private hospitals and public schools total 28 and 22 representing 18.7 per cent and 14.7 per cent, respectively. The large number of private hospitals implies that households spend significant proportions of their earnings on medical care since private hospitals are profit making entities. Impoverished households whose income is inadequate to seek formal medication are likely to revert to traditional medication. Hence, these issues call for a policy change to increase public access to hospitals and schools in the communities.

4.2 Estimating the Poverty Lines

To get the various estimates of poverty lines, the food expenditure per adult equivalent was regressed on the calorie per adult equivalent. The result obtained is indicated below:

$$\ln Q = 3.91 + 0.00016C \quad (2.8)$$

(16.59) (2.92)

From equation (2.8) where C is the recommended daily food allowance, Q is the food expenditure per adult equivalent and the t-statistics shown in parenthesis, the food poverty line is estimated at LD72 Liberian Dollars (about USD1.20) per adult equivalent as the minimum amount required to attain a consumption level of 2250 kilocalorie per day.

4.2.1 FEI and CBN poverty lines for Monrovia

Table 5.0a: FEI Poverty Lines

Location	Food Poverty Line	FEI Overall Poverty Line			Nonfood Poverty Line		
	FEI	Lower	FEI	Upper	Lower	Mean	Upper
	Z_f	Z_L	Z_r	Z_U	Z_{nf}	Nonfood(Z_n)	Z_{nf}
Bushrod-Central Monrovia	LD2160/month	2196.40	2339.03	2481.66	36.4	179.03	321.66

Source: survey data

Table 5.0b: Estimates of FEI and CBN Poverty Lines

Poverty Lines	Estimation Method (all in Liberian Dollars, LD)	
	FEI	CBN ¹¹
Food Poverty Line	2160	2301
Non-Food Poverty Line	180	180
Overall Poverty Line	2340	2481

Source: survey data

In table 5.0a, the food poverty line is computed at LD72 (USD1.20)¹², which indicates the minimum daily expenditure requires obtaining a calorie consumption of 2250kilocalories as recommended by WHO/FAO (1985). In monthly terms, LD2160 (USD36) per adult equivalent reflects the monthly food poverty line. Based on the food poverty line, the non-food poverty line is estimated at about LD180 considering the upper and lower bound poverty lines at 20 per cent below and 10 per cent above. Adding the lower and upper bound nonfood poverty lines to the FEI poverty lines and averaging the two resulted to the attainment of the overall FEI poverty line of LD2339.03 (about USD39) as the minimum monthly money amount required for household to afford its monthly basic necessities. Alternatively, table 5.0b depicts the overall CBN poverty lines of LD2481 (about USD42) per month, computed by considering a fixed market basket constituting eleven food items commonly consumed in Liberia. Interestingly, both poverty lines exceed the specified international poverty line of 1USD per day or 30USD per month as requirement, respectively for a person's daily or monthly subsistence. One explanation for this is that the cost of living in urban setting like Monrovia is usually higher than in the rural areas. The urban setting often experiences greater impact of inflation. Supportively, the NHDR (2006) asserts that incomes in Liberia are low and have not changed over several decades despite rising prices with average annual consumer price changes ascending from 14.2 per cent in 2002 to 15 per cent in 2003. Therefore, based on our findings the international poverty line of 1USD per day is not usually a good measure for poverty, specifically in an urban setting like Monrovia, which experiences rising inflation.

¹¹ See Appendix 3 for the CBN computation

¹² The official exchange rate as at April, 2007, from CBI. bulletin is 1USD=60LD and it is flexible

4.2.2 FEI and CBN Measures

Table 5.1: FEI and CBN Indices

Approach	P_0	P_1	P_2	N
FEI	56.6	27.8	7.7	85
CBN	57.3	29.6	8.7	86
Overall FEI	58.7	11.2	1.25	88
Overall CBN	62.7	14.9	2.2	94

