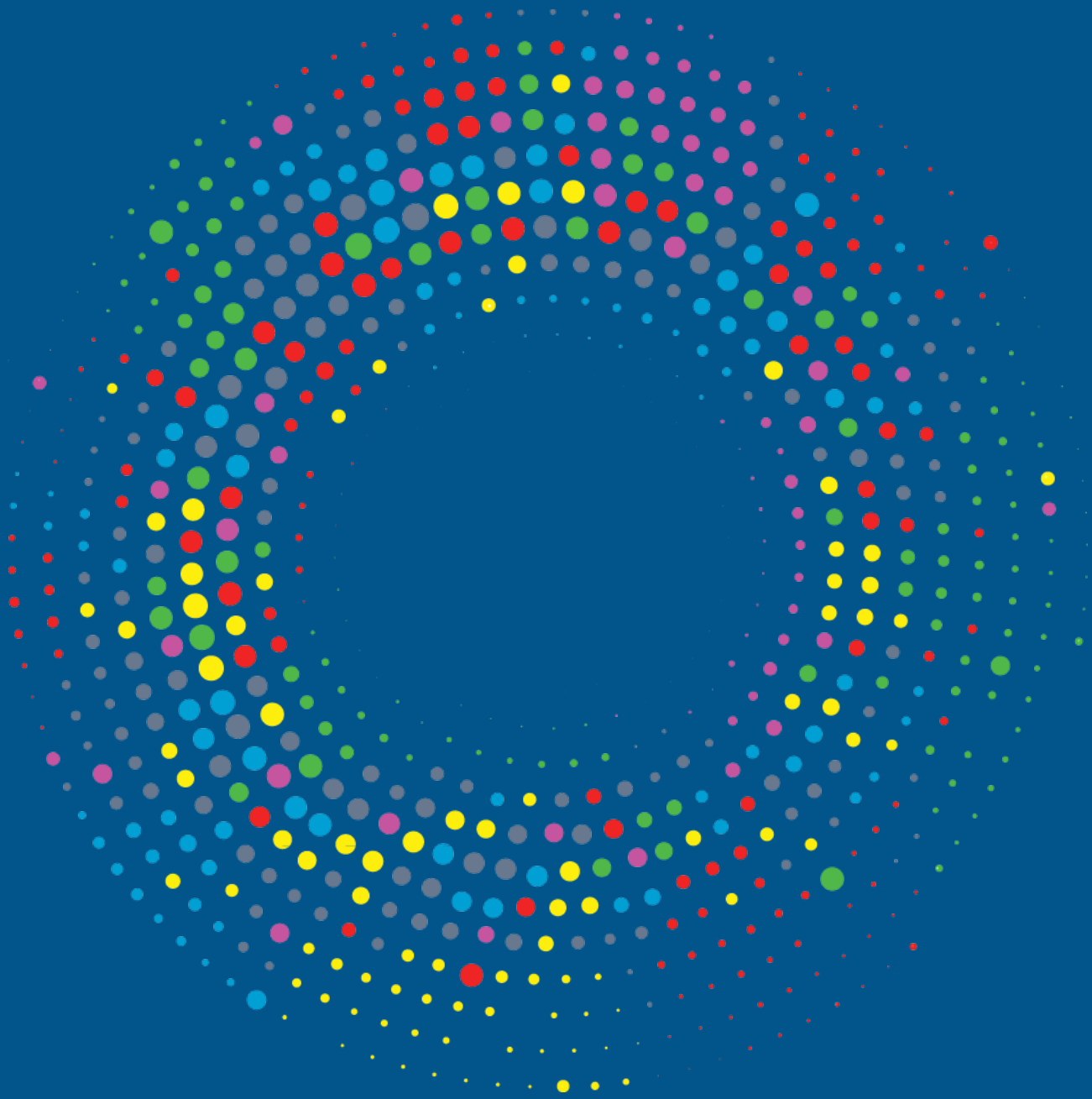
MALAWI MULTIDIMENSIONAL POVERTY INDEX



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Oxford Poverty & Human Development Initiative

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Malawi Multidimensional Poverty Index

Produced by:
National Statistical Office in collaboration with the Ministry of Economic Planning and Development and Public Sector Reforms, with support from United Nations Development Programme and Oxford Poverty and Human Development Initiative (OPHI)

The National Statistical Office
PO Box 333 Zomba,
Malawi.
Tel: +265 1 524 377
www.nsomalawi.mw

FOREWORD

The first Multidimensional Poverty Index (MPI) Report for Malawi provides detailed analysis of poverty using multiple dimensions to measure poverty thereby identifying various deprivations that the poor face in Malawi. These deprivations result in creating inequalities among people and the result is that a large part of the population is at risk of being left behind in the development process. The adoption of this multidimensional approach to measuring poverty provides a better understanding of the welfare of people and is therefore important for guiding policy decisions.

The various deprivations faced by different segments of the population are responsible for creating inequalities among people in terms of access to opportunities and resources. Inequalities among people need to be addressed if every person is to participate in, and benefit from development.

The MPI has provided disaggregated data reported at national, rural/urban, region and district levels and is further analyzed by age and sex of household head. This information is key to identifying where challenges exist and points to where interventions should be focused to reduce inequality as well as eradicate poverty.

It is the intention of Government to ensure that every citizen enjoys their right to decent and good living standards. The Malawi 2063 (MW2063) national vision aims to transform Malawi into a wealthy and self-reliant industrialized upper middle-income country by the year 2063. The eradication of poverty in all its forms and dimensions is also highlighted in Goal 1 of the Sustainable Development Goals (SDGs) while reducing inequality within and among countries is reflected in Goal 10. The MPI is therefore an important milestone that will provide better data for monitoring the progress of both the Malawi 2063 national vision and the SDGs.

I would therefore like to urge all policy and decision makers, programme designers and implementers and those involved in monitoring and evaluation in all sectors, to make use of the MPI Report in their work to ensure targeted and prioritized interventions that will have a positive impact on the welfare of the people in Malawi. I trust we will all use these data for evidence-based policy formulation and decision making in our quest to ensure that no one will be left behind.

