The Second Malawi Multidimensional Poverty Index Report

November 2022

Illustration depicting a vibrant and dynamic group of energised pieces coming together in the process that forms the MMPI measurement process.

OPHI
Oxford Poverty & Human Development Initiative

UN
DP

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Foreword

Malawi, like many other developing countries in the world, continues to address poverty among its people. With the recent revived development agenda, the country is geared towards an inclusively wealthy and self-reliant nation, as espoused in the national development vision, Malawi 2063 which is operationalized through the first 10-year implementation plan (MIP-1). By 2030, Malawi intends to graduate into a lower middle-income country and meet most of the sustainable development goals (SDG), key to which are eradicating poverty in all its forms and dimensions (SDG Goal 1) while reducing inequality within and among countries (SDG Goal 10).

Monetary measures of poverty provide a picture about poverty in the country, guiding policy design, implementation, monitoring and evaluation. Recognizing that poverty is a multi-faceted phenomenon that goes beyond monetary assessments, examining and reporting the multi-dimensional nature of poverty across population groups, provides a much-needed diversified picture of poverty that could foster design and development of focused policies and programs in the country. Effective and multi-pronged strategies and interventions with which to address various deprivations and inequalities in the population can only be possible if poverty is measured and reported based on analyses that capture deprivations, as presented in this report.

Focused on analysing experienced deprivations other than monetary aspects of poverty, this multi-dimensional poverty index report provides space for understanding how different population groups in the country fare. The findings enable an understanding of sectors in need of urgent attention and prioritized resource allocation in an effort to address development challenges. On this account, I urge all policy and decision makers, programme designers and implementers and those involved in monitoring and evaluation in all sectors to consult this MPI Report as they go about addressing various development challenges. This priotisation will ensure targeted interventions that will have a positive impact on the welfare of the people in Malawi.

The Honourable Sosten Alfred Gwengwe MP,
Minister of Finance and Economic Affairs.

Preface

The 2022 Malawi Multidimensional Poverty Index (M-MPI) is the second in a series of multidimensional poverty measurement in Malawi following the first one that was produced in 2021. The report provides a detailed picture of poverty in the country to enable understanding the dynamics of poverty across various dimensions i.e. education, health and employment, among othervs. The National Statistical Office led the process of developing the report in collaboration with the National Planning Commission (NPC), the Ministry of Finance and Economic Affairs (MoF&EA), the University of Malawi (Department of Economics and Centre for Social Research) with technical and financial support from the United Nations Development Programme (UNDP) in Malawi.

The purpose of this report is to provide poverty estimates from a multi-dimensional perspective, important for designing and operationalisation of monitoring and evaluation programmes for socioeconomic development in the country. The report also provides information for prioritising strategies and activities for responsive interventions to reported poverty trends, as well as impetus for mobilizing resources for implementing development programmes.

The M-MPI report complements monetary poverty measures which have been traditionally used in the country to monitor the state of poverty. Its key advantages are the ability to analyse poverty in varied dimensions i.e. incidence and intensity and an analysis of deprivations suffered by people in different facets of life, which the monetary poverty measure does not do.

The current MPI report used data from the fifth Integrated Household Survey (IHS5) which was conducted in 2019/2020 while the previous MPI report used data from IHS4 which was conducted in 2016/2017. Among other issues, the current report presents the context of poverty in Malawi, the methodological design and techniques used to analyse the dynamics of poverty in different dimensions.

The report further presents results from poverty analysis in Malawi; aggregate poverty estimates at national, regional and district levels, rural and urban contexts, and across demographics; age and sex. It also provides policy implications emerging from the findings of the analysis and recommendations for action.

I would like to express my appreciation to various stakeholders who participated in the production of the report. Specifically, I recognize the important roles played by Bright Mvula, Twikaleghe Mwalwanda, Samuel Chipokosa and Benson Chambo from National Statistical Office; Dr Andrew Jamali and Frank Kamanga from National Planning Commission; Vincent Chimuzu and Elisha Limbe from Ministry of Finance and Economic Affairs; Dr Jacob Mazalale, Dr Gowokani Chijere Chirwa and Chrispine

Mrs Lizzie Chikoti
Commissioner of Statistics

Executive Summary

The Multidimensional Poverty Index (MPI) is a comprehensive measurement tool that can provide a holistic understanding of poor people's lives while allowing for more effective and efficient poverty reduction policymaking. This report serves as a comparison point from which the previous M-MPI results can be compared as well as a progress monitoring tool for interventions related to the Malawi National Planning Commission's implementation plan to achieve the Malawi 2063. The report also evaluates our country's progress toward SDG target 1.2, which aims to reduce by half the proportion of men, women, and children of all ages living in poverty in all dimensions.

The report is based on data from the National Statistical Office's Fifth Integrated Household Survey (IHS5), which was conducted in 2019/20.

The Alkire-Foster method was used to calculate the multidimensional poverty index. The M-MPI has thirteen (13) indicators across four dimensions: Health and Population, Education, Environment and Work. The indicators are equally weighted within their respective dimensions. To identify multidimensionally poor populations, the M-MPI was calculated at the national level and then disaggregated by region, district, place of residence, sex of household head, and age groups.

The multidimensional poverty cut-off point was set at 38 percent , implying that a person living in a household with more than one and a half dimensions of deprivation is considered multidimensionally poor. Robustness tests were conducted to ensure that the measure was not sensitive to several specifications and estimation assumptions. This report highlights the multidimensionally poor population across different subgroups.

The results show that 58.8 percent of individuals in Malawi were multidimensionally poor. These people were deficient in 53.9 percent of the weighted indicators. The M-MPI value of 0.316 means that multidimensionally poor people in Malawi experienced about 32 percent of the total possible deprivations if everyone was multidimensionally poor. In comparison to the previous MPI report, which found that 61.7 percent of individuals in Malawi were living in multidimensional poverty, findings indicate a downward trend. Nonetheless, no statistically significant difference existed between these results. As a result, no conclusion can be drawn about whether the level of Multidimensional Poverty has changed. Literacy and schooling contributed the most to the MPI (14.7 percent), followed by electricity, asset ownership, job diversity, and child labour, which contributed 11.5 percent, 10.8 percent, 10.2 percent, and 10.0 percent, respectively.

After decomposing the MPI at a regional level, the results show that the Southern region had the highest M-MPI value (0.332), and the Northern

ALKIRE-FOSTER

Method

13

indicators across 4 equally weighted dimensions

MANGOCHI & MACHINGA

districts with highest percentages of MPI

MPI in female led households than male led households

Downward trend between 1st and 2nd MPI Report

IHS5

based on Statistical Office's Fifth Integrated Household Survey

SOUTHERN

region recorded the highest MPI value

0-9yrs HIGHEST

Incidence of poverty greatest in Children aged 0 to 9

region had the lowest (0.232). Similarly, the Southern region had the highest incidence of poverty (61.3 percent), and the Northern region had the lowest (45.6 percent). The intensity was highest in the Central and Southern regions, both at 54.2 percent, and lowest in the Northern region, at 51.0 percent. Between the current and previous MPI findings, there were no significant changes in the M-MPI value, incidence, or intensity of multidimensional poverty.

When the results were broken down by place of residence, the incidence of multidimensional poverty in rural areas was 65.7 percent, compared to 20.0 percent in urban areas. The intensity of poverty was higher in rural areas, at 54.1 percent, compared to 49.2 percent in urban areas. In comparison to previous findings, the results show that the MPI value for the rural area fell significantly from 0.385 in the previous M-MPI to 0.356 in the current M-MPI. Similarly, the incidence of poverty in rural areas decreased significantly from 70.0 percent in 2016/17 to 65.7 percent in 2019/20. However, this was not the case for both measures in urban areas. Literacy and schooling were the largest contributors to the MPI in both rural and urban areas, accounting for 14.8 percent and 12.8 percent, respectively.

At district level, Mangochi and Machinga had the highest percentages of people living in multidimensional poverty (78.4 percent and 78.2 percent, respectively). Mzuzu, Blantyre, Zomba, and Lilongwe cities had low rates of

multidimensional poverty, with 17.0 percent, 20.5 percent, 20.9 percent, and 21.2 percent, respectively.

Individuals in female-headed households had a higher incidence of multidimensional poverty (71.4 percent) than those in male-headed households (53.9 percent), according to the analysis by sex of household head. Female-headed households were more multidimensionally poor than male-headed households, with MPI values of 0.396 and 0.286, respectively. Literacy and schooling, electricity, asset ownership, and job diversity were the major contributors to the MPI for both sexes.

Children aged 0 to 9 years had the highest incidence of poverty (63.5 percent), followed by those aged 10 to 19 years (61.8 percent). Children aged 0 to 9 years experienced the highest level of poverty (54.7 percent), followed by those aged 10 to 19 years (54.4 percent). Literacy and schooling contributed the most to multidimensional poverty across all age groups, accounting for 17.2 percent among those 50 years and older and more than 14 percent across the rest of the age groups.

Given these findings, the Government and its stakeholders must step up efforts to address the various forms and dimensions of deprivation that Malawians are currently experiencing if the vision of an inclusive and self-reliant nation is to become a reality. Given the macro-economic turbulence in the country's development space, persistent tracking of all interventions aimed at addressing poverty and creating wealth for the people is an urgent imperative to inform policy direction and prioritisation of financial investments aimed at operationalizing poverty reduction and wealth creation initiatives that Malawi is pursuing towards the vision and medium-term goals.

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List of Abbreviations

AF	Alkire-Foster
CSR	Centre for Social Research
EP&D	Economic Planning Department
HDRO	Human Development Report Office
IHS	Integrated Household Surveys
LSMS	Living Standard Measurement Surveys
MIP-1	Malawi Implementation Plan 1
MoF & EA	Ministry of Finance and Economic Affairs
MPI	Multidimensional Poverty Index
M-MPI	Malawi Multidimensional Poverty Index report
NSO	National Statistical Office
NPC	National Planning Commissioner
UNIMA	University of Malawi
UNDP	United Nations Development Programme

Introduction

This chapter provides context and purpose for the multidimensional poverty measure for Malawi.

Malawi is one of the world's least developed countries, with more than half of its population living below the national poverty line. Over the years, the Government of Malawi and its development partners have worked to eradicate poverty through policies such as the Malawi Poverty Reduction Strategy Papers and the Malawi Growth and Development Strategies. Despite these interventions, many Malawians remain impoverished.

In Malawi, poverty has generally been assessed using monetary measures. However, research has shown that monetary measures only reflect a society's state of poverty while masking the underlying multiple overlapping deprivations. In this case, the Multidimensional Poverty Index (MPI) is key in efforts to curb the economic vice because it identifies the main deprivations that contribute to poverty. As a result, the MPI can be very useful in assisting in the development of well-targeted development programmes. The first Malawi Multidimensional Poverty Index was developed using data from the Fourth Integrated Household Survey (IHS4), which was conducted in 2016/2017. This report presents the second Malawi Multidimensional Poverty Index (M-MPI),

which was calculated using IHS5 data from 2019 to 2020.

1.1. The Multidimensional Poverty Index (MPI)

The MPI is a multidimensional measure of poverty developed by the University of Oxford's Oxford Poverty and Human Development Initiative (OPHI) and supported by the United Nations Development Program (UNDP). Based on several identified dimensions of poverty in a specific setting, the index assesses the simultaneous deprivation experienced by people in a society. This multidimensional measure is commonly used in conjunction with the monetary measure to assess the state of poverty in a society. As a result, the MPI is regarded as a complementary detailed measure of poverty. While the monetary measure assesses poverty based on income or consumption-expenditure according to pre-defined national poverty lines, the multidimensional poverty measure assesses key non-monetary dimensions of poverty in a community. Poverty, according to the MPI, is a phenomenon caused by several overlapping deprivations that poor people face in society.

The MPI measure combines the incidence of poverty (the proportion of poor people or the breadth of poverty) with the intensity of poverty (the degree or depth of poverty among poor people). As a result, the measure reveals who is poor, the dimensions of their poverty, and the breadth of their deprivation.

One of the measure's key features is that it can be de-composed by deprivation dimensions, indicators, and population groups, providing useful information for policy targeting.

1.2. Purpose of the M-MPI Report

The Malawi Multidimensional Poverty Index (M-MPI) was created for two primary reasons. Firstly, it will provide up-to-date multidimensional poverty statistics to help inform development policy. The M-MPI is an important tool for coordinating policy actions by multiple stakeholders, establishing policy goals and targets for poverty reduction interventions, and serving as a monitoring and accountability tool. Secondly, it supplements monetary poverty statistics by providing an understanding of the multidimensional nature of poverty and the prevalent deprivations experienced by various groups of people in Malawi. The evidence gathered can be used to create inclusive development programmes addressing various aspects of poverty among Malawians. The measure can assist Malawi in fostering inclusivity by identifying groups of people to be targeted in poverty alleviation to achieve the goal of inclusive wealth creation espoused in MW2063 and its 10-year implementation plan, the MIP-1. Poverty measures will also aid in the monitoring of these national development programmes and the SDGs.

CHAPTER 2

Methodology

This chapter describes how the multidimensional poverty measure was developed, as well as a description of the data used in this report and an explanation of the structure of the M-MPI.

2.1. Alkire-Foster Method

The Alkire-Foster (AF) method was developed by Alkire and Foster to measure multidimensional poverty (2011). It involves counting the various types of deprivation that individuals experience at the same time, thus expanding the Foster-Greer-Thorbecke poverty measures. These multiple deprivation profiles are analysed to determine who is poor and then used to create a multidimensional index of poverty as well as other components of aggregate poverty.

The MPI is computed using the AF method, which involves counting the simultaneous deprivations that have a negative impact on a person's life. The AF method enables the creation of individual deprivation profiles, which can then be used to identify people who are multidimensionally poor. The MPI value combines the number of people living in multidimensional poverty and the intensity of their poverty.

Through this method, the M-MPI reflects simultaneous deprivation in the 13 indicators chosen based on a detailed analysis of relevance and data availability. A deprivation cut-off was set for each indicator to determine whether a person in Malawi is deprived in that indicator. This gave us a set of 13 binary variables for everyone, where each variable has a value of 1 if the individual is deprived in that indicator and 0 otherwise.

After calculating the set of binary variables, each person is assigned a deprivation score denoted as "c," indicating the proportion of deprivations weighted by the relative importance of each indicator in the MPI structure. The deprivation score "c" is defined as a number between 0 (indicating that the person has no weighted deprivations) and 1, (indicating that they experience weighted deprivations in all the 13 indicators).