Source: survey data

Following the FGT (1984), the poverty level, depth and severity were estimated. As noted in table (5.1) and based on the FEI, 56.6 per cent, 27.8 per cent and 7.7 per cent account for the level depth and severity of poverty respectively while the overall FEI representing level, depth and severity were 58.7 per cent, 29.6 per cent and 8.7 per cent respectively. In the same pattern, the CBN poverty level, depth and severity represented 57.3 per cent, 29.6 per cent and 8.7 per cent respectively and the overall CBN accounts for 62.7 per cent, 14.9 per cent and 2.2 per cent respectively. It is noteworthy that though the level of poverty remains high, the poverty gap is very wide coupled with high degree of inequality. While the analysis of the various poverty estimates confirms the UNDP (2001) findings that Liberia is one of the poorest countries in the World, the poverty levels estimated calls for intensive or concerted poverty reduction strategy.

4.2.3 Disaggregation of Poverty by Size, Age and Education of Household Heads

Table 5.2a: Poverty rate by Gender of Household Head

Gender of household head	Below FEI poverty line(Overall)		Below CBN poverty line(Overall)	
	Bushrod	Central	Bushrod	Central
Female	66.7%(N=12)	28.6%(N=7)	91.7%(N=12)	42.9%(N=7)
Male	57%(N=79)	61.5%(N=52)	59.5%(N=79)	65.4%(N=52)
Over all Poverty Rate	57.7%(N=91)	57.6%(N=59)	63.7%(N=91)	62.7%(N=59)

Source: survey data

The poverty estimates by gender in table 5.2a, based on the overall FEI and CBN show that female headed households have poverty rates which exceed the male headed household for Bushrod Island and the opposite is noted in Central Monrovia. In the overall FEI estimated results, the female headed household poverty rates in Bushrod Island exceed the male headed household by about 15 per cent and on the contrary the female headed household in Central Monrovia is less by about 54 per cent. Furthermore, the CBN poverty rates indicate that male poverty rates representing 59.5 per cent in Bushrod Island falls short of the female poverty rate, which accounts for 91.7 per cent with the latter exceeding the former by about 36 per cent. With respect to Central Monrovia, male headed household poverty rates surpass female headed household by 34 per cent. It is important to note that majority of household head below the poverty line are aged between 44-75, with majority possessing only high school or junior high level education as noted in the tables 5.2b and 5.2c below.

Table 5.2b: Poverty rate by Age of Household Head

Age	FEI Overall			CBN Overall			Sample
	P0	P1	P2	P0	P1	P2	N
Less than/equal 43years	67.8	12.1	1.5	72.9	16.5	2.7	59
Greater than/equal 44 years	51.6	10.6	1.1	56	13.9	1.9	91

Source: survey data

In Table 5.2b, both FEI and CBN results manifest high level of poverty rate in age group less than 43years compare to household heads in age group above 44years. However, distribution of poverty by age groupings does not only justify the high level of poverty in the study area, but also its severity (P2).

Table 5.2c: Poverty rate by Education levels of Household Head

Level	Overall FEI			Overall CBN			Sample
	P0	P1	P2	P0	P1	P2	N
None	50	16	2.6	61.1	19.1	3.8	18
Primary	57.1	11.4	1.3	57.1	14.7	2.2	14
Junior High	68.8	16.3	2.7	68.8	20.1	4.1	16
High School	58.3	26	6.8	61.1	12.3	1.5	72
Tertiary	60	29.9	8.9	66.7	15.9	2.5	30

Source: survey data

The distribution of poverty by education is depicted in table 5.2c and indicates high poverty rates of 68.6 per cent constituting household heads with junior high education and 60 per cent representing household heads with tertiary education for the FEI. The poverty rate with respect to the CBN also shows similar situation. Conversely, the CBN shows a low poverty rate of 57 per cent for household with primary education, while the FEI depicts low poverty rates of 50 per cent accounting for household head with no level

of education. Generally, the high poverty rates with respect to those with education can be explained on the basis of complete disregard for education by past governments, low incentives, high dependency and collapse of the formal sector over the last two decades when situation in the country was volatile. Furthermore, the criteria for employment, mainly in public sector, were not based on meritorious consideration, instead a basis to gain political support from factional leaders for peace. Hence, this resulted to high expansion of the civil servants, irrespective of qualification, thereby resulting to low productivity and low wages. However, though situation prevailed today and efforts are being made by current government to revalue education, it must be robust to reverse the positive impact of poverty on education.