Right Honourable Dr Saulos Klaus Chilima

THE VICE PRESIDENT OF THE REPUBLIC OF MALAWI AND MINISTER FOR ECONOMIC PLANNING AND DEVELOPMENT AND PUBLIC SECTOR REFORMS

PREFACE

The Malawi Multidimensional Poverty Index Report has been prepared by the National Statistical Office (NSO) in collaboration with the United Nations Development Programme (UNDP), the University of Malawi (Economics Department), the Centre for Social Research, the National Planning Commission and the Ministry of Economic Planning and Development with technical support from the Oxford Poverty and Human Development Initiative (OPHI).

This is the first report of this nature and it provides a detailed exposition of the various dimensions of people's living standards and complements existing monetary poverty estimates. The main objective of this report is to monitor key simultaneous disadvantages that affect poor people multidimensionally.

The report has been produced using data collected during the Fourth Integrated Household Survey (IHS4) which was conducted in 2016/17. This is a detailed survey that collects information on consumption patterns of households both in terms of food and non-food over a period of one year. It enables further analysis of the survey results to produce poverty profile of the country which feeds into the Malawi 2063 national vision

I wish to express my appreciation to non-governmental and other governmental agencies for their contributions during the consultations on the contents and structure of the Malawi MPI which provided important input for the successful completion of this report.

Lastly, I recognize the important role played by the following: National Statistical Office, University of Malawi - Economics Department, Centre for Social Research, United Nations Development Programme.

Special thanks should go to Ross Jennings and Ricardo Nogales from OPHI at the University of Oxford who provided technical assistance for the production of this report. Other special thanks should go to Mr. Shigeki Komatsubara the UNDP Resident Representative and his technical team for providing technical and financial support to the process of developing the Multidimensional Poverty Report in Malawi for the first in the history of the country. We look forward to continued and sustained support from UNDP as we progress towards updating the MPI using future Integrated Household Surveys.

Mercy Kanyuka (Mrs)

COMMISSIONER OF STATISTICS

EXECUTIVE SUMMARY

This report presents Malawi's official national Multidimensional Poverty Index (MPI) using the fourth Integrated Household Survey (IHS4) conducted by the National Statistical Office (NSO) in 2016/17 through the Integrated Household Survey Program of the World Bank. The first of such surveys was conducted in 1997/98 and has been carried out periodically ever since.

An MPI, which is a complementary measure of traditional monetary poverty valuations makes visible the joint distribution of deprivations, starting with a profile of each person's simultaneous challenges. In order to measure multidimensional poverty, the Alkire-Foster method was used to estimate the official national MPI for Malawi (M-MPI). The M-MPI is formed of four equally weighted dimensions: Health and Population, Education, Environment and Work, which regroup thirteen (13) indicators reflecting national priorities, which are all equally weighted within the dimensions. The M-MPI is estimated at the national level, and then it is disaggregated by region, district, place of residence, sex of household head and age groups to identify some of the poorest population subgroups, as well as specific areas with multiple overlapping deprivations. This helps in making solid steps towards effective prioritization and inclusion of all disadvantaged people in the national development policy agenda. The multidimensional poverty line was set at 38%, therefore, a person living in a household, whose deprivations are higher than one and a half dimensions is considered multidimensionally poor.

Results show that 61.7 percent of Malawi's population are multidimensionally poor. The intensity of poverty is 54.6 percent, meaning that poor people experience, on average, more than half of the weighted deprivations. The MPI, which is the product of the incidence and intensity of poverty, is 0.337. The indicators that contribute most to multidimensional poverty in Malawi are literacy and schooling (14.9 percent), electricity (11.4 percent), and job diversity (11.3 percent).

Analysis by region shows that the incidence of multidimensional poverty is highest in the Southern region and lowest in the Northern region at 63.7 and 43.7 percent, respectively. Similarly, the intensity of poverty is also highest in the Southern region (55.1 percent) and lowest in the Northern region (50.2 percent). Accordingly, the Southern region has the highest MPI value of 0.351 while the Northern region has the lowest MPI value of 0.219.

The incidence of multidimensional poverty is highest in rural areas at 70.0 percent compared to 25.7 percent in urban areas. Similarly, the intensity of poverty is highest in rural areas at 55.0 percent compared to 50.7 percent in urban areas. As regards to indicators, the proportion of individuals that were multidimensionally poor and deprived of food security was 50.8 percent in rural areas compared to 17.4 percent in urban areas.

Analysis by sex of head of household shows that the incidence of multidimensional poverty is higher in female-headed households at 72.3 percent compared to male-headed households at 58.1 percent. The major indicators that caused this difference are electricity, literacy and schooling, food security and asset ownership. The major contributing indicator to MPI was literacy and schooling for individuals in both female and male-headed households at 15.7 percent and 14.6 percent respectively.

The findings presented in this report will help to monitor social progress made with regards to the Malawi 2063 national vision and target 1.2 of the SDGs, which aims to reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions.

The report highlights the variation in the proportion of multidimensionally poor people across geographic areas and different population subgroups. It also identifies the pertinent indicators that contribute to the different levels of poverty in different areas and among different groups. It should therefore be used as the basis for further analysis and discussion in designing policies and programmes that will target and reduce multidimensional poverty to improve the lives of those in need.

This report will be revised using data from the IHS5 survey, conducted in 2019/20. The second report will detail changes in the levels and composition of multidimensional poverty from 2016/17 to 2019/20.

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Chapter 1 INTRODUCTION

This chapter is intended to provide a history of poverty measurement in Malawi as well as the context and the purpose of a multidimensional poverty measure for Malawi.

1.1 History of Poverty Measurement in Malawi

Poverty measurements in Malawi are based on Integrated Household Surveys (IHSs), a family of Living Standard Measurement Surveys of the World Bank conducted by the National Statistical Office that collects information on consumption patterns of households both in terms of food and non-food over a period of one year. It enables further analysis of the survey results to produce poverty profiles.

In Malawi, poverty has been exclusively measured using a monetary approach up until now. The first of such surveys was conducted in 1997/98 which is commonly referred to as IHS1 and the poverty rate was 62.5 percent. The second survey was conducted in 2004/05 (IHS2) and the poverty rate was 52.4 percent. The third Integrated Household Survey was conducted in 2010/11 (IHS3) with a poverty rate of 50.7 percent and the fourth Integrated Household Survey which was conducted in 2016/17 (IHS4) had a poverty rate of 51.5 percent.