In Malawi, the deprivation score is compared to a poverty cut-off point or the k-value to identify people who are suffering from multidimensional poverty. Individuals identified as multidimensionally poor have a number of weighted deprivations equal to or greater than this cut-off point.

After determining the proportion of poor people in Malawi, the MPI is calculated as the sum of two component indices: the multidimensional headcount ratio and the intensity of multidimensional poverty.

- The headcount ratio or incidence, H is the proportion of the population that is multidimensionally poor.
- The intensity of poverty, A, reflects the proportion of the weighted indicators in which, on average, multidimensionally poor people are deprived.

The MPI, also called the adjusted headcount ratio, combines these two aspects of poverty in the following way:

$$MPI = H \times A$$

It is important to note that the MPI can be calculated as the weighted sum of censored headcount ratios, which show the percentage of people who are identified as poor and deprived in a specific indicator. The MPI can be broken down by indicator to show the composition of multidimensional poverty. This dimensional detail adds policy relevance to the analysis.

2.1.1. Common Uses of the Alkire-Foster Method

- **Poverty measures:** The AF method can be used to develop national, regional, or international measures of poverty or well-being by incorporating context-specific dimensions and indicators.
- **Targeting of services or conditional cash transfers:** The method can be used to target people who are underserved in multiple ways.
- **Monitoring and evaluation:** It can be used to track the effectiveness of programmes over time.

2.1.2. Significance of Alkire-Foster Method

While the AF method provides a single headline measure of poverty, it can also be broken down and analysed effectively to inform policy.

- **Decomposition by population group:** It can be broken down by geographic area, ethnicity, or other sub-groups of a population to show how poverty differs within and between these groups.
- **Breakdown by dimension or indicator:** It can be broken down to show which types of deprivation contribute to poverty within groups.
- **Changes over time:** Using data collected at separate times, the AF method can be used to track changes in poverty over time. It directly and quickly reflects changes in specific dimensions and indicators of poverty, making it an effective monitoring tool.
- **Complements other metrics:** The AF method can be used in conjunction with other measures, such as measures of income poverty.

NKHATA_BAY_GBV_VILLAGE_LEVEL

15:02 P P P

🔍

	A4. District:
Tamed plan	
A2. Sex Male	NKHATA BAY
Date of Birth 12	MZIMBA
Month 8	NTCHISI
Year 1989	DOWA
A4. District:	MACHINGA
T/A Code	NSANJE
A5. T/A.	
A6a. Group Village ...	
A6. Village:	
A7. Place / area vilo...	
A7. Blindness/Low ...	
A7. Hearing	
A7. Walking	
A7. Speaking	
A7. Intellectually	

2.2. Measurement Design

2.2.1. Dimensions, Indicators and Weights

The official structure of the M-MPI consists of four equally weighted dimensions: Health and Population, Education, Environment, and Work. This structure was inspired by the Malawi Growth and Development Strategy 2017-2022 (MGDS III) and will be informed by the MIP-1 in the future. The dimensions, indicators, and cut-offs were chosen by various stakeholders involved in the conception and computation of the M-MPI. They include UNDP, the Ministry of Finance and Economic Affairs (MoF & EA), the Centre for Social Research (CSR), the University of Malawi (UNIMA), the National Planning Commission (NPC), and the National Statistical Office (NSO).

In the four M-MPI dimensions, thirteen indicators are grouped. Figure 1 depicts them, and Table 1 contains their precise definitions. Each dimension in the M-MPI is equally weighted at 1/4; each indicator within a dimension is also equally weighted. For example, the sanitation indicator was given a weight of 1/16 because the Health and Population dimension has four indicators, and the literacy and schooling indicator was given a weight of 1/8 because the Education dimension has two indicators. Any household that did not meet the requirements of any of the indicators was considered to be not deficient in that indicator. For example, if a household did not have a child aged 0 to 5, that household was not considered to be nutritionally deficient.

Figure 1: Structure of Malawi Multidimensional Poverty Index (Dimensions, Indicators & Weights)
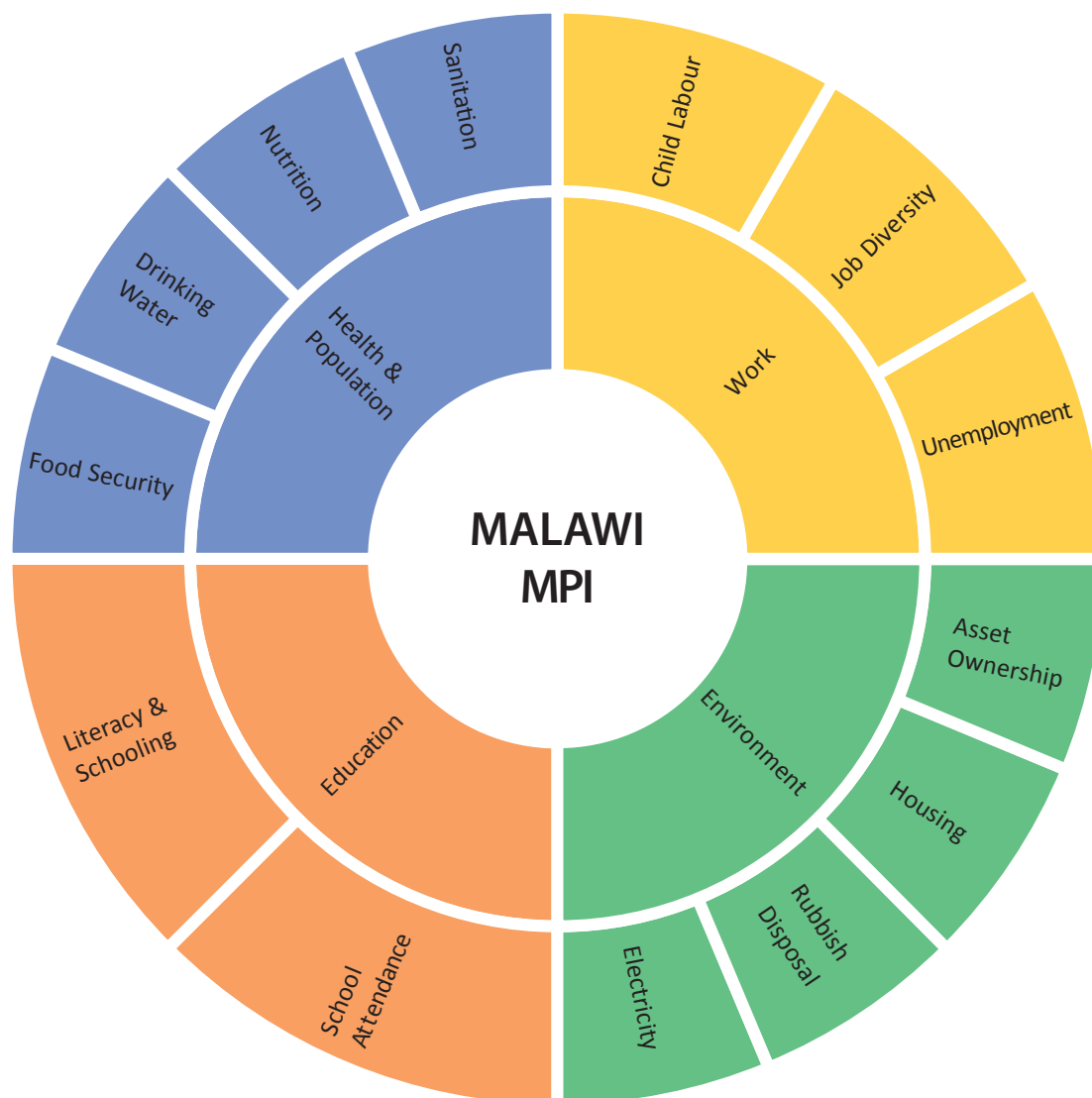
NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

2.2.2. Robustness Analysis

A robustness analysis was carried out to determine how sensitive the estimates were to changes in assumptions. Three robustness tests were performed. The first test involved calculating the Spearman correlation coefficient, the **second** involved calculating the Kendall correlation coefficient, and the **third** involved performing similar pairwise comparisons in the second M-MPI estimates for each district while accounting for sampling errors.

They were all concerned with analysing the changes in the ordering (ranking) of districts under different alternative structures for the M-MPI. In summary, all robustness analyses show that the district poverty orderings defined by the preferred structure of the MPI are resistant to changes in its structure. Annex A contains additional information.

Table 1: Indicators, Definitions and Deprivation Cut-Offs, Malawi 2019/2020

No	Indicator	Deprivation Cut-offs
1	Literacy and Schooling	A household is deprived if all members aged 15+ have less than 8 years of schooling OR cannot read or write in any language.
2	School Attendance	A household is deprived if at least one child aged 6-14 is not attending school.
3	Nutrition	A household is deprived if there is at least one child under 5 who is either underweight, stunted or wasted.
4	Food Security	A household is deprived if, in the past 12 months, they were hungry but did not eat AND went without eating for an entire day due to a lack of money or other food resources.
5	Housing	A household is deprived if at least two of the following dwelling structural components are of poor quality: • Walls (grass, mud, compacted earth, unfired mud bricks, wood, iron sheets or other materials) • Roof (grass, plastic sheeting or other materials) • Floor (sand, smoothed mud, wood, or other materials)
6	Electricity	A household is deprived if it does not have access to electricity.
7	Asset Ownership	A household is considered deficient if it lacks at least two of the following basic livelihood items: radio, television, telephone, computer, animal cart, bicycle, motorbike, or refrigerator, AND a car or truck.
8	Drinking Water	A household is deprived if its main source of water is unimproved OR it takes 30 minutes or more (round trip) to collect it.
9	Sanitation	A household is deprived if the sanitation facility is not flush or a VIP latrine or a latrine with a roof OR if it is shared with other households.
10	Rubbish disposal	A household is deprived if rubbish is disposed of on a public heap, is burnt, disposed of by other means or there is no disposal facility.
11	Unemployment	A household is deprived if at least one member aged 18-64 has not been working but has been looking for a job during the past four weeks.
12	Job Diversity	A household is deprived if all working members are only engaged in farm activities, household livestock activities or casual part-time work (ganyu).
13	Child Labour	A household is deprived if any child aged 5-17 is engaged in any economic activities in or outside of the household.

NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

Results

The results of the M-MPI estimation using the IHS5 data set are presented in this chapter. These findings are presented on national, regional, and district levels. They are also organised by location, sex of the household head, and age group.

3.1. The National Malawi MPI-Key Results

This section presents Malawi`s Multidimensional Poverty Index at national level. The MPI value explains the weighted deprivation of an average poor individual. The incidence or headcount ratio shows the proportion of individuals who are multidimensionally poor in relation to the poverty cut-off. The Intensity explains the extent of poverty among multidimensionally poor individuals.

3.1.1. Aggregate Measures (M-MPI, H and A) at National Level

The results show that Malawi had an MPI value of 0.316. This means that multidimensionally poor people in Malawi experienced about 32 percent of the total possible weighted deprivations that could be experienced if everyone was multidimensionally poor. The incidence of multidimensional poverty (headcount ratio-H) was 58.8 percent, implying that about 59 out of every 100 individuals in Malawi are multidimensionally poor. The intensity of multidimensional poverty was 53.9 percent, implying that, on average, a poor individual in Malawi was deprived in at least 54 percent of the weighted indicators.

Table 2: Multidimensional Poverty Measurement 2019/20 and 2016/17

Index (K=38%)	Year	Value	(95% Confidence Interval)	
M-MPI (M0)	2019/20	0.316	0.310	0.330
	2016/17	0.337	0.327	0.347
Incidence or headcount ratio (H %)	2019/20	58.8	57.0	60.6
	2016/17	61.7	60.0	63.4
Intensity (A %)	2019/20	53.9	53.5	54.3
	2016/17	54.6	54.2	55.0

NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

Between 2019/20 and 2016/17, the three measures, MPI, Incidence or Headcount ratio (H percent), and Intensity (A percent), show a downward trend. The differences, however, are not statistically significant. (Table 1).

3.1.2. National Uncensored Headcount Ratio Indicators

An indicator's uncensored headcount ratio denotes the proportion of the population deprived in that indicator, regardless of whether they are poor or not.

The results show that access to electricity has the highest deprivation in the population, at 88.8 percent, followed by asset ownership and child labour, at 77.4 percent and 53.8 percent, respectively. School attendance and employment had the lowest levels of deprivation, at 14.4 percent and 12.2 percent, respectively. (Figure 2).

3.1.3. National Censored Headcount Ratio Indicators (K=38 Percent)

The Censored Headcount Ratio for indicators represents the proportion of individuals who are multidimensionally poor and deprived in those indicators at the same time.

The results show that 58.2 percent of the individuals were multidimensionally poor and deprived of electricity, 54.4 percent in asset ownership and 40.3 percent in housing. The least censored deprivation was observed in employment with a proportion of 5.3 percent. (Figure 3).