Table 5.2d: Poverty rate by Size of households

Size	Overall FEI			Overall CBN			Sample
	P0	P1	P2	P0	P1	P2	N
Less than/equal 6members	53.7	11.6	1.4	40.7	14.9	2.2	54
Between 7 & 10 inclusive	56	10.3	1.06	58.7	13.8	1.9	75
Above 10	80.9	13.4	1.8	95.2	18.9	3.6	21

Source: survey data

Considering the poverty rates by size of the households as noted in table 5.2d, household size greater than ten members show very high poverty rates for both FEI and CBN. This explained the fact that household with more members usually find it difficult to consume the basic necessities required for daily sustenance, hence they are poor in terms of FEI and CBN. Generally, the low level of education by most household heads and the large family size can be attributed to the prolonged civil conflict.

4.3 Determinants of poverty

4.3.1 Logit and Logistic Analyses of Poverty Status

Table 5.3a: Logit Regression Results

Dependent Variable: Poverty Status(P=1 if poor)

Variables	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
xhsiz	0.2474886	0.0914064	2.71	0.007	0.0683354	0.4266418
xsexhhednum	-0.9566246	0.6259402	-1.53	0.126	-2.1834450	0.2701956
xemplhnum	-0.4925751	0.2796901	-1.76	0.078	-1.0407580	0.0556075
xeduchnum	-0.0151309	0.1343906	-0.11	0.910	-0.2785317	0.2482699
xchldprim	0.2346632	0.1240022	1.89	0.058	-0.0083767	0.4777030
xagehh46_75	-0.7859758	0.4488272	-1.75	0.080	-1.6656610	0.0937094
xearnrs	-0.1103752	0.1662192	-0.66	0.507	-0.4361588	0.2154084
cons	1.647623	1.7895800	0.92	0.357	-1.8598900	5.1551360
Prob > chi2	0.0314			Log pseudolikelihood	-73.96752	
Wald chi2(6)	18.34			Pseudo R2	0.13540	

Description of Variables

Variables	Descriptions	Variables	Descriptions
Constant	Constant term	Xeduchnum(Educated=1)	Education level of household head
Xagehh45	Age of household head aboven 45years	Xsexhhednum (Female=1)	Gender of household head
xhsiz	Household size	Xemplhnum(Employed=1)	Employment of household head

Following the estimation of poverty line, the functional relationship was estimated to capture the determinants of poverty using the logit and logistic models discussed in section (3.3). Since most of the household characteristics such as gender, employment and educational level are qualitative, dummy variables were generated before estimating. The dependent variable is the household poverty status and explanatory variables are age of household heads, household size, number of earners in the household, education level of household head, sex of household heads, employment status of household heads, number of children in primary school. As shown in table 5.3a, only the variables representing the household number of children in primary school and the household's size are positively related to the dependent variable (poverty), while all the others reflect a negative relationship. The results indicate that the coefficients on female gender of household head, on education of household heads and on the number of income earners in a household appear to be insignificant at 1 per cent but the direction of the sign is vital,

implying female headed household, educated household head relative to uneducated and households with more wage earners are less likely to be poor. Furthermore, with the exception of the size of household being significant at 1per cent level, the coefficients on household head with age more than 45 years, employment status of household head and number of children in primary school were statistically significant at 10per cent and had the predicted signs. The implication is that while larger household size is more likely to be poor on account of large number of children, households with employed heads relative to unemployed are less likely to be poor. Female headship of household portrays a distinct negative sign, suggesting that the probability of poverty declining is high when household is headed by female in an urban setting. The possible explanation for this in urban areas is on the basis that females are willing to explore all job opportunities in the formal and informal sectors. Also, households with many children in primary school are more likely to be poor due to medical and academic costs frequently associated with their welfare.