1.2 Context

A Multidimensional Poverty Index (MPI) makes visible the joint distribution of deprivations in every individual in the survey, by identifying the profile of each person's simultaneous livelihood challenges, in order to measure multidimensional poverty. Overall, MPIs provide not only a headline figure, but also an associated information platform on national and subnational conditions across population groups and joint deprivations in different dimensions of poverty. The Oxford Poverty and Human Development Initiative (OPHI) at the University of Oxford and the United Nations Development Programme's Human Development Report Office (HDRO) jointly compute and publish a global version of the MPI that compares acute multidimensional poverty across more than 100 countries. However, this measure is intended for international comparability and is not adapted for the specific circumstances of any given country. Thus, Malawi follows many other countries worldwide in developing its own national MPI.

The national Multidimensional Poverty Index for Malawi (hereafter referred to as the M-MPI), provides a detailed exposition of the various dimensions of people's living standards and complements existing monetary poverty estimates. The M-MPI is carefully tailored to the particular context and priorities of Malawi and reflects the national understanding of poverty, as well as the country's policy priorities. Updated regularly, the M-MPI will be used to shape and energize effective policy actions to end poverty in all its forms and dimensions.

The aim of the M-MPI is to capture the many overlapping deprivations that poor people experience in Malawi. People living in poverty often refer to lack of education, poor health and nutrition, poor housing, and unsafe water as examples of their disadvantages to a meaningful quality of life. These deprivations reflect the lived experiences of many poor people and the obstacles they face in pursuing and achieving valuable capabilities. The presence and shared experiences of multiple deprivations, therefore, will provide an effective mechanism in Malawi to monitor the progress toward target 1.2 of the Sustainable Development Goals (SDGs): By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions.

In Malawi, poverty has been measured using a monetary approach up until now. For the first time, the M-MPI captures the overlapping deprivations experienced by poor people in the country, using 13 non-monetary indicators across four dimensions - Health and Population, Education, Environment and Work. Given the importance of simultaneous deprivations in the understanding and alleviation of poverty, the M-MPI is a powerful tool for both

poverty analysts and policymakers. It will allow, henceforth, social planners and policymakers to target those who are most affected by multiple disadvantages simultaneously and will enable concerted and coordinated policy efforts across the different sectors and departments of government.

1.3 Purpose of the Measure

The purpose of the M-MPI is to monitor key simultaneous disadvantages that affect multidimensionally poor people. The indicators constituting the M-MPI reflect national priorities as initially outlined in the Malawi 2063. The M-MPI will be used to monitor and evaluate progress across a set of interlinked and policy-responsive SDGs and targets that are of recognized national and global importance. A detailed analysis of the M-MPI, such as that presented in this report, will be used to support more effective integrated and multi-sectoral policies at both national and regional levels, including budget allocation and targeting. Analysis of the M-MPI by region, district, place of residence, sex of household head and age group will help identify the poorest groups and specific areas of deprivation to ensure effective prioritization and inclusion of all disadvantaged people. This will help give effect to the desire expressed in Malawi 2063 to "not leave behind those segments of the society that are vulnerable and marginalized".

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Chapter 2 METHODOLOGY

This chapter presents how multidimensional measures are constructed, a description of the data used in this report and an explanation of the proposed structure of the M-MPI.

2.1 Alkire-Foster Method

The Alkire-Foster (AF) method is a way of measuring multidimensional poverty developed by Alkire and Foster (2011). Expanding the Foster-Greer-Thorbecke poverty measures, it involves counting the different types of deprivation that individuals experience at the same time. These multiple deprivation profiles are analyzed to identify who is poor and then used to construct a multidimensional index of poverty, as well as other component indicators of aggregate poverty.

The M-MPI is calculated using the AF method, which consists of counting the simultaneous deprivations that negatively affect a person's life. The AF method allows the construction of individual deprivation profiles that can then be used to identify multidimensionally poor people. The number of people living in multidimensional poverty and the intensity of their poverty are combined in the value of the MPI.

By applying this method, the M-MPI reflects simultaneous deprivations in the 13 indicators that were chosen based upon a detailed analysis of relevance as well as data availability. To identify whether or not a person in Malawi is deprived in an indicator, a deprivation cutoff was set for each indicator. This yields a set of 13 binary variables for every person, each one taking the value of 1 if the individual is deprived in that indicator and 0, otherwise.

Once the set of binary variables is calculated, 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 structure of the M-MPI. The deprivation score c is defined to take values ranging between 0 (indicating that the person does not experience any weighted deprivations) and 1 (indicating that they experience weighted deprivations in all the 13 indicators).

In order to identify people who suffer multidimensional poverty in Malawi, the deprivation score is compared to a poverty cutoff or the k-value. All people suffering deprivations in a number of weighted deprivations equal to or greater than this cutoff are identified as multidimensionally poor.

Once the proportion of poor people in Malawi is identified, the M-MPI is computed as the product 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 who are multidimensionally poor.

- The intensity of poverty, A, reflects the proportion of the weighted indicators in which, on average, multidimensionally poor people are deprived.

The M-MPI combines these two aspects of poverty in the following way:

MPI = H x A

It is important to note that the M-MPI can be equivalently computed as the weighted sum of censored headcount ratios – which show the percentage of people who are identified as poor and are also deprived in a particular indicator. Because of this structure, the M-MPI can be broken down by indicator to show the composition of multidimensional poverty. This feature of dimensional detail brings added policy relevance to the analysis.

2.1.1 Common Uses of the Alkire-Foster Method

- **Poverty measures**: The AF method can be used to create national, regional, or international measures of poverty or wellbeing by incorporating dimensions and indicators that are tailored to specific contexts.

- **Targeting of services or conditional cash transfers:** The method can be used to target people who are deprived in multiple ways.

- **Monitoring and evaluation**: It can be used to monitor the effectiveness of programmes over time.

2.1.2 Why is the Alkire-Foster Method Useful?

While the AF method provides a single headline measure of poverty, it can also be broken down and analyzed in powerful ways 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 the composition of poverty within and among these groups.

- **Breakdown by dimension or indicator:** It can be broken down to show which types of deprivation are contributing to poverty within groups.

- **Changes over time:** The AF method can be used to monitor changes in poverty over time, using data collected at different periods. It reflects changes in particular dimensions and indicators of poverty directly and quickly, making it an effective monitoring tool.

- **Complements other metrics:** The AF method can complement other measures, such as measures of income poverty.