Figure 2: National Uncensored Headcount Ratio for Indicators, Malawi 2019/2020

Indicator	Value
Electricity	88.8
Asset ownership	77.4
Child labour	53.8
Toilet	52.7
Food security	49.0
Housing	48.4
Job diversity	48.2
Literacy and Schooling	40.9
Rubbish Disposal	35.9
Water and Sanitation	27.3
Nutrition	23.1
School Attendance	14.4
Unemployment	12.2

NSO, Malawi Multidimensional Poverty Index Report, 2019-2020
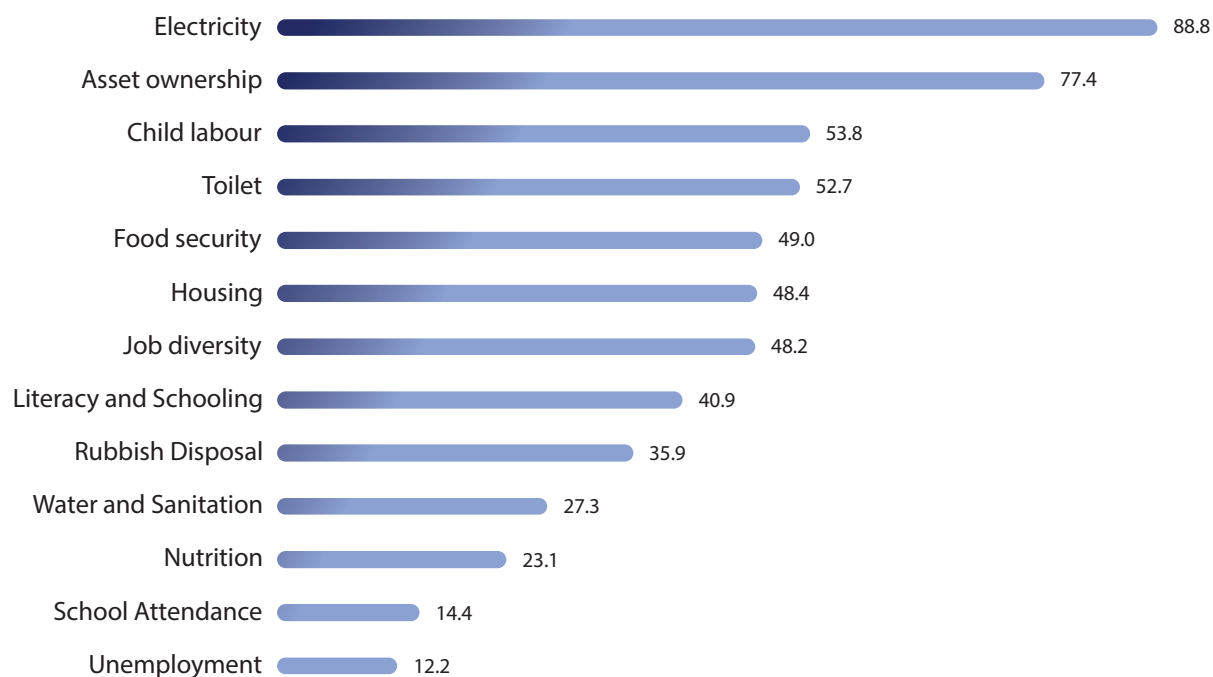
Figure 3: National Censored Headcount Ratio for Indicators, Malawi 2019/2020

Indicator	Value
Electricity	58.2
Asset Ownership	54.4
Housing	40.3
Food Security	39.5
School Attendance	39.5
Job Diversity	38.8
Child Labour	38.0
Sanitation	37.4
Literacy and Schooling	37.1
Rubbish Disposal	27.6
Drinking Water	20.9
Nutrition	17.3
Unemployment	5.3
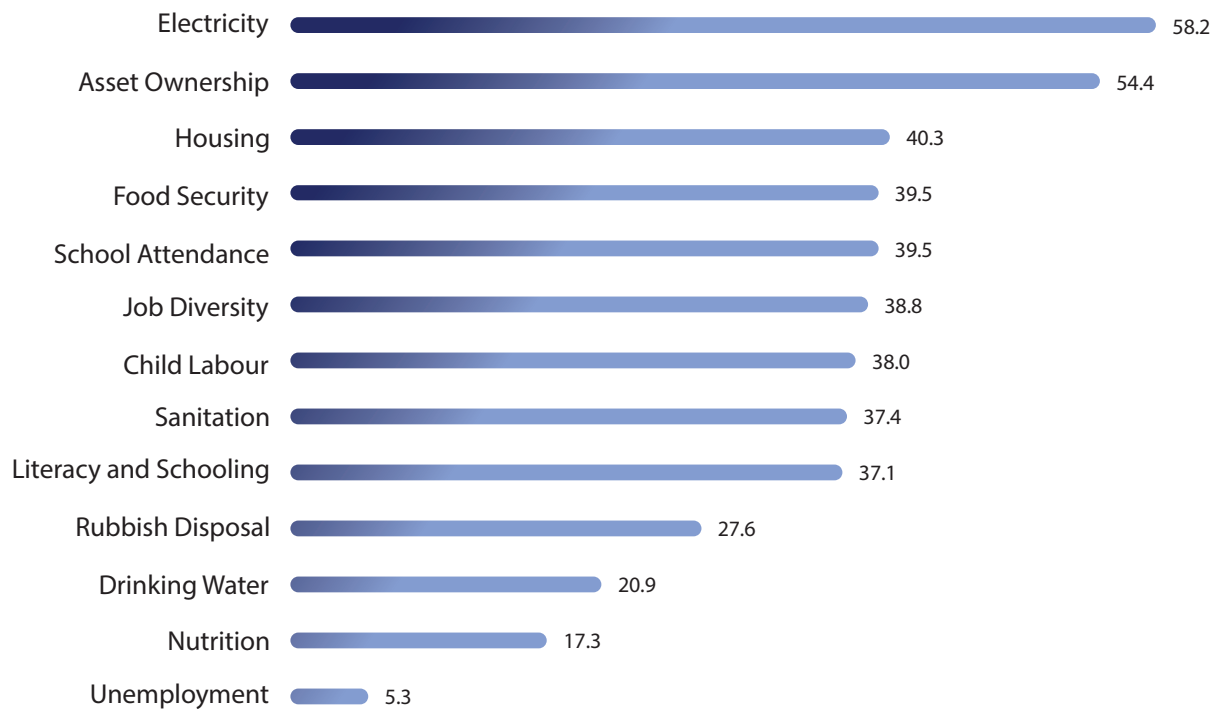
NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

Figure 4: Percentage Contribution of Each Indicator to MPI at the National Level, Malawi 2019/2020

Indicator	Value
Literacy and Schooling	14.7
Electricity	11.5
Asset Ownership	10.8
Job Diversity	10.2
Child Labour	10.0
Housing	8.0
Food security	7.8
Sanitation	7.4
Sanitation Disposal	5.5
School Attendance	5.3
Drinking Water	4.1
Nutrition	3.4
Unemployment	1.4
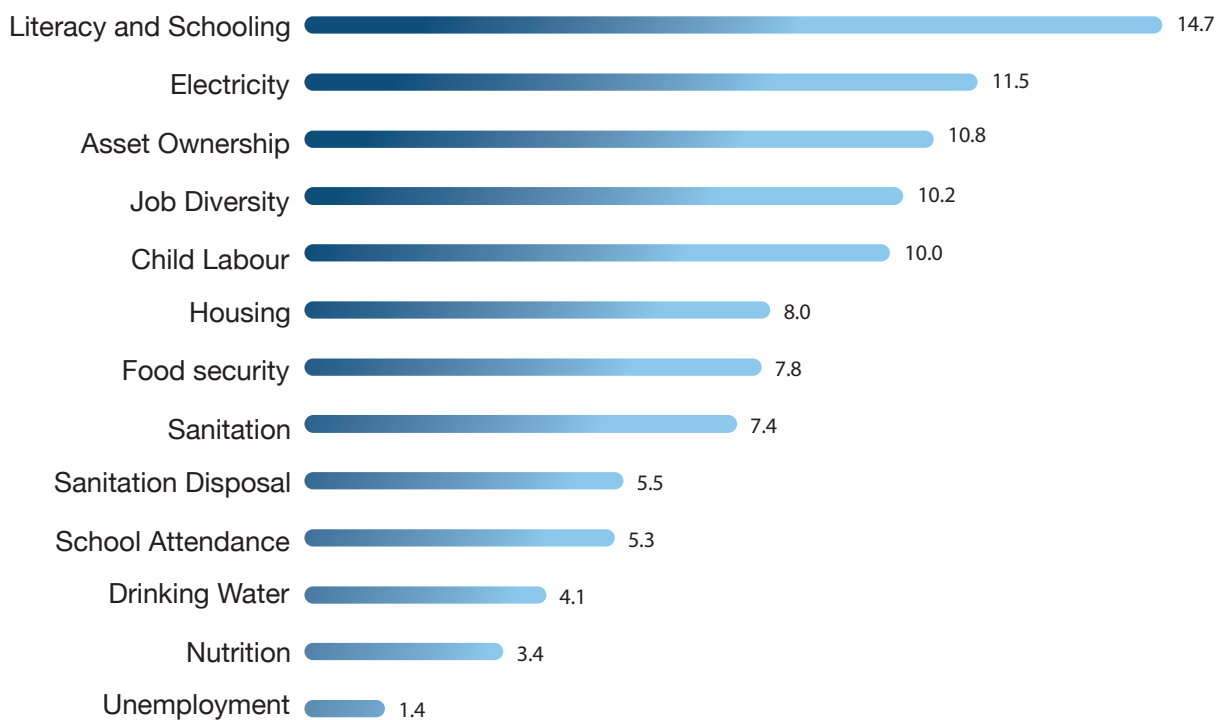
NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

3.1.4. Contribution of Each Indicator to the National MPI

Literacy and schooling had contributed the most to the MPI, accounting for 14.7 percent. This was followed by electricity, asset ownership, job diversity, and child labour, with respective contributions to the MPI of 11.5 percent, 10.8 percent, 10.2 percent, and 10.0 percent. Nutrition and unemployment made the least contribution to MPI, accounting for 3.4 percent and 1.4 percent, respectively (Figure 4). In terms of the indicators' contribution to the MPI, there has been little change since the previous M-MPI report (2021). In terms of the indicators' contribution to the MPI, there has been little change since the previous M-MPI report (2021).

3.2. Multidimensional Poverty at Regional Level

This section provides the headcount (H), intensity (A) and adjusted headcount ratio (MPI) at regional level. The section also discusses the percentage contribution of each indicator to the regional MPI.

3.2.1. Aggregate Measures (H, A, MPI) at Regional Level

According to the results, the Southern Region had the highest MPI value (0.332), while the Northern Region had the lowest (0.232). The incidence of poverty was highest in the Southern Region (61.3 percent) and least prevalent in the Northern Region (45.6 percent). Similarly, the Central and Southern Regions had the highest intensity of multidimensional poverty at 54.2 percent each, while the Northern Region had the lowest at 51.0 percent. Overall, between 2016/2017 and 2019/2020, there were no significant changes in the MPI value, incidence, and intensity of multidimensional poverty. (Table 2).

3.2.2. Regional Uncensored Headcount Ratio Indicators

The uncensored headcount ratio shows access to electricity was the highest deprivation across the regions. The Central Region had the highest rate of electricity deprivation at 91.2 percent, followed by the Southern Region at

Table 3: Multidimensional Poverty Index, Incidence and Intensity at Regional Level, Malawi 2019/2020

Region	Year	Population Share %	MPI			Headcount Ratio			Intensity		
			Value %	95% Confidence Interval		Value %	95% Confidence Interval		Value %	95% Confidence Interval	
Northern	2016-2017	12.8	0.219	0.199	0.239	43.7	39.9	47.5	50.2	49.3	51.1
	2019-2020	19.1	0.232	0.208	0.257	45.6	41.1	50.0	51.0	49.7	52.2
Central	2016-2017	42.0	0.348	0.331	0.364	63.4	60.6	66.3	54.8	54.2	55.4
	2019-2020	35.9	0.325	0.308	0.342	60.0	57.2	62.9	54.2	53.5	54.8
Southern	2016-2017	45.2	0.351	0.337	0.366	63.7	61.4	66.0	55.1	54.5	55.7
	2019-2020	45.0	0.332	0.316	0.348	61.3	58.6	64.0	54.2	53.6	54.7

NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

Figure 5: Uncensored Headcount Ratios (Percent) by Region, Malawi 2019/2020

Electricity — Northern 84.8, Central 91.2, Southern 87.7
Asset Ownership — Northern 69.5, Central 77.8, Southern 79.2
Child Labour — Northern 55.2, Central 53.5, Southern 53.6
Sanitation — Northern 46.8, Central 48.5, Southern 58.6
Job Diversity — Northern 48.6, Central 48.9, Southern 47.5
Food Security — Northern 40.7, Central 48.7, Southern 51.6
Housing — Northern 33.0, Central 57.1, Southern 44.4
Literacy and Schooling — Northern 21.6, Central 42.4, Southern 45.1
Rubbish Disposal — Northern 24.9, Central 36.6, Southern 38.4
Drinking Water — Northern 37.1, Central 26.0, Southern 25.7
Nutrition — Northern 20.1, Central 23.4, Southern 23.8
School Attendance — Northern 11.7, Central 13.8, Southern 15.8
Unemployment — Northern 12.4, Central 13.8, Southern 10.5

Legend: Northern, Central, Southern

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87.7 percent and the Northern Region at 84.8 percent. The regions with the least deprivation had the highest rates of school attendance and employment. Uncensored headcount ratios for school attendance in the Northern, Southern, and Central Regions were 11.7 percent, 13.8 percent, and 15.8 percent, respectively. Unemployment rates in the Northern, Southern, and Central Regions were 12.4 percent, 13.8 percent, and 10.5 percent, respectively. (Figure 5).

3.2.3. Regional Censored Headcount Ratio Indicators

In general, the Northern Region had the lowest proportion of deprived individuals. Electricity had the highest headcount ratios across all regions, at 44.6 percent, 59.6 percent, and 60.7

percent in the Northern, Central, and Southern Regions, respectively. Unemployment had the lowest headcount ratios across all regions, at 4.1 percent, 6.5 percent, and 4.4 percent in the Northern, Central, and Southern Regions, respectively. (Figure 6).

3.2.4. Contribution of Each Indicator to the Regional MPI

Electricity, job diversity, and asset ownership were the major contributors to the MPI in the Northern Region, accounting for 12.0 percent, 11.3 percent, and 11.0 percent, respectively. In the same region, unemployment, nutrition, and garbage disposal had the lowest contributions to multidimensional poverty, at 1.5 percent, 3.3 percent, and 4.5 percent, respectively.

Literacy and schooling, electricity, and asset ownership made the greatest contributions to regional multidimensional poverty in the Central Region, with distributions of 14.8 percent, 11.5 percent, and 10.7 percent, respectively. Unemployment contributed the least at 1.7 percent, nutrition contributed 3.4 percent, and drinking water contributed 3.9 percent.

Like the Central Region, literacy and schooling, electricity, and asset ownership contributed the most to multidimensional poverty in the Southern Region, with distributions of 15.4 percent, 11.4 percent, and 10.7 percent, respectively. Unemployment, nutrition, and drinking water had the lowest contributions to M-MPI, at 1.7 percent, 3.4 percent, and 3.9 percent, respectively. (Figure 7).

3.3. Multidimensional Poverty by Place of Residence

This section provides data on the adjusted headcount ratio (MPI), headcount (H), intensity (A), and the percentage contribution of each indicator to the M-MPI for rural and urban areas.