Table 5.3b: Logistic Regression Results

Variables	Odds Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
xhsiz	1.2808050	.1170737	2.71	0.007	1.070724	1.532104
xsexhhednum	0.3841875	.2404784	-1.53	0.126	0.1126528	1.310221
xemplhnum	0.6110508	.1709049	-1.76	0.078	0.353187	1.057183
xeduchnum	0.9849830	.1323725	-0.11	0.910	0.7568943	1.281806
xchldprim	1.2644830	.1567987	1.89	0.058	0.9916583	1.612367
xagehh46_75	0.4556748	.2045193	-1.75	0.080	0.1890657	1.098241
xearnrs	0.8954981	.1488489	-0.66	0.507	0.6465151	1.240368
Prob > chi2	0.0314		Log pseudolikelihood		-73.96752	
Wald chi2(6)	18.34		Pseudo R2		0.1354	

The logistic results in table 5.3b, based on odds ratio, explain the probability of being poor relative to not being poor. Therefore, the results show that the probability of a household being poor is high with respect to a unit increase in its members and the number of children in primary school, as indicated by 28 per cent and 26 per cent respectively. Conversely, household head with age more than 45 years have about 55 per cent lower probability of being poor, while female headed households have about 62 per cent lower probability of being poor compared to males. Coefficient for educated household head is insignificant and further justified the minimum impact education has on poverty as indicated by about 2 per cent. This calls for more pronounced educational policy strategy to make education more attractive.

Table 5.3c: Marginal effects

Marginal effects after logit

$$y = \text{Pr}(p) \text{ (predict) } .54885661$$

Variables	dy/dx	Std. Err.	z	P> z	[95% C.I.]
xhsiz	0.0612814	.02268	2.70	0.007	0.016837	.105726	7.62097
xsexhhnm	-0.2368727	.15499	-1.53	0.126	-0.540647	.066902	1.87097
xemplhnm	-0.1219680	.06941	-1.76	0.079	-0.258008	.014072	2.33871
xeduchnm	-0.0037466	.03327	-0.11	0.910	-0.068959	.061466	2.41129
xchldprm	0.0581057	.03069	1.89	0.058	-0.002047	.118258	2.42742
xageh45	-0.1921039	.10625	-1.81	0.071	-0.400341	.016133	0.50807
xearnrs	-0.0273303	.04118	-0.66	0.507	-0.108043	.053383	2.50000

The marginal effect which explains the likelihood of poverty increasing or decreasing based on the signs of a unit change in any of the poverty indicators is indicated in table 5.3c. Therefore, a unit increase by a member in the household and in the number of children in primary school will directly increase poverty by about 7 per cent and about 6 per cent respectively. On the contrary, if the household head is employed, the probability of being poor declines by about 13 per cent while a unit increase of earners in a given household has the effect of reducing poverty by 2.7 per cent.

4.4 Limitation of the study

The study of poverty in Liberia is unique, especially in post-war era. The welfare survey information which is essential for poverty analysis is not available at governmental level and non-governmental institutions. The inconsistency of poverty statistics on Liberia from different sources also posed constraints on the study, as it was difficult to actually determine which information to consider. The study, however, considered statistics which are concurrent in two or three sources. Furthermore, undertaking this study through the formulation of questionnaires for data collection was difficult, given the fact that most inhabitants of Liberia are not accustomed to it. Getting relevant statistical details from government agencies also posed serious hurdles as many of those agencies could either not trace the information or did not compile them at all. Other factors which made the data collection difficult were related to non-sampling errors which include: illiteracy of the population, especially some of those migrating from the rural areas; household income and expenditure accounts are not kept by the households; incorrect statement of expenditure on account of memory bias; wide variation in the mode of purchase of consumption goods from different areas.