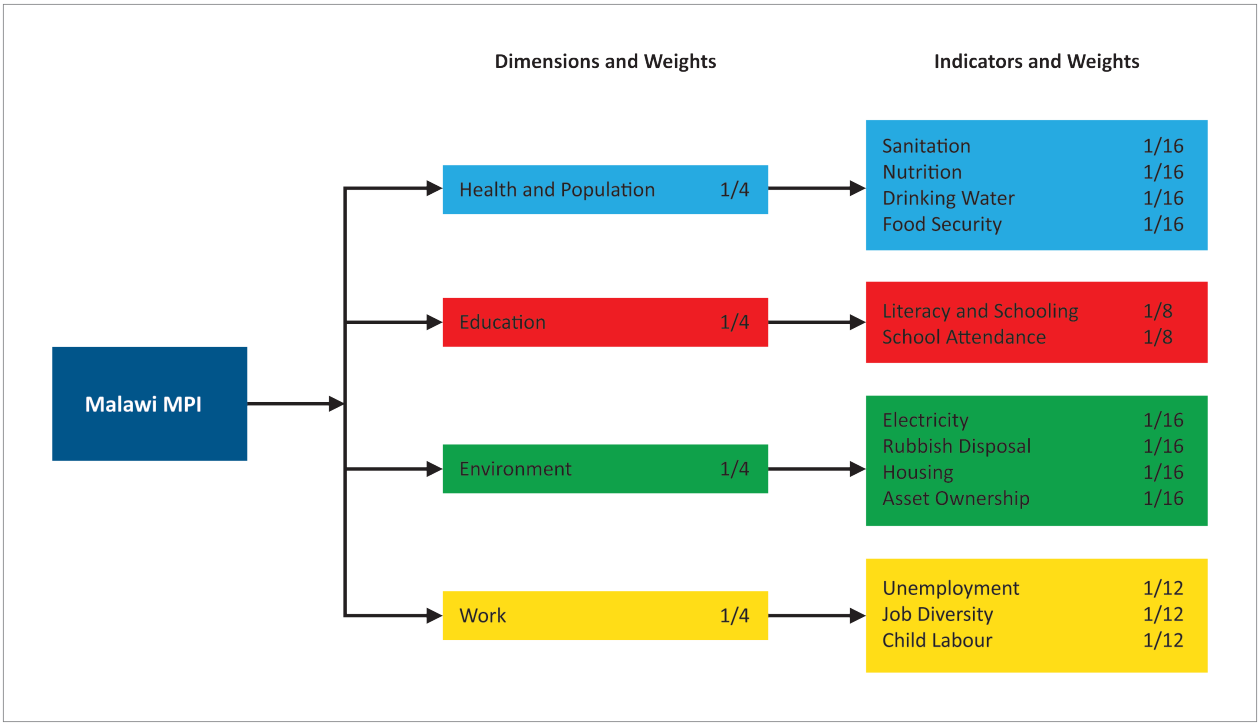
2.2 Measurement Design

2.2.1 Dimensions, Indicators and Weights

The official structure of the M-MPI consists of four equally weighted dimensions namely: Health and Population, Education, Environment and Work. This structure is inspired by the Malawi Growth and Development Strategy 2017-2022 (MGDS III) and the choice of dimensions, indicators, and cutoffs were agreed upon by various stakeholders that were involved in the conception and computation of the M-MPI. They include UNDP, Ministry of Economic Planning and Development and Public Sector Reforms (MEPD&PSR), Center for Social Research, the University of Malawi (Chancellor College), National Planning Commission (NPC) and NSO.

Thirteen indicators are regrouped in the four M-MPI dimensions. They are described in Figure 1, and their precise definitions are provided in Table 1. In the M-MPI, each dimension is equally weighted at 1/4; each indicator within a dimension is also equally weighted. For example, the sanitation indicator was assigned a weight of 1/16 because there are 4 indicators under the Health and Population dimension and the literacy and schooling indicator had a weight of 1/8 as there are two indicators under the Education dimension.

Figure 1: Structure of Malawi's MPI (Dimensions, Indicators and Weights)



Source: National Statistical Office, MPI 2016-2017

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Table 1: Proposed Indicators and Deprivation Cut-offs

Indicator	Deprivation Cutoffs
Literacy and Schooling	A household is deprived if all members aged 15+ have less than 8 years of schooling OR cannot read or write English or Chichewa
School Attendance	A household is deprived if at least one child aged 6-14 is not attending school
Nutrition	A household is deprived if there is at least one child under 5 who is either underweight, stunted or wasted
Food Security	A household is deprived if in the past 12 months, they were hungry but did not eat AND went without eating for a whole day because there was not enough money or other resources for food
Housing	A household is deprived if at least two of the following dwelling structural components is 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)
Electricity	A household is deprived if they do not have access to electricity
Asset Ownership	A household is deprived if they do not own more than two of the following basic livelihood items: radio, television, telephone, computer, animal cart, bicycle, motorbike or refrigerator AND do not own a car or truck
Drinking Water	A household is deprived if their main source of water is unimproved OR it takes 30 minutes or more (round trip) to collect it
Sanitation	A household is deprived if the sanitation facility is not flush or a VIP latrine or a latrine with roof OR if it is shared with other households
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
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
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)*
Child Labour	A household is deprived if any child aged 5-17 is engaged in any economic activities in or outside of the household

Source: National Statistical Office, MPI 2016-2017

2.2.2. Poverty Cutoff (k=38 percent)

The poverty cutoff of the M-MPI is specified at one and a half of the dimensions, meaning that a person whose weighted count of simultaneous deprivations constitute at least 38 percent of the weighted indicators included in the M-MPI is considered multidimensionally poor. This poverty cutoff point was also supported by the rank robustness test, which is a test for assessing comparisons as poverty cutoffs and other parameters change.

2.3 Data Sources

The M-MPI is computed using data coming from the IHS. The present report draws on data from the IHS4, a household survey conducted in 2016/17, representative at the national, regional and district levels; and by place of residence (rural/urban). The IHS is one of the country's most important tools to inform national policies on poverty reduction and for the country's monetary poverty measurement.

IHS4 employed a stratified two-stage sample design where the first stage involved selecting primary sampling units (PSU) which are enumeration areas (EAs) defined for the 2008 Malawi Population and Housing Census. An EA is the smallest operational area established for the census with well-defined boundaries, corresponding to the workload of one census enumerator (IHS4, 2017). The second sampling stage involved selecting households in these EAs to be involved in the survey.