3.3.1. Aggregate Measures (MPI, H, A) by Place of Residence

Rural areas had a higher incidence of multidimensional poverty, at 65.7 percent, compared to 20.0 percent in urban areas. Similarly, the intensity of poverty was higher in rural areas, at 54.1 percent, compared to 49.2 percent in urban areas. The results also show that the MPI for rural areas decreased significantly from 0.385 in M-MPI-1 to 0.356 in the current M-MPI, whereas the MPI for urban areas did not. Similarly, the rural headcount ratio improved significantly, falling from 70.0 percent in 2016/17 to 65.7 percent in 2019/20. However, the level of poverty did not change significantly from 2016/2017 to 2019/2020. (Table 3).

3.3.2. Uncensored Headcount Ratio Indicators by Place of Residence

Rural areas have higher uncensored headcount ratios than urban areas. The proportion of individuals without electricity in rural areas was 95.4 percent, compared to 52.6 percent in urban areas. Furthermore, 81.1 percent of people in rural areas lacked asset ownership, compared to 57.2 percent in urban areas. Sanitation deprivation was higher in cities than in rural areas, with 56.2 percent and 52.1 percent, respectively. Similarly, unemployment rates in urban and rural areas were 37.1 percent and 7.6 percent, respectively. (Figure 8).

Table 4: Headcount Ratio, Intensity and Multidimensional Poverty Index by Place of Residence (Rural/Urban Areas), Malawi 2016/2017 and 2019/2020

Region	Year	Population Share %	MPI			Headcount ratio			Intensity		
			Value %	95% Confidence Interval		Value %	95% Confidence Interval		Value %	95% Confidence Interval	
Rural	2016-2017	81.0	0.385	0.374	0.396	70.0	68.2	71.8	55.0	54.5	55.4
	2019-2020	82.6	0.356	0.344	0.367	65.7	63.8	67.7	54.1	53.7	54.6
Urban	2016-2017	19.0	0.130	0.106	0.155	25.7	21.5	30.0	50.7	48.9	52.4
	2019-2020	17.4	0.101	0.082	0.121	20.6	17.0	24.3	49.2	47.6	50.8

Figure 6: Censored Headcount Ratios (Percent) by Region, Malawi 2019/2020

Indicator	Northern	Central	Southern
Electricity	44.6	59.6	60.7
Asset Ownership	40.9	55.8	57.0
Food Security	30.0	40.8	41.1
Job Diversity	31.6	39.6	40.2
Housing	24.9	46.8	38.5
Child Labour	30.0	38.5	39.9
Sanitation	28.8	35.1	42.2
Literacy and Schooling	19.4	38.5	40.8
Rubbish Disposal	16.8	28.7	29.7
Drinking Water	26.0	20.2	20.2
Nutrition	12.4	17.9	18.0
School Attendance	10.5	13.0	14.7
Unemployment	4.1	6.5	4.4
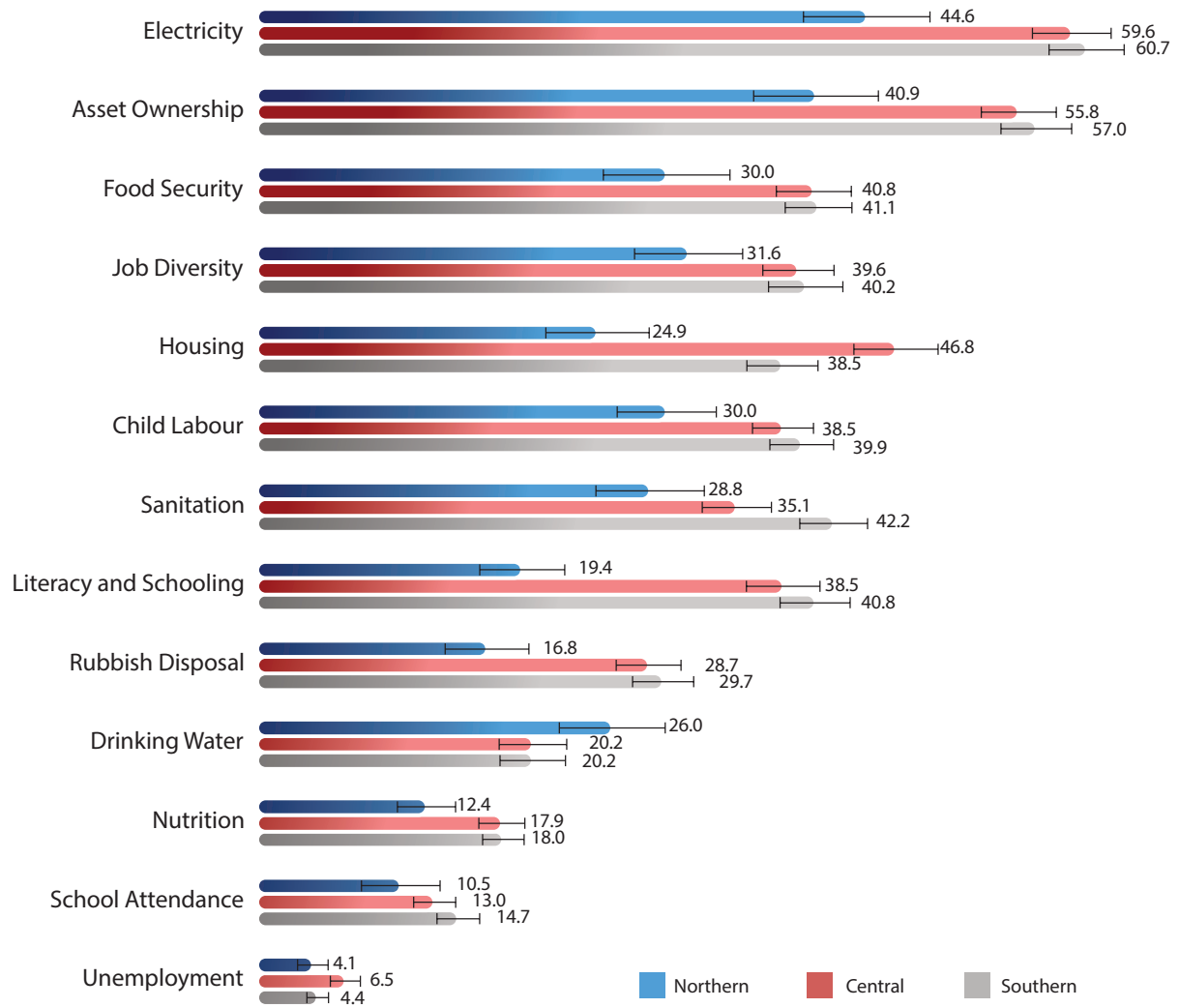
Figure 7: Percentage Contribution of Each Indicator to M-MPI at the Regional Level, Malawi 2019/2020

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Figure 8: Uncensored Headcount Ratios by Place of Residence (Rural/Urban), Malawi 2019/2020

Indicator	Rural	Urban
Electricity	95.4	52.6
Asset Ownership	81.1	57.2
Sanitation	52.1	56.2
Child Labour	59.0	25.0
Food Security	53.7	22.9
Job Diversity	54.3	14.9
Housing	54.8	13.5
Rubbish Disposal	37.8	25.5
Literacy and Schooling	45.8	14.2
Unemployment	7.6	37.1
Nutrition	24.2	17.3
Drinking Water	30.4	10.1
School Attendance	15.8	6.8
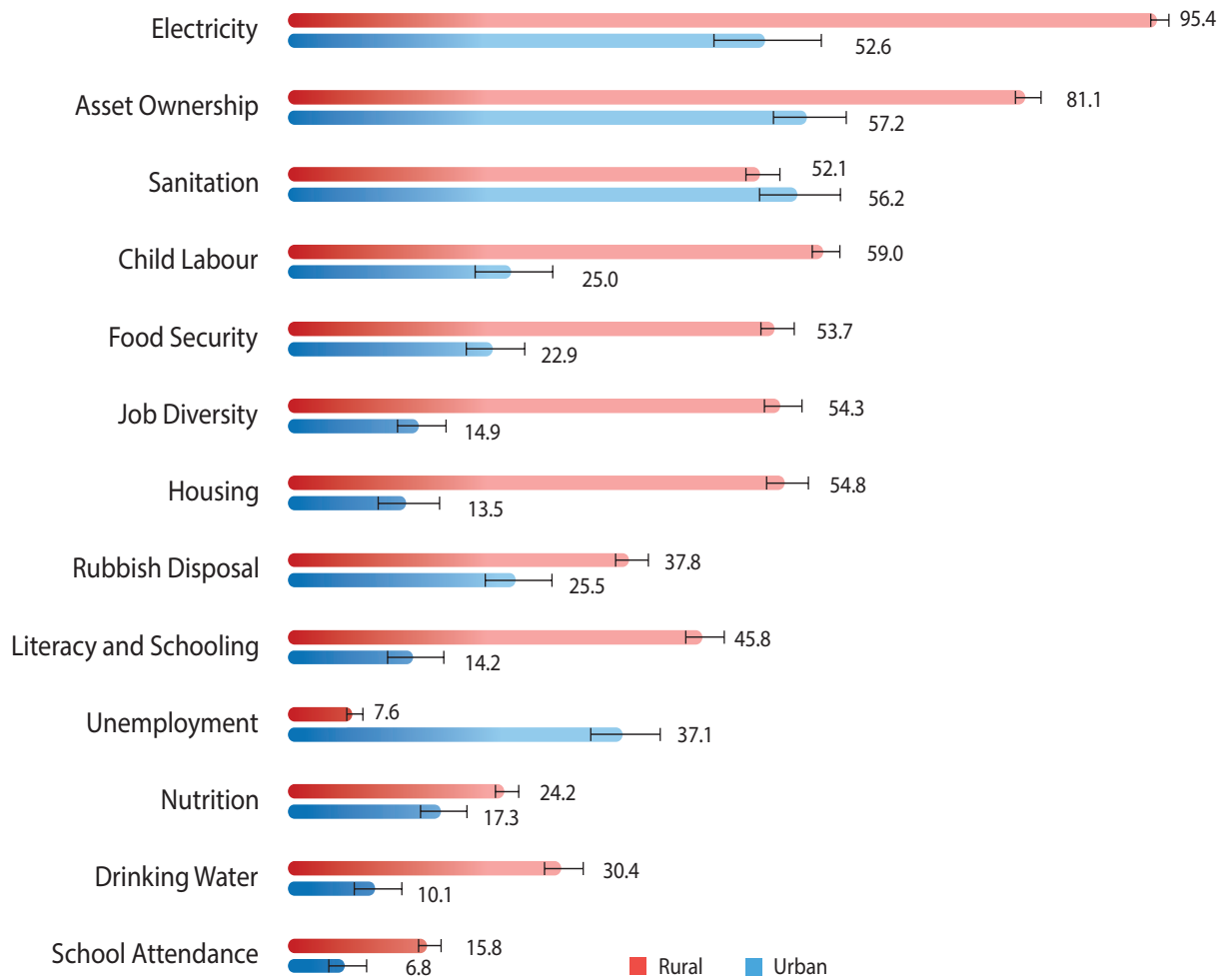
■ Rural ■ Urban

NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

Figure 9: Censored Headcount Ratios by Place of Residence (Rural/Urban), Malawi 2019/2020
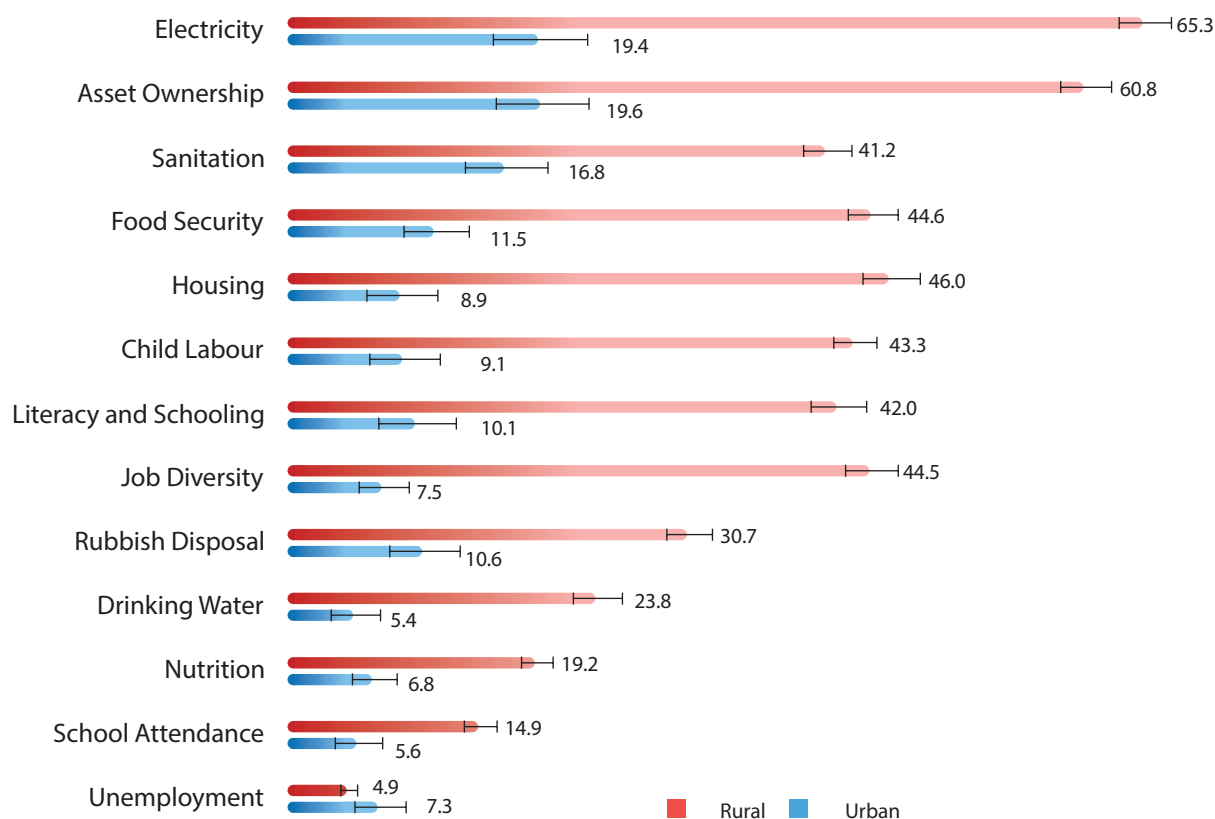
NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

3.3.3. Censored Headcount Ratio Indicators by Place of Residence

In general, the censored headcount ratio was higher in rural areas than in urban areas. In rural areas, electricity had the highest headcount ratio at 65.3 percent, followed by asset ownership at 60.8 percent. The lowest headcount ratios were 4.9 percent for unemployment and 14.9 percent for school attendance.