Furthermore, given our absence during the data collection, there might be some flaws in the results but adequate verifications were made to authenticate accuracy of the data. Also, due to lack of the availability of calories content, we used proxy calories. Essentially, results from the study are valid on account of the competence and qualifications of the enumerators and research assistants used for the study.

CHAPTER FIVE: SUMMARY, IMPLICATIONS AND RECOMMENDATIONS

5.1 Summary and Findings

This research paper has analyzed poverty from various dimensions in two areas of Monrovia: Central Monrovia and Bushrod-Island. While poverty is perceived in Bushrod and Central Monrovia as persistent hunger, poor housing conditions without electricity, water and toilet; the improper sanitation and inadequate education along with inadequate health are considered as other dimensions of poverty in the study sites.

Our analysis indicates that most of the household heads did not have functional qualifications. About 12 per cent of the sample was illiterate, a combined total of 68 per cent possessed primary and secondary education, and only 20 per cent had tertiary education. While majority of the household heads are formally educated, those employed and self-employed constitute about 81 per cent but the distribution of household by size shows high dependency for those with ages less than 18 years and more than 64 years. The high dependency, coupled with neglect for education, and lack of employment are the reasons for a high prevalence of poverty in the study area. The analysis also shows that about 72 per cent of household heads migrated to Monrovia from other parts of Liberia, likely due to the civil war. In terms of distribution of social services, most of the households residing either in concrete, mud block, zinc or mat houses lack adequate toilet facilities, electricity and water. About 91 per cent and 64 per cent of them lack piped water and electricity into homes respectively. Nearly 76 per cent of households did not have flush toilets due to lack of piped water. The findings depict the poor distribution of schools and hospitals in Monrovia with limited access to quality schools and hospitals in terms of public classification.

Furthermore, the high proportion of poor households in the study areas is partly attributed to low income, as evidenced by 60 per cent of household head receiving monthly income less than LD2500. On the overall, male headed households have a poverty rate that exceeds female headed households by 10.5 per cent. The inequality of income distribution and the existence of high poverty levels can be accounted for by unequal opportunities in Monrovia and by high dependency anchored to large family sizes and low educational opportunities.

In terms of the multivariate regression results, the poverty status of the household is influenced by household size, female gender of the household heads, employment status, age of household head and number of children of a household in primary school.

5.2 Implications and Recommendations

Poverty in all forms is detrimental to the progress of any society, specifically post-conflict Liberia. Consequently, it helps to breed social disillusionment, discontentment and insecurity. Just as instability induces poverty so does poverty induces instability, since the impoverished become incapable of properly deciding and planning about the means of acquiring food for survival. Even though Liberia is experiencing rapid growth, it must be sustained through pro-poor growth strategies.

Thus, a society where majority spend about 80 per cent to 90 percent of their income on food consumption is likely to be trapped in the vicious cycle of poverty. From the analysis, it is glaring that poverty is prevalent in Bushrod-Central Monrovia, as evidenced by the links of poverty to household size, education, employment, gender and earnings, and social infrastructural facilities like electricity, piped water, public schools, and housings. Therefore, adequate provision of the foregoing will immensely contribute to poverty alleviation.

Importantly, the Government must enforce its policies by focusing on the reduction of absolute poverty through the basic needs approach, as opposed to holistically concentrating on wage increment. This approach stresses on the importance of providing essential social services such as sanitation, health services, education, water supply and nutrition. The idea behind this approach is that the direct provision of those basic needs helps to reduce absolute poverty more immediately because growth strategies are usually inadequate to benefit the intended populations directly. In effect, this is also due to the fact that the productivity and income of the poor are directly anchored on the provision of health facilities, basic education, and food. While the employment level remains high with most of those employed below tertiary education level, the high food insecurity problem must be addressed through food subsidy, prioritizing agriculture investment for self-sufficiency in food production and instituting sound anti-inflationary measures. The

APPENDICES

Appendix 1: Data preparation, Validation and Cleaning

Some of the food items consumed in Liberia are not listed on account of the unavailability of the calorie contents acquired from them. However, a proxy calorie based on the food derivatives was used for conversion. For instance, cassava was used as a proxy for food, such as fufu and farina.