IHS's are conducted regularly (every 3 years), and they are permanent sources of microdata.

Chapter 3
RESULTS

This chapter presents the main results on the M-MPI estimated from the IHS4 data set. These results are presented at national, regional and district levels, by place of residence (rural/urban areas), sex of household heads and age groups of individuals.

3.1 The National Malawi MPI – Key Results

3.1.1 The Level of Multidimensional Poverty in Malawi

This section provides the national results of the headcount (H), intensity (A) and the adjusted headcount ratio (M-MPI). The section also discusses the percentage contributions of each indicator to the M-MPI.

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

The M-MPI value is 0.337, meaning that multidimensionally poor people in Malawi experienced about 34 percent of the weighted deprivations out of the total possible deprivations that could be experienced if everyone was multidimensionally poor. The incidence of multidimensional poverty was 61.7 percent. This means that at least three out of every five Malawians are multidimensionally poor. The true multidimensional poverty headcount ratio lies between 60.0 percent and 63.4 percent of the population. The intensity of poverty was 54.6 percent, implying that on average, a poor person was deprived in more than half of the weighted indicators (Table 2).

3.1.3: National Uncensored Headcount Ratio for Indicators

The uncensored headcount ratio of an indicator denotes the proportion of the population deprived in that indicator irrespective of whether they are poor or not.

The results indicate that the highest deprivations in the population were recorded in access to electricity at 89.1 percent followed by asset ownership and job diversity at 76.5 and 56.1 percent respectively. Furthermore, 54.1 percent of the individuals were deprived in food security, 51.9 percent in housing and 43.7 percent in literacy and schooling. The lowest levels of deprivation were recorded in school attendance and unemployment at 14.5 and 14.3 percent respectively (Figure 2).

3.1.4 National Censored Headcount Ratio for Indicators (k=38 percent)

The censored headcount ratio of an indicator denotes the proportion of the population that is multidimensionally poor and deprived in that indicator at the same time.

The results show that 61.3 percent of the individuals

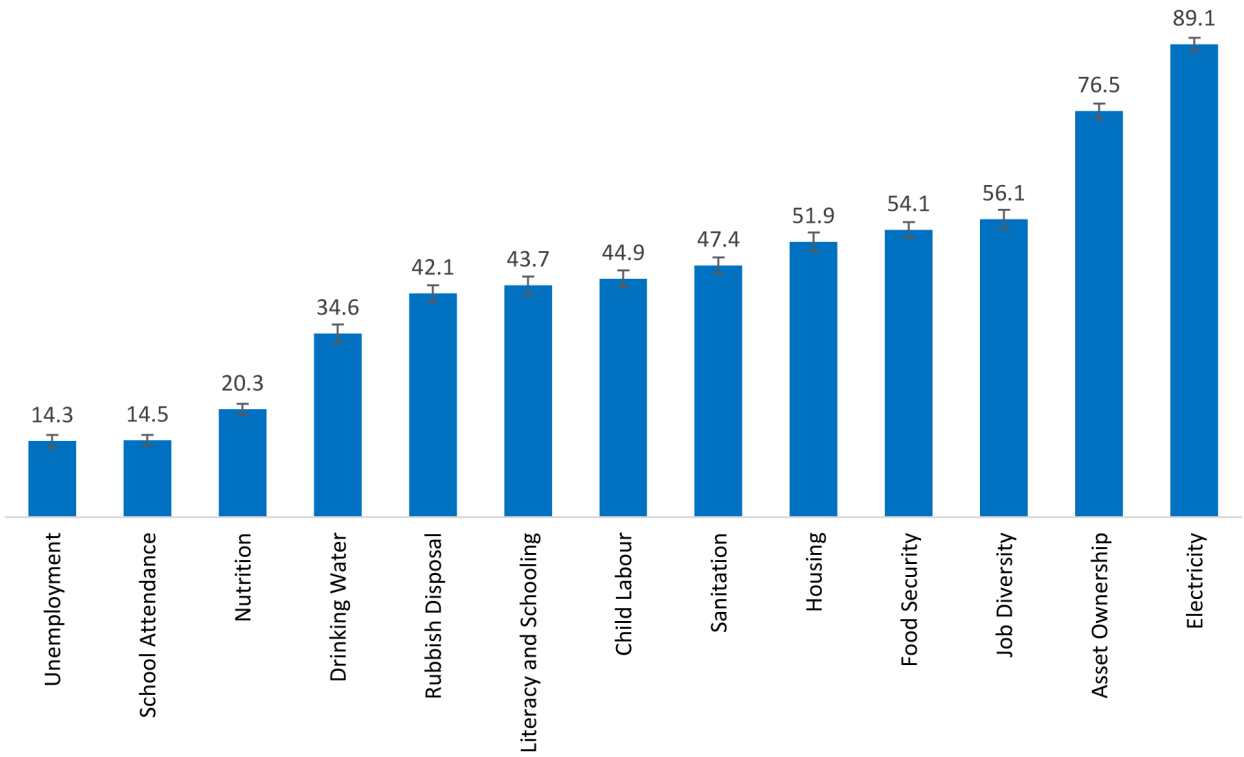
Table 2: Multidimensional Poverty Index, Incidence and Intensity, Malawi 2016-2017

Index (k=38%)	Value	(95% Confidence Interval)	
M-MPI	0.337	0.327	0.347
Incidence or headcount ratio (H %)	61.7	60.0	63.4
Intensity (A %)	54.6	54.2	55.0