In urban areas, asset ownership had the highest headcount ratio of 19.6 percent, followed by electricity at 19.4 percent. The lowest headcount ratio for multidimensional poverty was 5.6 percent for school attendance and 5.4 percent for drinking water. There were significant differences between the results of the previous M-MPI. (Figure 9).

3.3.4. Contribution of Each Indicator to the MPI by Place of Residence

The contribution of the indicators to the MPI varies by place of residence. Literacy and schooling contributed the most to the MPI in urban areas, accounting for 12.4 percent. Asset ownership, electricity, and sanitation all contributed 12.0 percent, 11.9 percent, and 10.4 percent, respectively. Drinking water and nutrition were the least important contributors, accounting for 3.3 percent and 4.2 percent, respectively.

Literacy and schooling, electricity, and asset ownership all contributed significantly to the MPI in rural areas, at 14.8 percent, 11.5 percent, and 10.7 percent, respectively, while unemployment and nutrition contributed the least, at 1.1 percent and 3.4 percent, respectively. (Figure 10).

Figure 10: Percentage Contribution of Each Indicator to M-MPI for Place of Residence (Rural/Urban), Malawi 2019/2020

Indicator	Rural	Urban
Literacy and Schooling	14.8	12.4
Electricity	11.5	11.9
Asset Ownership	10.7	12.0
Child Labour	10.1	7.5
Sanitation	7.2	10.4
Job Diversity	10.4	6.2
Food Security	7.8	7.1
Housing	8.1	5.5
School Attendance	5.2	6.9
Rubbish Disposal	5.4	6.5
Nutrition	3.4	4.2
Drinking Water	4.2	3.3
Unemployment	1.1	6.0
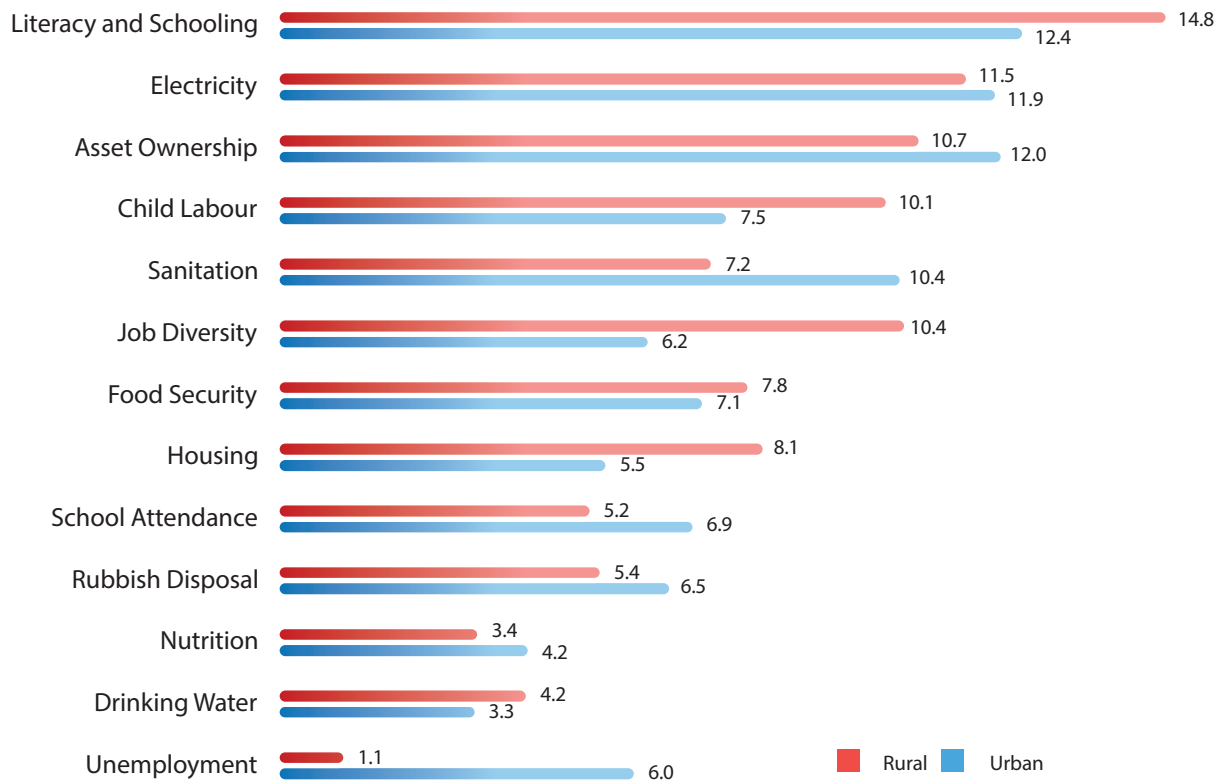
NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

3.4. Multidimensional Poverty by District

This section provides the headcount (H), intensity (A) and adjusted headcount ratio (MPI) at district level.

3.4.1. Multidimensional Poverty Index by District in Malawi

The Districts of Machinga, Mangochi, and Phalombe had the highest multidimensional poverty indices, at 0.445, 0.440, and 0.413, respectively. This means that people in Machinga, Mangochi, and Phalombe experienced about 45 percent, 44 percent, and 41 percent of the weighted deprivation, respectively. Mzuzu had the lowest multidimensional poverty index at 0.083, followed by Lilongwe and Blantyre cities at 0.101 each. (Figure 11).

3.4.2. Incidence (H) of Multidimensional Poverty by District in Malawi

Mangochi had the highest rate of multidimensional poverty at 78.4 percent, followed by Machinga and Phalombe, which had rates of 78.2 and 75.4 percent, respectively. This means that about 78 out of every 100 individuals in Mangochi and Machinga were multidimensionally poor. Mzuzu and Blantyre Cities had the lowest multidimensional poverty incidences, at 17.0 percent and 20.5 percent, respectively. (Figure 12).

3.4.3. Intensity (A) of Multidimensional Poverty by District in Malawi

According to the findings, Likoma had the highest multidimensional poverty intensity of 58.7 percent, followed by Machinga and Nkhotakota at 56.9 percent and 56.6 percent, respectively. Lilongwe City, on the other hand,

had the lowest intensity of multidimensional poverty at 47.6 percent. (Figure 13).

3.5. Multidimensional Poverty by Sex of Household Head

This section presents estimates for the adjusted headcount ratio (MPI), headcount ratio (H), and intensity (A) by sex of the household head. The section also shows the percentage contribution of each indicator to the MPI by sex of the household head.

Figure 11: M-MPI by District (K=38 Percent), Malawi 2019/2020
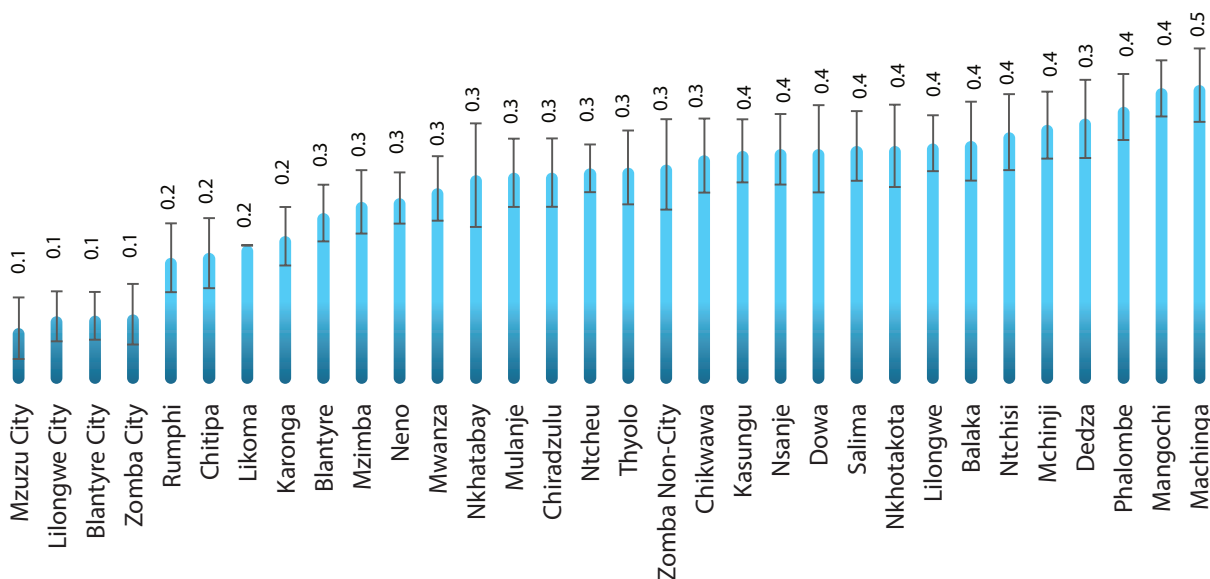
NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

Figure 12: Incidence of M-MPI (Percent) by District, Malawi 2019/2020
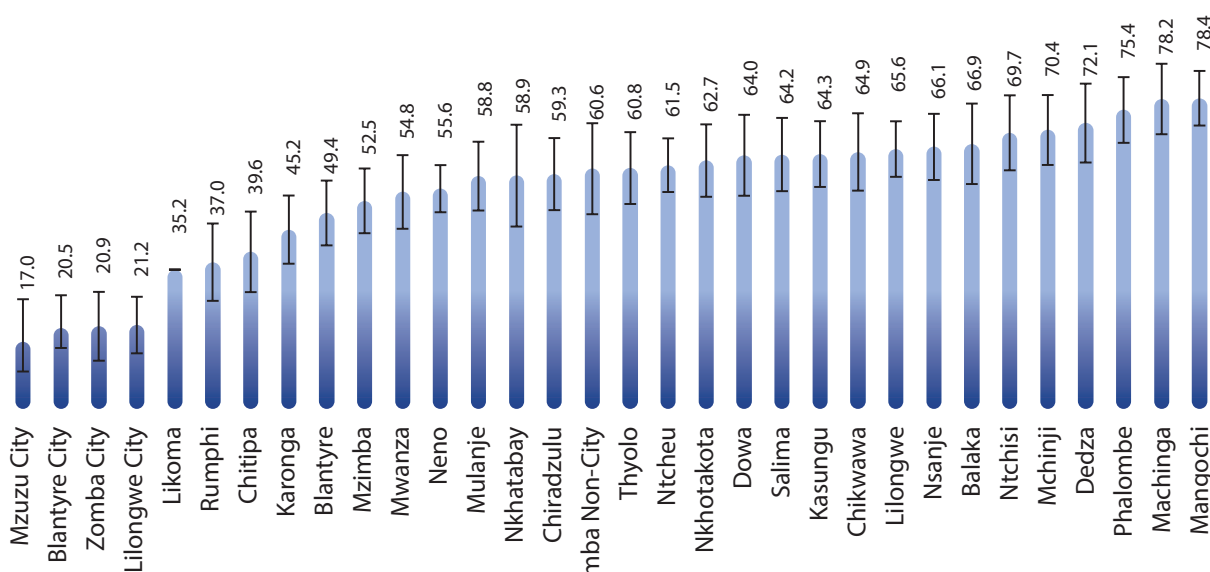
NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

Figure 13: Intensity of M-MPI (Percent) by District, Malawi 2019/2020
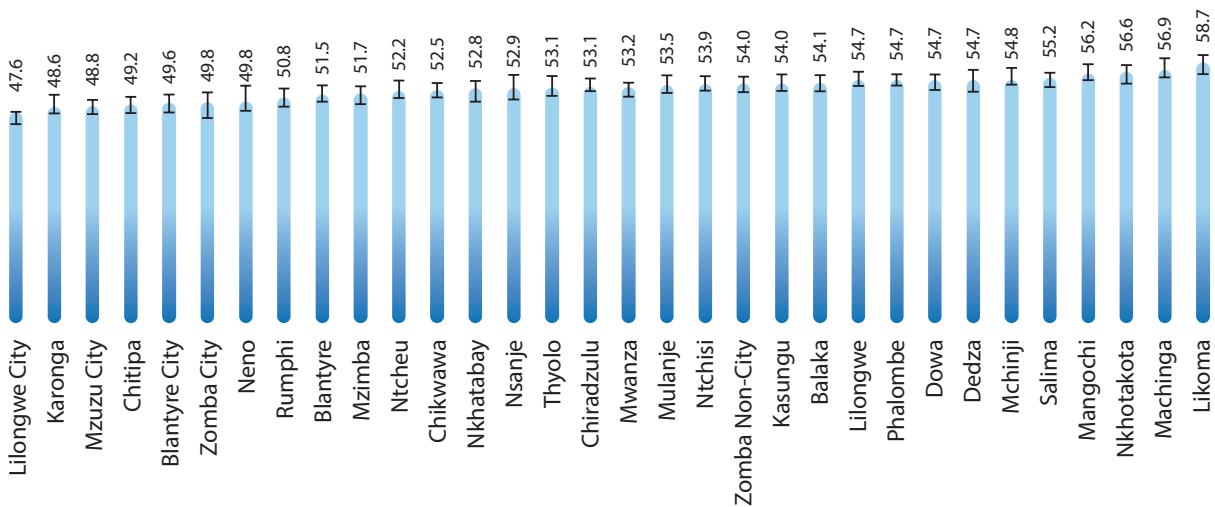
NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

3.5.1. Aggregate Measures (MPI, H, A) by Sex of Household Head

Individuals in female-headed households had a higher incidence of multidimensional poverty (71.4 percent) than those in male-headed households (53.9 percent). Similarly, the intensity of poverty was higher in female-headed households than in male-headed households (55.5 percent versus 53.0 percent). This results in relatively higher MPI values of 0.396 for individuals belonging to female-headed households versus 0.286 for individuals belonging to male-headed households. It is worth noting that over 71.0 percent of Malawian households are male-headed. (Table 4). The analysis suggests a decreasing trend in incidence, intensity, and adjusted headcount ratio for both male-headed and female-headed households in all estimates.

3.5.2. Uncensored Headcount Ratio Indicators by Sex of Household Head

Individuals living in female-headed households have higher uncensored headcount ratios than those living in male-headed households. The proportion of individuals without electricity was 92.6 percent in female-headed households and 87.4 percent in male-headed households. Furthermore, 90.0 percent of individuals in female-headed households and 71.8 percent of individuals in male-headed households were deprived of asset ownership. Food insecurity affected 57.1 percent of people in male-headed households and 45.8 percent of people in female-headed households. Literacy and education levels were 53.2 percent in male-headed households and 36.2 percent in female-headed households. (Figure 14).