Most of the food data collected were either not appropriately weighed or priced. Therefore, a market survey was reconducted to obtain the correct price and subsequently weighed the food items for accuracy. Furthermore, price of own food produced by a given household was verified and priced based on the actual market value. The calorie value of food was acquired from three sources based on commonality as indicated in footnote 13 of Appendix 2 because of the variation in food consumed in different countries.

Appendix 2: Listing of Calorie values used in estimating food poverty lines¹³

Foods	Kilocalories/ 100 grams
Rice	335
Bread	240
Cassava	140
Potato	460
Yam	110
Beans	105
Groundnut	592
Eggplant	82
Banana	235
Plaintain	82
Meat	625
Pork(pigfeet)	255
Chicken egg	255
Dried fish	79
Milk	355
Mango	355
Cabbage	58
Oil	900
Greens	45
Onion	38
Sugar	375
Fresh fish	230
Cassava leave	90
Tomato	22
Butter	885
Pineapple	60
Orange	44
Passion fruit	48
Beef	170

¹³ Sourced from Mwabu et al (1999), Okurut et al (2002), Malawi and Mozambique food compositions

based on Anzagi and Bernard (1997) Food Commonly Eaten in Africa.

Appendix 3: Estimation of Poverty Lines Using CBN Approach

Calorie intake per day per adult equivalent	Daily Calorie intake as a ratio total intake	Daily recommended/adult equiv.	Calories needed to meet daily calories, Kg	LD per Kg at 2007 prices	Daily Food expenditure needed to meet calories(LD)	CBN Monthly food Poverty Line (Zf)
4		5	6	7	8	
324.55	0.177183337	398.6625077	1.190037336	12	14.28	2301
168.07	0.047681056	107.2823756	0.766302683	10	7.66	
540.54	0.096610381	217.3733574	0.945101554	20	18.90	
531.24	0.150711514	339.1009056	0.737175882	5	3.69	
248.82	0.070589637	158.8266835	0.675858227	5	3.38	
50.24	0.014252967	32.06917682	0.712648374	5	3.56	
1016.07	0.288256622	648.5773984	0.720641554	10	7.21	
36.67	0.010403191	23.40717982	0.615978416	2.5	1.54	
148.24	0.042055332	94.62449786	0.901185694	10	9.01	
120.6	0.034213931	76.98134405	0.855348267	5	4.28	
239.84	0.068042033	153.0945734	0.637894056	5	3.19	
3524.88		2250			76.70	

Procedure: col1=food basket; col2=food conversion weight; col3=obtained from food basket; col4=col3/3524.88; col5=2250*col4; Col6=col5/col2; col7=given; col8= col7*col6; col9=CBN food poverty lines per month

Appendix 4: Descriptive statistics of household characteristics

Variable	Variable Description	Mean	Std. dev	Min	max	N
Locat1(Bushrod Island=1)	Household located at Bushrod	0.61	0.49	0	1	150
Xyresid	Duration of household resident	15.5	11	1	70	224
Xhsiz	Household size	7.83	2.37	3	15	150
Xage	Age of household members	24.01	16.23	0.25	98	1161
Xagehh	Age of household head	47.13	10.18	27	75	150
xsex (Female =1)	Sex of household member	0.51	0.50	0	1	1161
Xsexhhed (Female=1)	Sex of household head	0.12	0.33	0	1	150
Xmritahh(Married=1)	Marital Status of household head	0.71	0.45	0	1	150
Xemplhh1 (Employed=1)	Employed household head	0.19	0.39	0	1	150
Xemplhh2 (Selfemployed=1)	Selfemployed household head	0.65	0.47	0	1	150
Xemplhh3 (Unemployed=1)	Unemployed household head	0.007	0.82	0	1	150
Xemplhh4(Retired=1)	Retired household head	0.16	0.37	0	1	150
Xeduchh1(high sch.=1)	Household head with high school education	0.48	0.50	0	1	150