Source: National Statistical Office, MPI 2016-2017

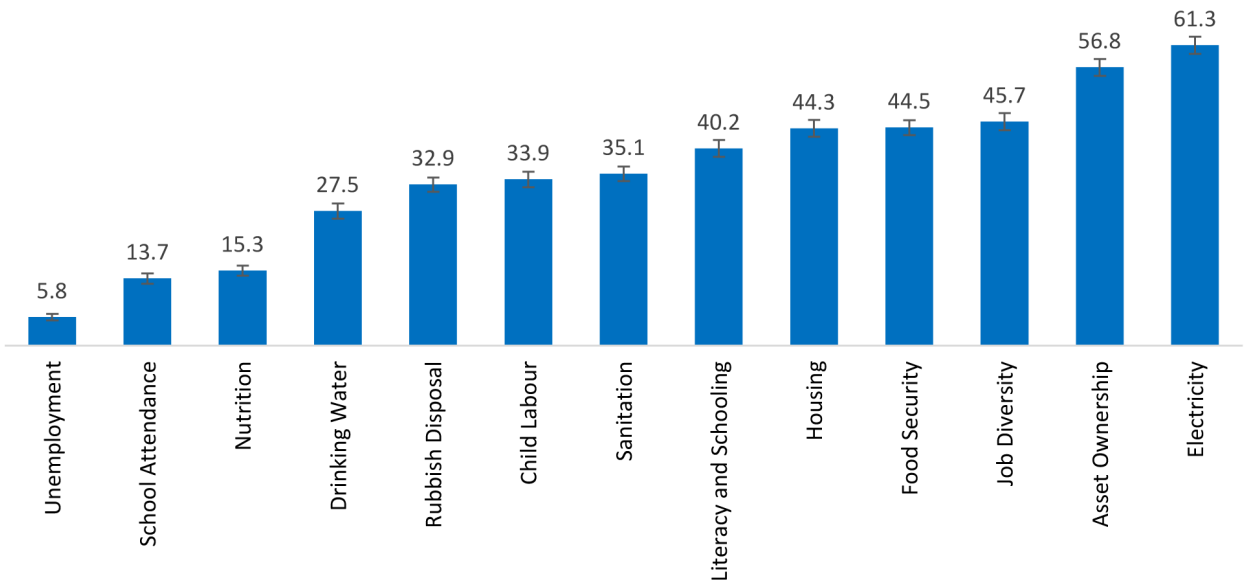
are multidimensionally poor and deprived in electricity, 56.8 percent in asset ownership and 45.7 percent in job diversity. In addition, 44.5 percent are both multidimensionally poor and deprived in food security, 44.3 percent in housing and 40.2 percent in literacy and schooling. However, it is evident that fewer people (5.8 percent) are multidimensionally poor and deprived in unemployment (Figure 3).

Figure 2: National Uncensored Headcount Ratio for Indicators, Malawi 2016-2017



Source: National Statistical Office, MPI 2016-2017

Figure 3: National Censored Headcount Ratio (Percent) for Indicators (k=38 percent), Malawi 2016-2017



Source: National Statistical Office, MPI 2016-2017

3.1.5 Contribution of Each Indicator to the M-MPI

Despite having the highest deprivations in electricity at 61.3 percent, asset ownership at 56.8 percent and job diversity at 45.7 percent, further analysis shows that electricity contributed 11.4 percent to poverty followed by job diversity at 11.3 percent and asset ownership at 10.2 percent. Despite having a higher proportion of people who were deprived in asset ownership than Job diversity, weight for asset ownership was lower than that of job diversity hence these indicators were affected by their relative weights. Although 40.2 percent of the poor were deprived in literacy and schooling, this indicator was the highest contributor to poverty in Malawi at 14.9 percent. Contributions thus provide a picture of relative deprivation that is much influenced by weights.

3.2 Multidimensional Poverty at Regional Level

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

3.2.1 Aggregate Measures (M-MPI, H and A) at Regional Level

Analysis by region shows that the Southern region has the highest M-MPI value (0.351) and the Northern region had the lowest (0.219). The incidence of poverty was highest in the Southern region at 63.7 percent and lowest in the Northern region at 43.7 percent. Similarly, the intensity of poverty which identifies the average proportion of weighted indicators among those that are multidimensionally poor shows that the Southern region had the highest intensity at 55.1 percent and Northern region had the lowest at 50.2 percent (Table 4).

3.2.2 Regional Censored Headcount Ratio (k=38 percent)

There is variation among the indicators that generated different levels of deprivation in individuals across regions. In general, Northern region has the lowest proportion of individuals that were deprived in most

Table 3: Percentage Contribution of Each Indicator to Poverty, Malawi 2016-2017

Dimension	Dimension Weight	Indicator	Head Count Ratio/ Incidence	Indicator Weight	Contribution
Health and Population	1/4	Sanitation	35.1	1/16	6.5
		Nutrition	15.3	1/16	2.8
		Drinking Water	27.5	1/16	5.1
		Food Security	44.5	1/16	8.33
Education	1/4	Literacy and schooling	40.2	1/8	14.9
		School attendance	13.7	1/8	5.1
Environment	1/4	Electricity	61.3	1/16	11.4
		Rubbish disposal	32.9	1/16	6.1
		Housing	44.3	1/16	8.2
		Asset ownership	56.8	1/16	10.2
Work	1/4	Unemployment	5.8	1/12	1.4
		Job diversity	45.7	1/12	11.3
		Child Labour	33.9	1/12	8.4