3.5.3. Censored Headcount Ratio Indicators by Sex of Household Head

In female-headed households, the proportion of people who were multidimensionally poor and deprived of electricity was 70.7 percent, while in male-headed households, the proportion was 53.4 percent. Individuals were denied asset ownership in 70.2 percent of female-headed households and 48.4 percent of male-headed households. Approximately 17 percent of people in female-headed households were multidimensionally poor and deprived of school

attendance, compared to 12.2 percent in male-headed households. (Figure 15).

3.5.4. Contribution of Each Indicator to the MPI by Sex of Household Head

Literacy and schooling (15.9 percent), electricity (11.2 percent), and asset ownership (11.1 percent) were the major contributors to the MPI for individuals in female-headed households. For individuals in female-headed households, the indicators that contributed the least to MPI were unemployment (1.1 percent), nutrition (2.9 percent), and drinking water (3.5 percent).

Literacy and schooling (14.0 percent), electricity (11.7 percent), and asset ownership (11.7 percent) were the major contributors to MPI for individuals in male-headed households (10.3 percent). For individuals in male-headed households, the least contributing indicators to MPI were unemployment (1.6 percent), nutrition (3.7 percent), and water (4.5 percent) (Figure 16).

Table 5: Aggregate Measuresv (H, A and MPI) by Sex of the Household Head, 2019/2020

Sex	Population share	MPI			Headcount Ratio/ Incidence			Intensity(A)		
	(%)	Value %	Confidence Interval		Value %	95% Confidence Interval		Value %	95% Confidence Interval	
Male	73	0.286	0.274	0.297	53.9	51.9	55.9	53.0	53.0	53.0
Female	27	0.396	0.382	0.411	71.4	69.1	73.7	55.5	54.9	56.1

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Figure 14: Uncensored Headcount Ratios by Sex of the Household Head, Malawi 2019/2020
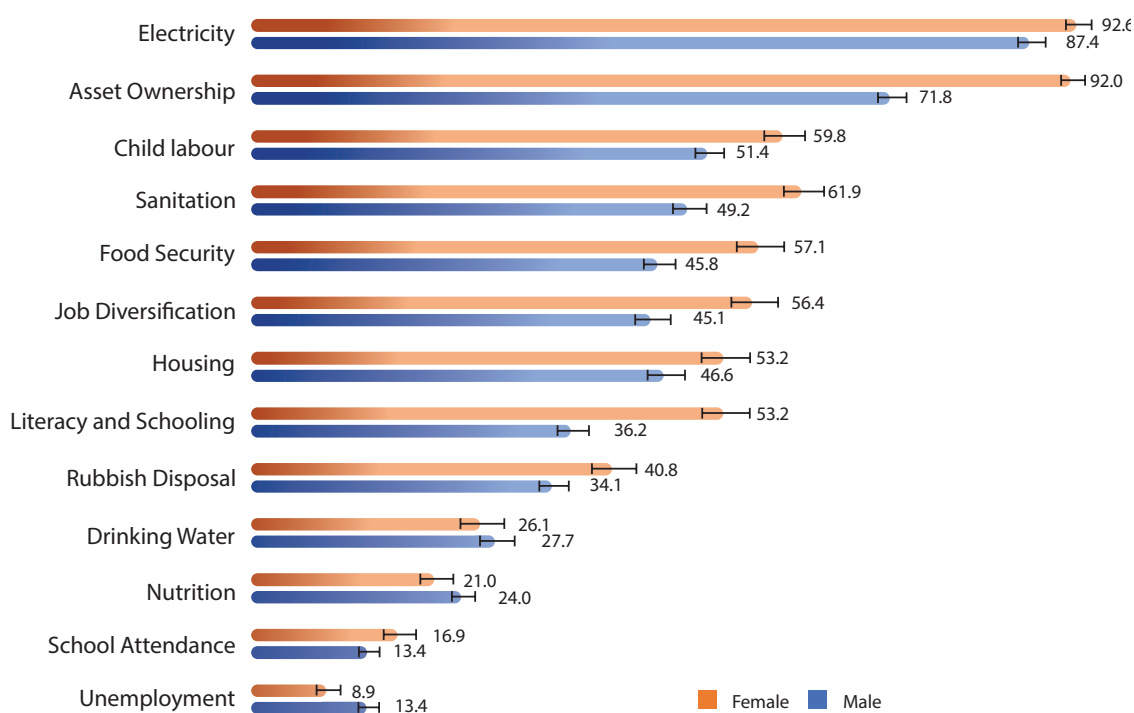
NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

Figure 15: Censored Headcount Ratios by Sex of the Household Head, Malawi 2019/2020

	Female	Male
Electricity	70.7	53.4
Assets	70.2	48.4
Food Security	49.5	35.7
Housing	47.4	37.6
Job Diversification	49.0	34.9
Sanitation	49.8	32.7
Child labour	48.4	34.0
Literacy and Schooling	50.3	32.0
Rubbish Disposal	35.6	24.6
Drinking Water	22.3	20.4
Nutrition	18.2	16.9
School Attendance	16.6	12.2
Unemployment	5.0	5.4
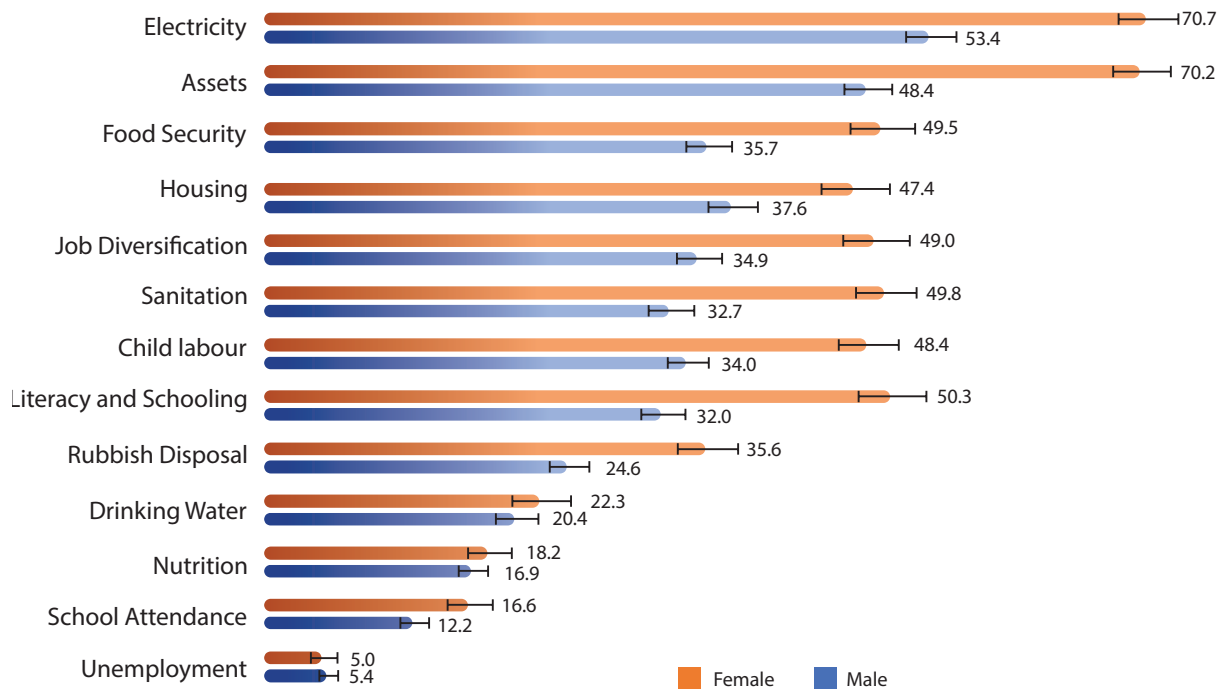
Source: National Statistical Office, M-MPI2019-2020

3.6. Multidimensional Poverty by Age Group of Individuals

This section presents the results of the headcount ratio (H), intensity (A), and contribution of each indicator to the current MPI compared to the previous MPI disaggregated by age group of the individuals.

3.6.1. Aggregate Measures (MPI, H, A) by Age Group of Individuals

The results show that individuals aged 0-9 years had the highest MPI value of 0.347, a significant drop from the previous MPI value of 0.374. This means individuals in the age group of 0-9 years who were multidimensionally poor experienced about 35 percent of the total possible deprivations that could be experienced if everyone in the group was multidimensionally poor.

The age group 0-9 had the highest headcount ratio of 63.5 percent, while the age group 20-34 had the lowest headcount ratio of 50.7 percent.

The intensity of multidimensional poverty was highest in the age group 0-9, at 54.7 percent, a significant drop from 55.8 percent in the previous M-MPI. At 52.2 percent, the age group 50 and up had the lowest intensity of multidimensional poverty. (Table 5).

3.6.2. Contribution of Each Indicator to the MPI by Age Group

Literacy and schooling contributed the most to multidimensional poverty across all age groups, accounting for 17.2 percent in the 50+ age group and about 14 percent in the other age groups. Other major contributors to the MPI ranging between 10.0 and 11.9 percent were a lack of access to electricity, asset ownership, and job diversity. (Figure 17).

3.7. Multidimensional and Monetary Poverty

The MPI is a supplement to the traditional measure of monetary poverty used in Malawi. This section presents results of the comparison

and overlap of the two poverty measures since the two measures were derived from the same data source (IHS5).

3.7.1. Comparison Between Multidimensional and Monetary Poverty at National Level

Overall, slightly more than half of the individuals (50.7 percent) were identified as monetary poor, while 58.8 percent were identified as multidimensionally poor.

The overlap between the two poverty estimates shows that nearly four out of ten (39.9 percent) individuals were both multidimensionally and financially poor. The findings also show that 10.8 percent of individuals were only financially poor, while 18.9 percent were only multidimensionally poor.

Furthermore, both multidimensional and monetary poverty estimates revealed that 30.4 percent of all individuals were not poor (Figure 18)

Figure 16: Percentage Contribution of Each Indicator to MPI by Sex of Household Head, Malawi 2019-2020

Indicator	Male	Female
Literacy and Schooling	14.0	15.9
Electricity	11.7	11.2
Assets	10.6	11.1
Job Diversification	10.2	10.3
Child labour	9.9	10.2
Housing	8.2	7.5
Food Security	7.8	7.8
Sanitation	7.1	7.9
Rubbish Disposal	5.4	5.6
School Attendance	5.3	5.2
Drinking Water	4.5	3.5
Nutrition	3.7	2.9
Unemployment	1.6	1.0
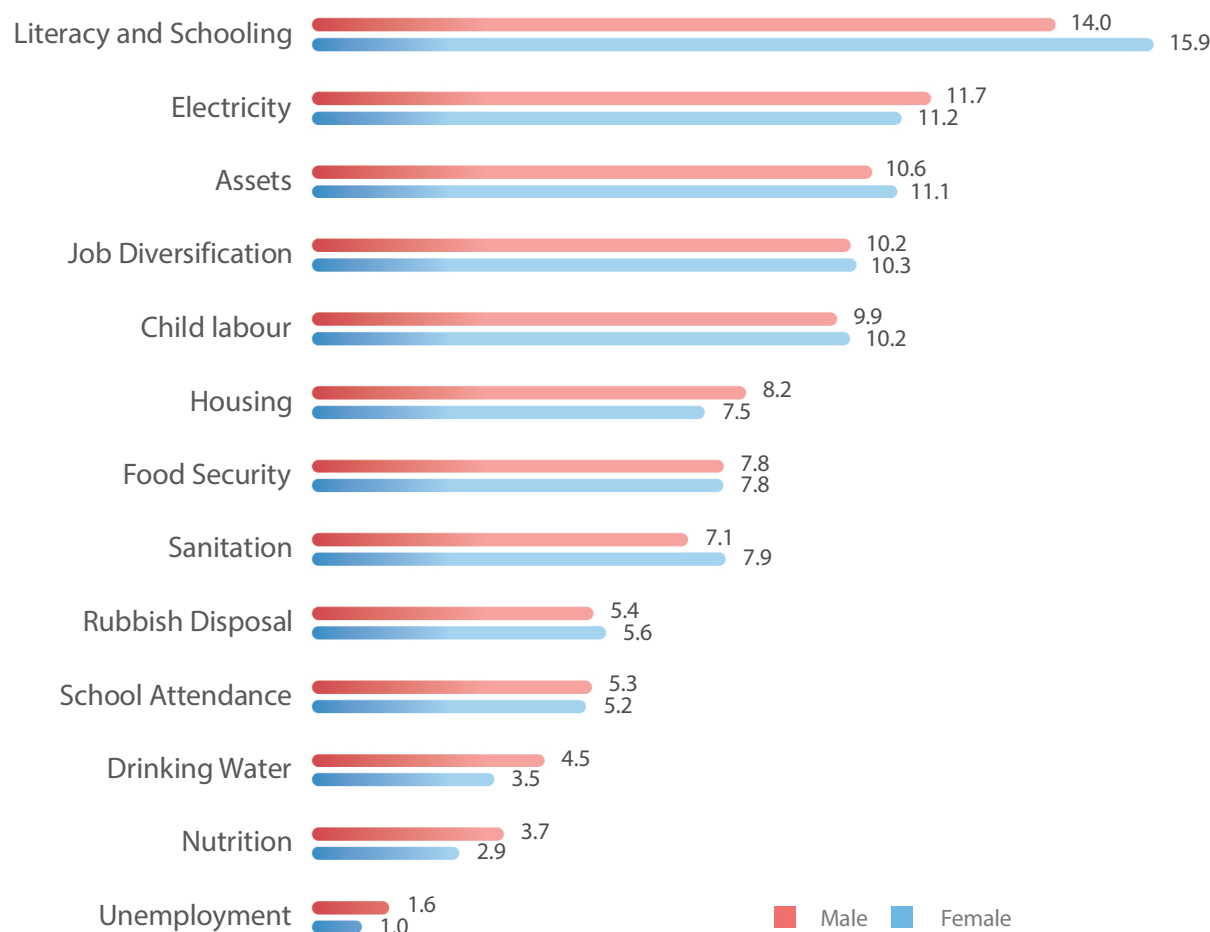
NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

Table 6: Multidimensional Poverty Index, Headcount Ratio and Intensity Age Group of Individuals, Malawi 2016/2017 and 2019/2020