Xeduchh2(Jr.High=1)	Household head with Junior high Education	0.11	0.31	0	1	150
Xeduchh3(No level=1)	Household head with no education	0.12	0.33	0	1	150
Xeduchh4(Primary=1)	Household head with primary education	0.09	0.28	0	1	150
Xeduchh5(Tertiary=1)	Household head with tertiary education	0.21	0.41	0	1	150
Xearnrs	Number of earners in each household	2.3	1.50	0	7	150
Xyrjob	Number of years on the job	10.7	8.1	0	42	349
Xhrs	Number of worked per day	8.4	1.9	0	16	337
Xchildprim	Number of children in primary school	2.5	1.8	0	8	148
Xmealday	Number time eat per day	1.9	0.56	1	3	150

Source: survey primary data

Appendix 5: Summary statistics of asset ownership before 1990 and after 2004

Asset	Prior to the war(Before 1990)					After 2004			
	observation	mean	Std.dev	Min	Max	mean	Std.dev	min	max
land	150	1.39	0.49	1	2	1.49	0.50	1	2
house	150	1.37	0.48	1	2	1.47	0.50	1	2
car	150	1.18	0.39	1	2	1.16	0.37	1	2
TV	150	1.65	0.48	1	2	1.41	0.80	1	3
Savings	150	1.29	0.46	1	2	1.34	0.47	1	2

Source: survey data

Appendix 6: Summary stat. of daily expenditure and kilocalorie per adult equivalent by gender of household head

Gender	Observation	mean	St.dev.	Min.	Max
Female	19	148.44	208.92	26.47	686.67 ¹
	19	3693.61	1541.42	1367.67	6510.71 ²
Male	131	206.45	266.13	14.47	1195.50 ¹
	131	3864.55	1750.27	727.72	9398.72 ²

¹ Expenditure per adult equivalent

² kilocalorie per adult equivalent

Source: survey data

Appendix 7: Distribution of Monthly income by Household Head

Monthly Income Range (Liberian Dollars)	Number of Household	Percent
Below 2500	90	60
2501-9300	40	26.7
Above 9301	20	13.3
Total	150	100

Source: survey data

Appendix 8: Questionnaire for the Research Project

Household Survey Interviewer: _____ Date _____

Area: _____

INTRODUCTION

EXPLANATION: Good morning/afternoon. My name is (interviewer). Kindly accord me few minutes of your time to conduct a survey on your household. The survey is carried out to complement a research thesis for a Liberian student pursuing Master in Economics at Nairobi University, Kenya. The purpose of this survey is to identify the many ways that life changed in pre and postwar Liberia. These questions are asked of a number of households living in Monrovia and the answers will suggest the kinds of changes and problems faced by many of the households in postwar Liberia. These answers will be analyzed and used in the research for effective policy decision. All answers provided here will strictly be treated with **confidentiality**. Since there are no wrong answers, your independent opinion is therefore very significant.

A. Information on Household Characteristics:

1. The below chart presents a summary of household demography
Table 1.0

List of HH members	Relationship to HH	Education Level	Age	Gender	Marital status	Is this your birth place?
1						
2						
3						
4						
5						
6						
.						
.						
10						
11						
12						
HH Size						

* Fill the table beginning with the Head of household (HH)

2. How long have you been a resident of this area? _____ years

Table 1.1

Employment status of each HH members above 18 years	Occupation	Number of years on this job	Monthly income	Hours Worked Per day
1.				
2.				
3.				
4.				
5.				
6				
-				
-				
-				
10				
11				
12				

* Fill the table beginning with the Head of household (HH)

B. Sources of Supplementary Income

Give approximate annual income from each source in the table

Table 1.2

No	Source	* Pre-war(before 1990)	* Post-war(2004 to present)
1	Remittances		
2	Transfers		
3	Donations		
4	Rents		
5	Commerce		
6	Sales of possessions		
7	Indicate other(s)		

C. Expenditures

Indicate the main food items normally bought and consumed (i.e purchases) in the table