Source: National Statistical Office, MPI 2016-2017

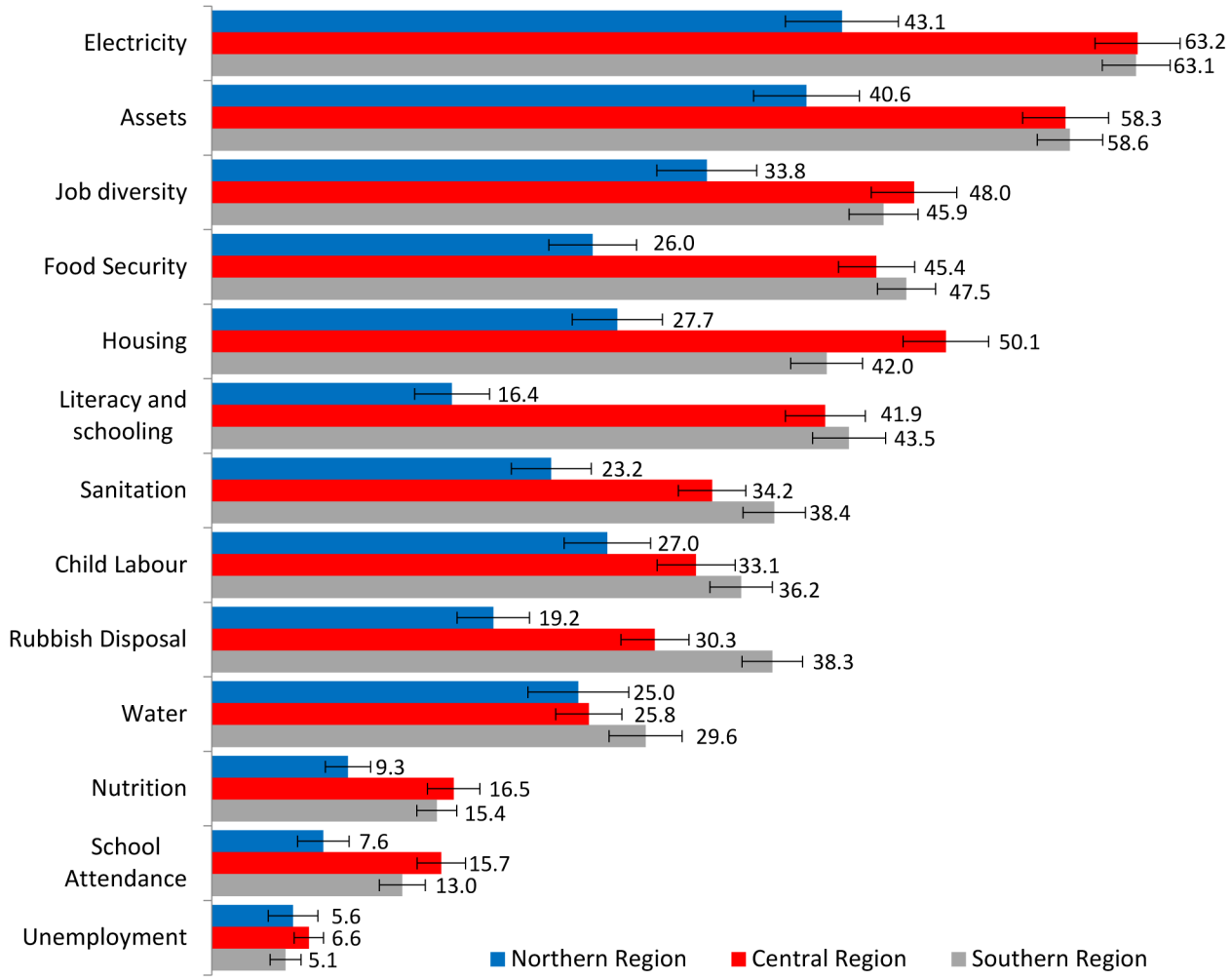
Table 4: Incidence, Intensity and M-MPI at Regional Level, Malawi 2016-2017

Region	Population Share	M-MPI			Headcount Ratio/ Incidence			Intensity		
	%	Value	95% Confidence Interval		Value (%)	95% Confidence Interval		Value (%)	95% Confidence Interval	
Northern	9.6	0.219	0.199	0.239	43.7	39.9	47.5	50.2	49.3	51.1
Central	45.6	0.348	0.331	0.364	63.4	60.6	66.3	54.8	54.2	55.4
Southern	45.1	0.351	0.337	0.366	63.7	61.4	66.0	55.1	54.5	55.7

Source: National Statistical Office, MPI 2016-2017

indicators. The proportion of individuals that are deprived in electricity was 63.2 percent in Central region followed by 63.1 percent in Southern region and 43.1 percent in Northern region. This is followed by 58.6 percent of individuals that were deprived in asset ownership in Southern region and 40.6 percent in Northern region. The lowest proportion of individuals are deprived in employment with 6.6 percent unemployed in the Central region and 5.1 percent in the Southern region (Figure 4).