Age Group	Year	Population Share (%)	MPI			Incidence (H)			Intensity (A)		
			Value	95% Confidence Interval		Value (%)	95% Confidence Interval		Value (%)	95% Confidence Interval	
0-9	2016/2017	29.5	0.374	0.362	0.385	67.0	65.2	68.8	55.8	55.3	56.3
	2019/2020	28.6	0.347	0.336	0.359	63.5	61.5	65.4	54.7	54.2	55.1
10-19	2016/2017	26.0	0.347	0.335	0.358	62.9	61.0	64.8	55.1	54.6	55.6
	2019/2020	27.1	0.336	0.324	0.348	61.8	59.9	63.8	54.4	53.9	54.9
20-34	2016/2017	22.7	0.286	0.275	0.298	54.0	51.9	56.0	53.0	52.6	53.5
	2019/2020	21.2	0.266	0.255	0.278	50.7	48.6	52.8	52.5	52.1	53.0
35-50	2016/2017	12.7	0.319	0.306	0.332	58.1	55.9	60.3	55.0	54.4	55.5
	2019/2020	13.5	0.292	0.279	0.305	54.2	51.9	56.5	53.8	53.8	53.8
50+	2016/2017	9.0	0.335	0.322	0.347	64.0	61.7	66.2	52.3	51.8	52.8
	2019/2020	9.5	0.312	0.299	0.325	59.7	57.3	62.1	52.2	51.7	52.8

NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

Figure 17: Percentage Contribution of Indicators to the MPI for Each Age Group
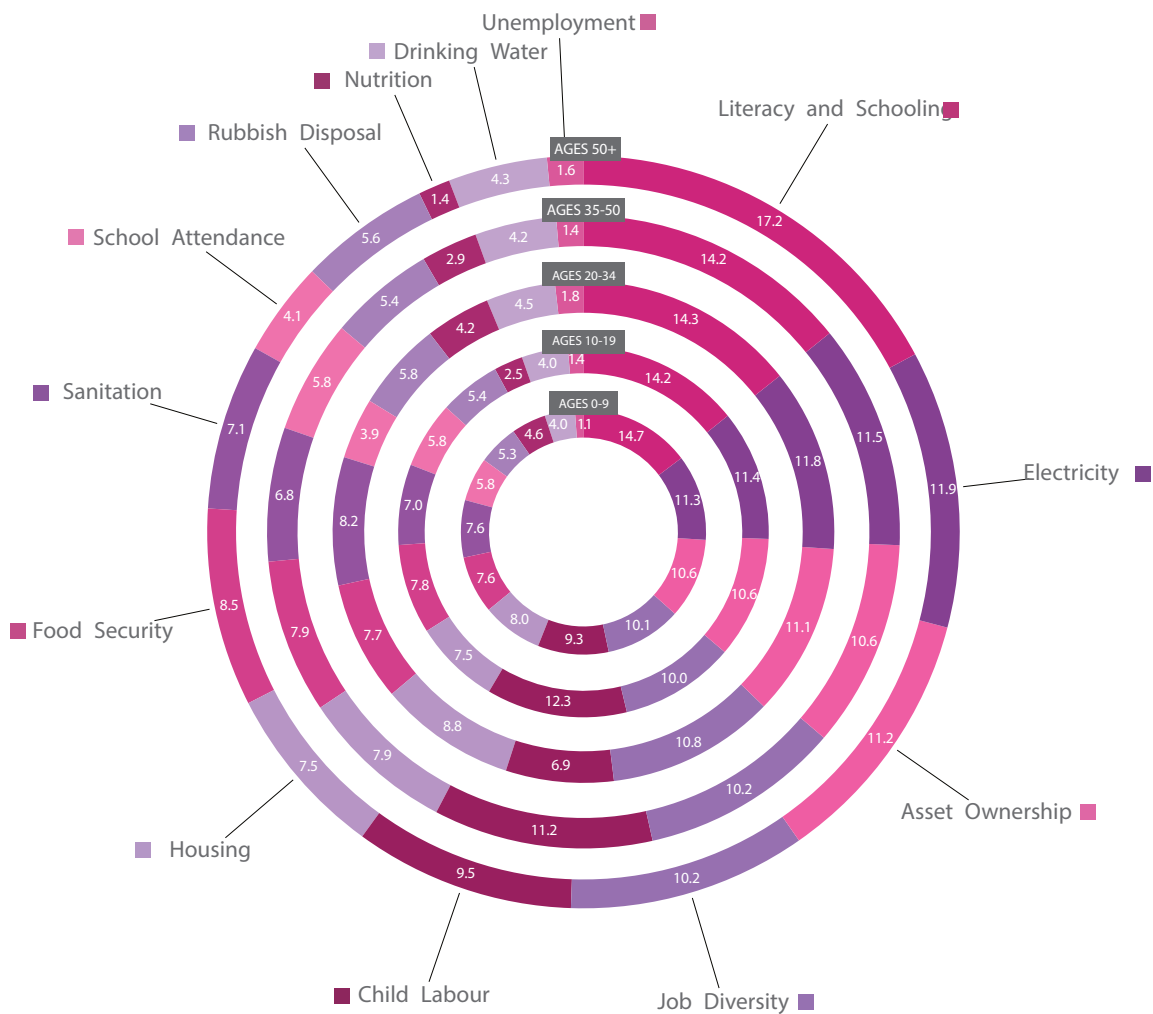
NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

Figure 18: Overlap of Multidimensional & Monetary Poverty at National Level, Malawi 2019/2020
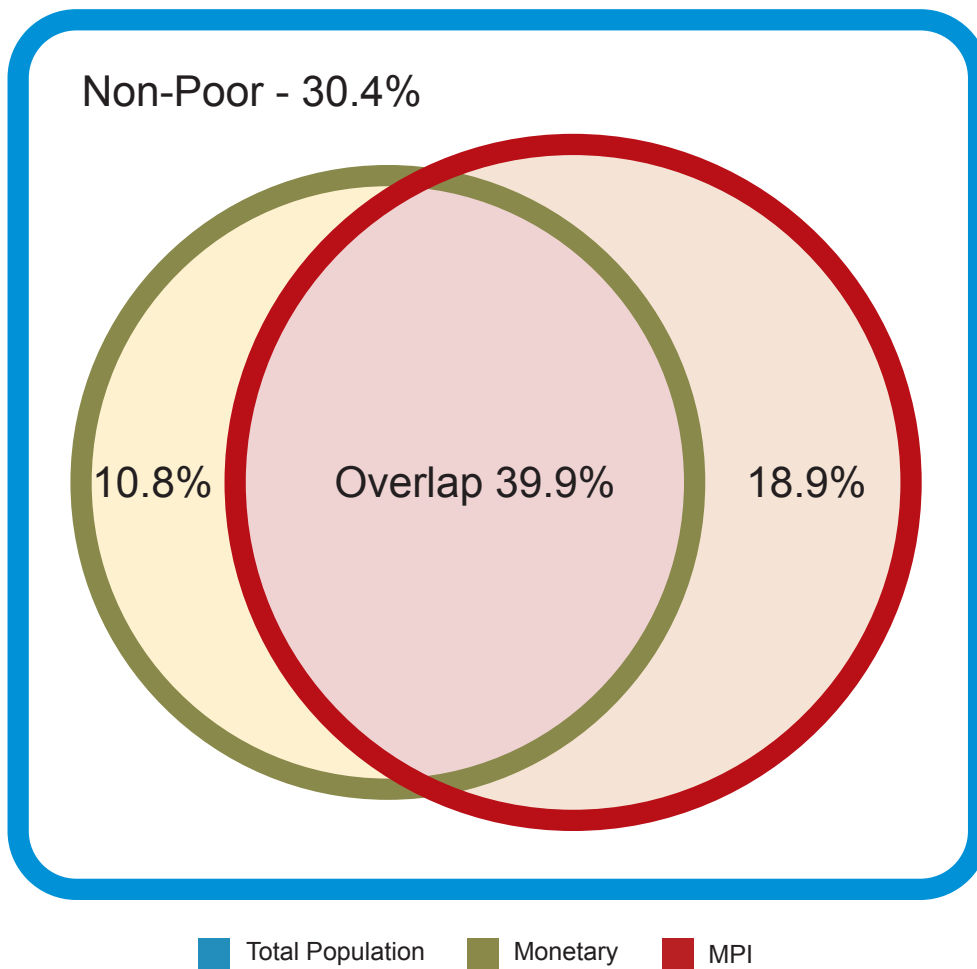
Nso, Malawi Multidimensional Poverty Index Report, 2019-2020

CHAPTER 4

Conclusions & Policy Implications

Poverty statistics provide evidence for the proper implementation of responsive programmes in Malawi's efforts to achieve lower middle-income status and meet most of the SDGs adopted in the MIP-1.

In recent years, much emphasis has been placed on monetary poverty measurement, which has primarily focused on consumption expenditure. The Multidimensional Poverty Index has provided a broader scope and lenses through which poverty and its various dimensions could be viewed and measured, complementing the monetary measure, which has limited scope on dimensions of poverty, essentially deprivations that Malawians suffer from in their lives at various points in time. This metric enables the provision of more detailed information on other aspects of people's lives that require immediate attention in the pursuit of inclusive wealth creation and self-reliance by 2063. This chapter discusses some of the key policy and programmatic implications of the 2019/2020 Multidimensional Poverty Index analysis.

4.1. Policy Implications and Suggestions

Results have shown, 58.8 percent of Malawi's population is classified as multidimensionally poor. This result indicates that more than half of Malawians were generally poor across all 13 poverty indicators examined, including literacy and schooling, electricity, nutrition, unemployment, housing, and food security. The findings imply that diagnosing these deprivations require integrated policy and programmatic frameworks that address these frequently occurring deprivation bundles.

The findings also suggest that our efforts to create wealth require inter-agency, system-wide, and integrated policy frameworks to address the multifaceted dimensions of poverty. In terms of programming, the findings point to the need for a portfolio approach to development initiative programming if the country is to make meaningful progress in addressing deprivation across all forms and dimensions of poverty. To achieve this level of programming, the inter-ministerial and inter-agency policy coordination structure must be strengthened, resulting in integrated and proactive policies based on sound and credible evidence.

According to the report, the poverty intensity in the country was estimated at 53.9 percent, implying that a poor individual in Malawi was deprived in at least 54 percent of the weighted indicators on average. This result shows that nearly 7 of the 13 indicators used in the analysis

were deprived by more than half of Malawians who were classified as multidimensionally poor, emphasising the depth of poverty in the population. This has policy implications in that, redistributive policy interventions, such as Social Protection programmes, that aim to reduce the incidence and intensity of multidimensional poverty should be scaled up. These policies have the potential to legitimise the allocation of resources to groups of people for critical services such as medical aid, housing assistance, and food assistance, among others.

This report has shown that among all the indicators, Literacy and Schooling were the highest contributors to the multidimensional poverty index. Given that one of the enablers for MIP-1 is Human Capital Development, strategic interventions to improve the quality and levels of education for the population are key to the country's inclusive wealth creation and self-reliance efforts. As a result, policies aimed at ensuring universal access to quality education must be promoted and scaled up more aggressively, as they are critical in addressing all forms of poverty. This report further shows that, lack of electricity was the second largest contributor to multidimensional poverty. As a result, Malawi should prioritise investments in energy generation and supply, which is one of the key areas under the MIP-1 enabler

"Economic infrastructure" and crucial to national productivity.

In Malawi, the incidence of multidimensional poverty was higher in female-headed households than in male-headed households, with 71.4 percent and 53.9 percent, respectively. This finding suggests that policy initiatives addressing poverty in female-headed households should be expanded. Furthermore, the findings imply that policies and programmes aimed at improving education for people living in female-headed households should be prioritised and promoted.

Across age groups, households with children aged 0-9 years were the most likely to be classified as multidimensionally poor, with a headcount ratio of 63.5 percent and an intensity of 54.7 percent. This suggests that wealth creation and poverty reduction policies and programmes should prioritise households with children aged 0 to 9 years.

Results by place of residence indicated, that the incidence of multidimensional poverty was higher in rural areas (65.7 percent) than in urban areas (20.0 percent). Similarly, the intensity in rural areas was 54.1 percent and 49.2 percent in urban areas. According to these findings, more people in rural areas are multidimensionally

poor than in urban areas. Therefore, efforts to address rural-urban poverty disparities should be prioritised alongside the promotion of wealth creation initiatives.

Moving forward, future programming to reduce multiple deprivations must be guided by both the Multidimensional Poverty Index and the Monetary Poverty Measure. Malawi should advocate for the Multidimensional Poverty Measure to be included as one of the strategic and approved national indicators used to guide policy analysis and programming. Furthermore, the Multidimensional Poverty Index will need to be updated on a regular basis using the most recent data from the National Statistical Office's newly published Integrated Household Surveys.

Glossary

Headcount Ratio or Incidence	Proportion of the population that is multidimensionally poor.
Intensity of Poverty	Proportion of the weighted indicators in which, on average, multidimensionally poor people are deprived.
MPI or Adjusted Headcount Ratio	The Multidimensional Poverty Index (MPI) represents the share of the population that is multidimensionally poor adjusted by the intensity of the deprivation suffered. The measure was created by adapting (or using forms of) the method upon which the MPI is based to better address local realities, needs and the data available (this measure uses the Alkire-Foster method).
Uncensored headcount ratio	Proportion of the population deprived in an indicator, irrespective of whether they are poor or not.
Censored Headcount Ratio	Proportion of individuals who are multidimensionally poor and deprived in certain indicators at the same time.
Household	Consists of one or more persons, related or unrelated, who live together and make common provisions for food and recognise one member as head.
Household Head	A usual resident member of the household who is the key decision maker and whose authority is acknowledged by all the members of the household.
Robustness Test	A test conducted to examine how certain "core" regression coefficient estimates behave when the regression specification is modified by adding or removing regressors, i.e., it is a test to measure how sensitive estimates are to changes in assumptions. A model is considered robust if its output and forecasts are consistently accurate even if one or more of the input variables or assumptions are drastically changed due to unforeseen circumstances.

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Annex A

Robustness Analysis: MPI Using Alternative Poverty Cut-Offs

The results of the second M-MPI have been found with a precise and coherent structure: each dimension has equal weights (25 percent each), and the poverty line is 38 percent. In this section, results for alternative structures are presented, and it is shown that the district poverty ordering is preserved to a great extent under these alternative specifications. In this sense, the second M-MPI structure is proven to be robust.

Three robustness tests were carried out. All of them consisted of analysing the changes in the ordering (ranking) of districts under different alternative structures for the M-MPI.