Table 1.3

Food item	Quantity consumed	units	Price/unit	Total expenditure
1				
2				
3				
4				
5				
6				
-				
10				
11				
12				

Indicate the main food items (own grown food) normally consumed (i.e non-purchases)

Table 1.4

Food item	Quantity consumed	units	Price/unit in the local market	Total expenditure
1				
2				
3				
4				
5				
6				

Other expenditures

Indicate the approximate monthly expenditure on the following

Table 1.5

Item	Amount
1 Rent	
2 School fees	
3. Medical expenses	
4. Transportation	
5. Insurance	
6 Entertainment	
7. Others	

D. Ownership of Asset

Table 1.6

Indicators	Pre-war(before 1990)	Location of Asset	Post-war(2004 to present)	Location of asset
Ownership of House(Yes/No)	1. Yes 2. No	1. Monrovia 2. Outside	1. Yes 2. No	1. Monrovia 2. Outside
Ownership of land(Yes/No)	1. Yes 2. No	1. Monrovia 2. Outside	1. Yes 2. No	1. Monrovia 2. Outside
Ownership of car(Yes/No)	1. Yes 2. No	1. Monrovia 2. Outside	1. Yes 2. No	1. Monrovia 2. Outside
TV, Radio(Yes/No)	1. Yes 2. No	1. Monrovia 2. Outside	1. Yes 2. No	1. Monrovia 2. Outside
Investment(Yes/No)	1. Yes 2. No	1. Monrovia 2. Outside	1. Yes 2. No	1. Monrovia 2. Outside
Savings(Yes/No)	1. Yes 2. No	1. Monrovia 2. Outside	1. Yes 2. No	1. Monrovia 2. Outside

Additional Question to section D

1. If yes to ownership of house before the war, what is its current status? 1) existing 2) sold 3) destroyed during the war 4) transferred 5) in bad condition 6) indicate _____
2. If yes to possession of investment and saving before the war, what is their current status? 1) existing 2) looted or stolen 3) Loss due to bank failure 4) collapse due to low profits or losses 4) Please indicate _____

E. Other indicators

1. Were you employed prior to the war? 1) Yes 2) No
2. Were you living in Monrovia before the war? 1) Yes 2) No
3. If no to Question number two, why did you come to Monrovia? _____
_____ (please be brief)
4. a) What is the distance to nearest medical facility accessible in this community? ___ km or mi. b) What is the type of medical facility? 1) Private 2) Public 3) Herbalist/country doctor
5. a) What is the distance to the nearby school? _____ km or mi b) What type of school? 1) Private 2) Public 3) others
6. What is/are the number of your children in primary school?
7. How many meals does your family eat each day? 1) one 2) two 3) three
8. How is your household sanitary need met? 1) latrine 2) septic system 3) sewage system 4) None
9. Do you have drinking water? 1) Piped into your home 2) a tap outside the home 3) a tap in walking distance
10. Does your household have access to electricity? 1) Yes 2) No
11. What are the most important daily difficulties you experience? (Rank starting with most difficulties)
1) Housing..... 2) Food provision..... 3) Education.....4)
Medication..... 5) Other (specify).....
12. Indicate the type of house: 1) concrete 2) mud block 3) Zinc 4) Mat

F) Fill the indicators of living conditions deterioration applicable to your situation in the below table

Table 1.7

Indicators	* Pre-war(before 1990)	* Post-war(2004 to present)
Ownership of house(yes/no)		
Ownership of car		
Size of household(complete/part)		
Place of resident(Quarter and class) Low, middle or High class		
Transportation means(private/public)		
Private education of children(private/public)		
Medication(private/public)		
No. of meals(3 meals/under 3meals)		
Entertainment (yes/no)		
Other		

List the price of basic household consumable items (collect these from the market center)

Table 1.8

Items	Kilograms or pounds etc	Price per unit
Rice		
Cassava		
Farina		
Fufu		
Edoes		
Potato		
Flours		
Peppers		
Bitter Balls		
Peeanuts		

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