The **first** test consists of calculating the Spearman correlation coefficient. Taking two alternative structures 1 and 2 into account (either by different poverty thresholds or by different indicator weights), the position occupied by any district min the poverty ordering by the MPI is calculated and denoted as $R_1(m)$ and $R_2(m)$, respectively. The difference between the position of district m is denoted as d(m)and calculated as:

$$d(m) = R_1(m) - R_2(m)$$

If any district m occupies the same position in the poverty orderings defined by both structures, then $d(m) = 0$. Spearman's rank correlation coefficient, ρ, is calculated as follows:

$$\rho = 1 - \frac{6\sum_{m=1}^{m} d(m)^2}{n^2(n-1)}$$

where $n = 32$ represents the number of census districts in Malawi as defined by the NSO. By definition, this coefficient can take values ranging between -1 and 1. The closer it is to 1, the greater the correlation between the district poverty ordering defined by both alternative MPI structures.

The **second** test consists of calculating the Kendall correlation coefficient. Considering two districts m and ρ, the second M-MPI allows determining which district is the poorest on average. If this pairwise ordering is unchanged under an alternative structure (defined either by different poverty thresholds or by different indicator weights), the pairwise ordering is said to be concordant; otherwise, it is said to be discordant. Kendall's coefficient, symbolized as τ, compares the number of discordant pairwise

orderings $n\mathbf{D}$, against the number of concordant pairwise orderings $n\mathbf{C}$, in the following way:

$$\tau = \frac{n_C - n_D}{n(n-1)/2}$$

This coefficient also ranges between -1 and 1. The closer it is to 1, the greater correlation there is between the district poverty orderings defined by the structures that are being compared.

The **third** test consists of performing similar pairwise comparisons considering sampling errors in the second M-MPI estimates for each district. A pairwise comparison is said to be robust if, considering sampling errors, the relative poverty ordering is preserved under alternative specifications of the MPI. The results of these comparisons can be summarised as the proportion of pairwise comparisons that are robust among all the possible pairwise comparisons that can be performed. This proportion ranges between 0 and 1, where 1 denotes perfect robustness (i.e., all possible pairwise comparisons are robust), and 0 denotes the complete absence of robustness (i.e., none of the possible pairwise comparisons are robust).

Robustness Results

The above-mentioned rank correlation coefficients ρ and τ were calculated to assess the stability of the district poverty orderings as per the preferred MPI structures with respect to alternative specifications, one at a time. The results were obtained by comparing the preferred structure (poverty cut-off of 38 percent and equal weights of 25 percent for each dimension) with a set of alternative structures defined by different poverty thresholds (with unchanged dimensional weights). The alternatives chosen, represent two potentially meaningful poverty cut-offs: 25 percent (equivalent to one dimension) and 50 percent. (Equivalent to two dimensions).

Furthermore, when assessing the stability of pairwise poverty orderings for the 32 districts taking sampling errors into account, it is discovered that 62.3 percent of the 496 possible pairwise comparisons are robust to changes in the poverty threshold from the original (38 percent) to any of those shown in Table A.1. Overall, it is discovered that changing the poverty threshold has little effect on the district poverty orderings. In this sense, the structure of the second M-MPI is effectively resistant to changes in the poverty line. (Table A.2).

Table A.1. Robustness to Changes in the Poverty Cut-Offs(K)

Alternative poverty cut-off	Spearman ρ	Kendall τ
k = 25%	0.9782	0.9097
k = 50%	0.9770	0.8839

NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

Table A.1 presents the results that compare the preferred structure for the MPI with another set of alternative structures, this time defined by alternative weights for each dimension (the poverty cut-off is unchanged at 38 percent). The possibility of giving one dimension at a time importance equal to twice all the previous ones was considered. Thus, for example, if the education dimension is considered twice as important as the other three dimensions of the second M-MPI, education would receive a weighting of 40 percent and the other three dimensions 20 percent each.

The results show that all the correlation coefficients between the original structure and all the alternative weightings considered are at least 88.8 percent. This indicates that the MPI is robust to changes in the weighting structure for each dimension. Similarly, it is also found that 368 (74.2 percent) of the possible comparisons (496) are robust to changes in the weighting structure from the original to any of those defined in (Table A.2).

In summary, all the robustness analyses carried out indicate that the district poverty orderings defined by the preferred structure of the MPI are robust to changes in its structure.

Table A.2. Robustness to Changes in the Weighting Structure of the Dimensions

Alternative dimensional weighting	Spearman ρ	Kendall τ
40% to Health and Population	0.9750	0.8968
40% to Education	0.9726	0.8882
40% to Environment	0.9839	0.9183
40% to Work	0.9746	0.8925

NSO, Malawi Multidimensional Poverty Index Report, 2019-2020

Annex B

Table B.1. Censored Headcount Ratios by District (K=38 Percent), Malawi 2019/2020

District	Sanitation	Nutrition	Drinking Water	Food Security	Literacy and Schooling	School Attendance	Electricity	Rubbish Disposal	Housing	Asset Ownership	Unemployment	Job Diversity	Child Labour
Chitipa	12.5	10.0	27.3	26.7	18.0	5.2	39.3	3.8	23.2	38.4	2.6	30.4	30.2
Karonga	23.8	8.2	22.2	32.6	18.6	7.8	44.7	5.7	21.2	41.8	7.3	37.3	29.9
Nkhatabay	38.0	19.8	36.0	36.4	23.6	14.3	57.8	29.4	31.5	54.1	6.9	40.8	41.6
Rumphi	17.0	10.1	26.2	21.8	13.6	11.1	37.0	13.0	25.0	34.4	2.9	21.6	25.6
Mzimba	38.9	14.8	28.7	34.3	23.3	13.3	51.3	23.4	29.7	45.6	2.2	35.7	32.7
Likoma	34.1	14.0	29.8	24.1	21.1	5.4	25.1	22.5	24.4	35.2	7.4	26.5	17.4
Mzuzu City	12.9	5.0	6.9	12.5	6.9	4.3	15.8	9.7	5.1	13.7	5.3	6.3	9.8
Kasungu	32.0	16.6	33.7	43.1	33.7	10.4	64.3	36.2	51.1	58.8	7.2	47.2	44.4
Nkhotakota	43.0	23.2	33.6	47.5	32.6	16.3	61.7	29.1	46.6	57.6	8.9	42.9	43.8
Ntchisi	35.0	15.6	32.6	47.0	43.3	14.7	69.7	32.0	53.7	64.2	6.7	45.4	48.9
Dowa	36.0	13.7	24.4	43.4	43.6	11.8	63.8	35.3	53.2	59.9	6.3	39.2	44.8
Salima	37.1	22.9	10.7	38.5	50.5	18.1	63.9	39.3	52.9	58.5	6.2	33.6	39.9
Lilongwe	39.0	17.6	18.9	49.0	44.9	15.6	65.2	29.9	55.7	60.8	4.6	45.4	37.5
Mchinji	43.1	24.0	18.7	52.8	41.7	14.2	69.9	30.5	51.7	68.3	7.9	50.0	51.9
Dedza	39.2	22.9	23.6	46.1	56.3	16.2	71.5	29.1	58.2	65.8	5.7	48.1	43.9
Ntcheu	35.5	21.8	16.4	37.3	35.1	13.2	61.5	26.6	42.3	56.9	4.9	42.0	42.4
Lilongwe City	18.3	8.8	3.1	10.2	9.1	4.1	20.1	8.7	9.2	20.5	8.7	9.0	8.9
Mangochi	48.0	26.5	16.0	42.4	62.5	27.9	77.8	36.7	54.1	72.6	3.8	59.6	49.1
Machinga	53.8	26.5	29.9	60.1	58.7	17.3	78.2	30.5	57.7	71.5	2.2	61.1	50.9
Zomba Non-City	47.4	15.6	22.5	45.9	37.1	10.1	60.2	29.0	41.8	56.4	2.4	42.8	37.7
Chiradzulu	45.7	13.3	23.8	46.3	29.7	13.7	59.3	33.7	31.8	55.5	3.2	38.5	39.0
Blantyre	37.5	14.2	22.0	28.8	24.9	8.0	48.8	25.9	28.7	47.2	9.5	30.7	26.0
Mwanza	32.6	15.2	18.2	36.7	42.8	10.6	54.8	18.4	37.7	52.0	2.5	30.0	38.0
Thyolo	45.0	12.8	29.9	42.8	39.0	8.4	60.3	39.9	29.4	58.7	2.7	30.0	44.2
Mulanje	39.0	18.0	14.8	41.8	37.8	12.7	58.1	35.0	28.5	54.4	3.9	37.1	43.6
Phalombe	46.2	21.0	20.6	55.9	50.8	15.8	75.4	43.3	49.5	67.7	3.1	50.6	56.9
Chikwawa	41.6	20.0	20.1	42.1	39.9	19.2	64.0	22.8	43.5	60.6	7.1	35.8	40.8
Nsanje	52.7	20.5	15.7	44.5	45.3	19.2	65.6	22.4	36.7	61.8	7.2	37.3	38.5
Balaka	43.2	20.5	21.9	45.9	43.5	13.9	66.9	24.4	42.5	61.6	4.3	50.3	48.3
Neno	38.9	13.4	25.4	26.5	28.4	7.8	53.9	26.8	40.5	51.8	3.8	27.0	39.4
Zomba City	15.7	7.8	7.2	12.0	9.0	7.7	19.5	11.2	7.5	19.5	4.0	8.9	11.3
Blantyre City	17.1	5.1	9.2	11.3	9.9	6.3	18.6	12.6	10.2	19.5	7.8	5.6	6.3

Table B.2. Percentage Contribution of Each Indicator to the M-MPI by District, Malawi 2019/2020

District	Sanitation	Nutrition	Drinking Water	Food Security	Literacy and Schooling	School Attendance	Electricity	Rubbish Disposal	Housing	Asset Ownership	Unemployment	Job Diversity	Child Labour
Chitipa	4.0	3.2	8.8	8.6	11.5	3.3	12.6	1.2	7.4	12.3	1.1	13.0	12.9
Karonga	6.8	2.3	6.3	9.3	10.6	4.4	12.7	1.6	6.0	11.9	2.8	14.1	11.3
Nkhatabay	7.6	4.0	7.2	7.3	9.5	5.7	11.6	5.9	6.3	10.9	1.8	10.9	11.1
Rumphi	5.6	3.4	8.7	7.2	9.1	7.4	12.3	4.3	8.3	11.4	1.3	9.6	11.4
Mzimba	9.0	3.4	6.6	7.9	10.7	6.1	11.8	5.4	6.8	10.5	0.7	11.0	10.1
Likoma	10.3	4.2	9.0	7.3	12.8	3.2	7.6	6.8	7.4	10.6	3.0	10.7	7.0
Mzuzu City	9.7	3.8	5.2	9.4	10.4	6.5	11.9	7.3	3.9	10.3	5.3	6.3	9.9
Kasungu	5.8	3.0	6.1	7.8	12.1	3.7	11.6	6.5	9.2	10.6	1.7	11.3	10.7
Nkhotakota	7.6	4.1	5.9	8.4	11.5	5.8	10.9	5.1	8.2	10.1	2.1	10.1	10.3
Ntchisi	5.8	2.6	5.4	7.8	14.4	4.9	11.6	5.3	9.0	10.7	1.5	10.1	10.9
Dowa	6.4	2.4	4.3	7.7	15.6	4.2	11.4	6.3	9.5	10.7	1.5	9.3	10.7
Salima	6.5	4.0	1.9	6.8	17.8	6.4	11.3	6.9	9.3	10.3	1.5	7.9	9.4
Lilongwe	6.8	3.1	3.3	8.5	15.6	5.4	11.4	5.2	9.7	10.6	1.1	10.6	8.7
Mchinji	7.0	3.9	3.0	8.6	13.5	4.6	11.3	4.9	8.4	11.1	1.7	10.8	11.2
Dedza	6.2	3.6	3.7	7.3	17.8	5.1	11.3	4.6	9.2	10.4	1.2	10.2	9.3
Ntcheu	6.9	4.2	3.2	7.3	13.6	5.1	12.0	5.2	8.2	11.1	1.3	10.9	11.0
Lilongwe City	11.4	5.5	1.9	6.3	11.3	5.1	12.5	5.4	5.7	12.7	7.2	7.4	7.4
Mangochi	6.8	3.8	2.3	6.0	17.7	7.9	11.0	5.2	7.7	10.3	0.7	11.3	9.3
Machinga	7.5	3.7	4.2	8.4	16.5	4.9	11.0	4.3	8.1	10.0	0.4	11.4	9.5
Zomba Non-City	9.0	3.0	4.3	8.8	14.2	3.8	11.5	5.5	8.0	10.8	0.6	10.9	9.6
Chiradzulu	9.1	2.6	4.7	9.2	11.8	5.4	11.8	6.7	6.3	11.0	0.9	10.2	10.3
Blantyre	9.2	3.5	5.4	7.1	12.2	3.9	12.0	6.4	7.0	11.6	3.1	10.0	8.5
Mwanza	7.0	3.3	3.9	7.9	18.3	4.5	11.7	3.9	8.1	11.2	0.7	8.6	10.9
Thyolo	8.7	2.5	5.8	8.3	15.1	3.3	11.7	7.7	5.7	11.4	0.7	7.7	11.4
Mulanje	7.7	3.6	2.9	8.3	15.0	5.0	11.5	7.0	5.7	10.8	1.0	9.8	11.5
Phalombe	7.0	3.2	3.1	8.5	15.4	4.8	11.4	6.6	7.5	10.3	0.6	10.2	11.5
Chikwawa	7.6	3.7	3.7	7.7	14.6	7.1	11.8	4.2	8.0	11.1	1.7	8.8	10.0
Nsanje	9.4	3.7	2.8	8.0	16.2	6.9	11.7	4.0	6.6	11.0	1.7	8.9	9.2
Balaka	7.5	3.5	3.8	7.9	15.0	4.8	11.6	4.2	7.3	10.6	1.0	11.6	11.1
Neno	8.8	3.0	5.7	6.0	12.8	3.5	12.2	6.0	9.1	11.7	1.1	8.1	11.8
Zomba City	9.4	4.7	4.4	7.2	10.9	9.2	11.7	6.7	4.5	11.8	3.2	7.1	9.1
Blantyre City	10.5	3.2	5.7	6.9	12.2	7.7	11.5	7.8	6.3	12.0	6.4	4.6	5.2

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