Figure 4: Censored Headcount Ratios (Percent) by Region, Malawi 2016-2017

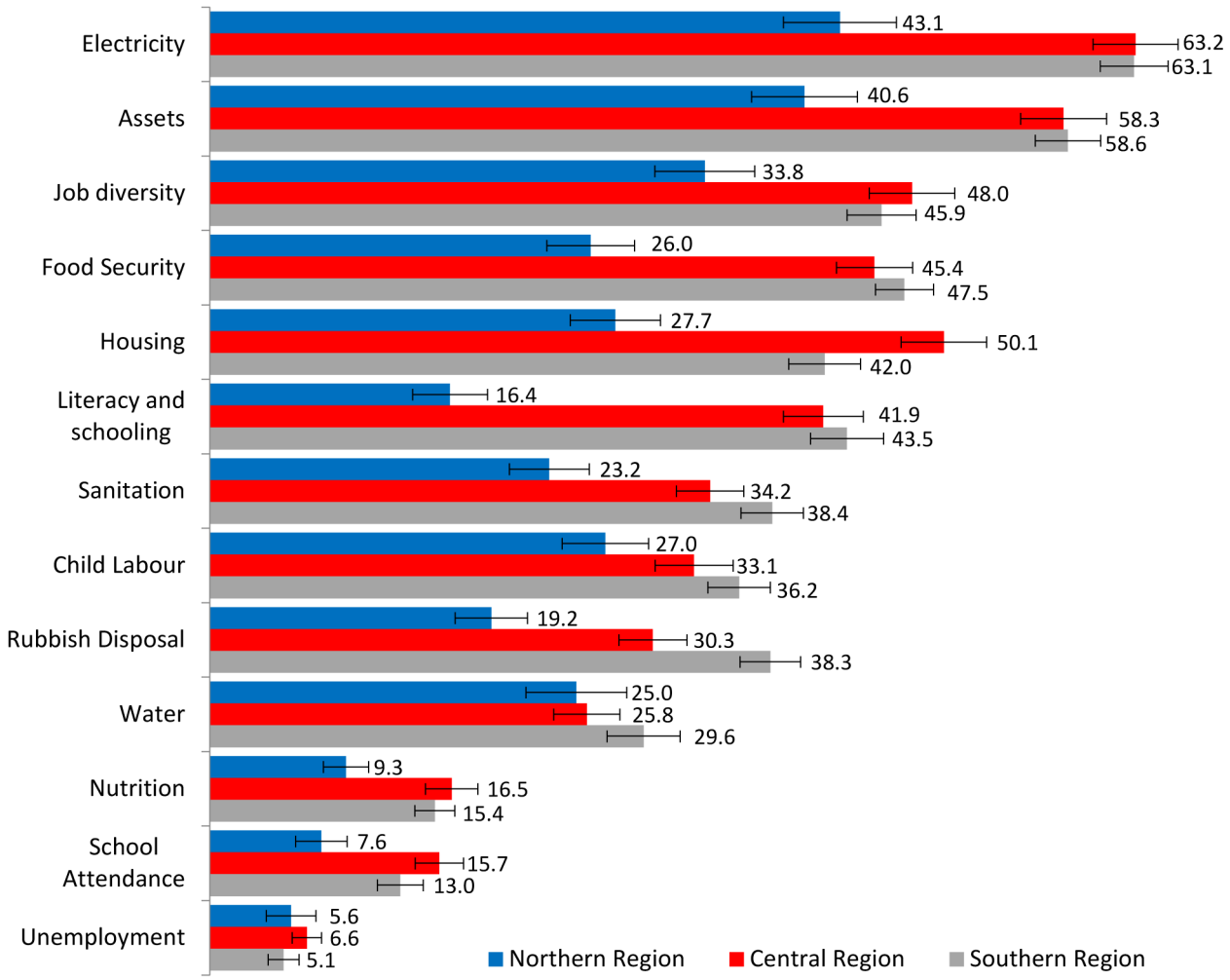


Source: National Statistical Office, MPI 2016-2017

3.2.3 Contribution of Each Indicator to the Regional M-MPI Value

Literacy and schooling were the major contributor to the M-MPI for the Central region and Southern region at 15.1 percent and 15.5 percent respectively while job diversity was the major contributor of M-MPI for the Northern region at 12.9 percent. Electricity was the second major contributor to M-MPI in the Northern region and Southern region at 12.3 percent and 11.2 percent respectively while job diversity was the second major contributor of M-MPI in the Central region. Unemployment was the least contributor to M-MPI for all the three regions at 2.1 percent, 1.6 percent and 1.2 percent for Northern region, Central region and Southern region respectively (Figure 5).

Figure 5: Percentage Contribution of Each Indicator to the Regional M-MPI, Malawi 2016-2017



Source: National Statistical Office, MPI 2016-2017

3.2.4 Multidimensional Poverty by Place of Residence (Rural/Urban)

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

3.2.5 Aggregate Measures (H, A and M-MPI) by Place of Residence (Rural/Urban)

Analysis by place of residence shows disparity in the distribution of multidimensional poverty. The incidence of multidimensional poverty is high in rural areas at 70.0 percent compared to 25.7 percent in urban areas. Further analysis shows that the intensity of poverty is 55.0 percent in rural areas compared to 50.7 percent in urban areas. For M-MPI, the rural areas register the highest MPI at 0.385 compared to the urban areas at 0.130 (Table 5).

3.2.6 Censored Headcount Ratio by Place of Residence (Rural/Urban) (k=38 percent)

The censored headcount ratios which reflect the percentage of the individuals multidimensionally poor and deprived in each indicator are generally higher in rural areas than urban areas. The proportion of individuals that are poor and deprived in electricity is 69.8 percent in rural areas compared to 24.4 percent in urban areas. This is followed by 64.5 percent of individuals that are poor and

Table 5: Incidence, Intensity and M-MPI by Place of Residence (rural/urban areas), Malawi 2016-2017

Area	Population Share	M-MPI			Headcount Ratio/ Incidence			Intensity		
	(%)	Value	Confidence Interval		Value (%)	95% Confidence Interval		Value (%)	95% Confidence Interval	
Rural	81.0	0.385	0.374	0.396	70.0	68.2	71.8	55.0	54.5	55.4
Urban	19.0	0.130	0.106	0.155	25.7	21.5	30.0	50.7	48.9	52.4

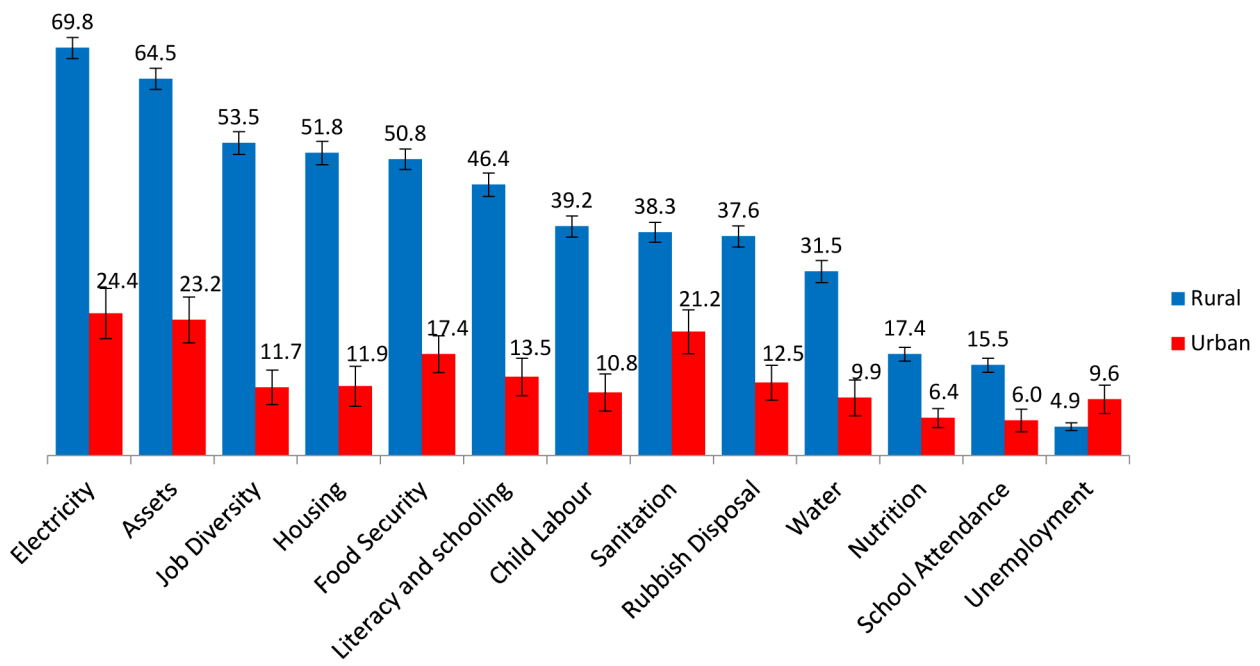
Source: National Statistical Office, MPI 2016-2017

deprived in asset ownership in rural areas compared to 23.2 percent in urban areas. The only indicator for which the level of deprivation is higher in urban areas than in rural areas was unemployment. About 5 percent of individuals that were unemployed were poor and deprived in this indicator in rural areas compared to 9.6 percent in urban areas (Figure 6).

3.2.7 Contribution of Each Indicator to M-MPI for Place of Residence (Rural/ Urban)

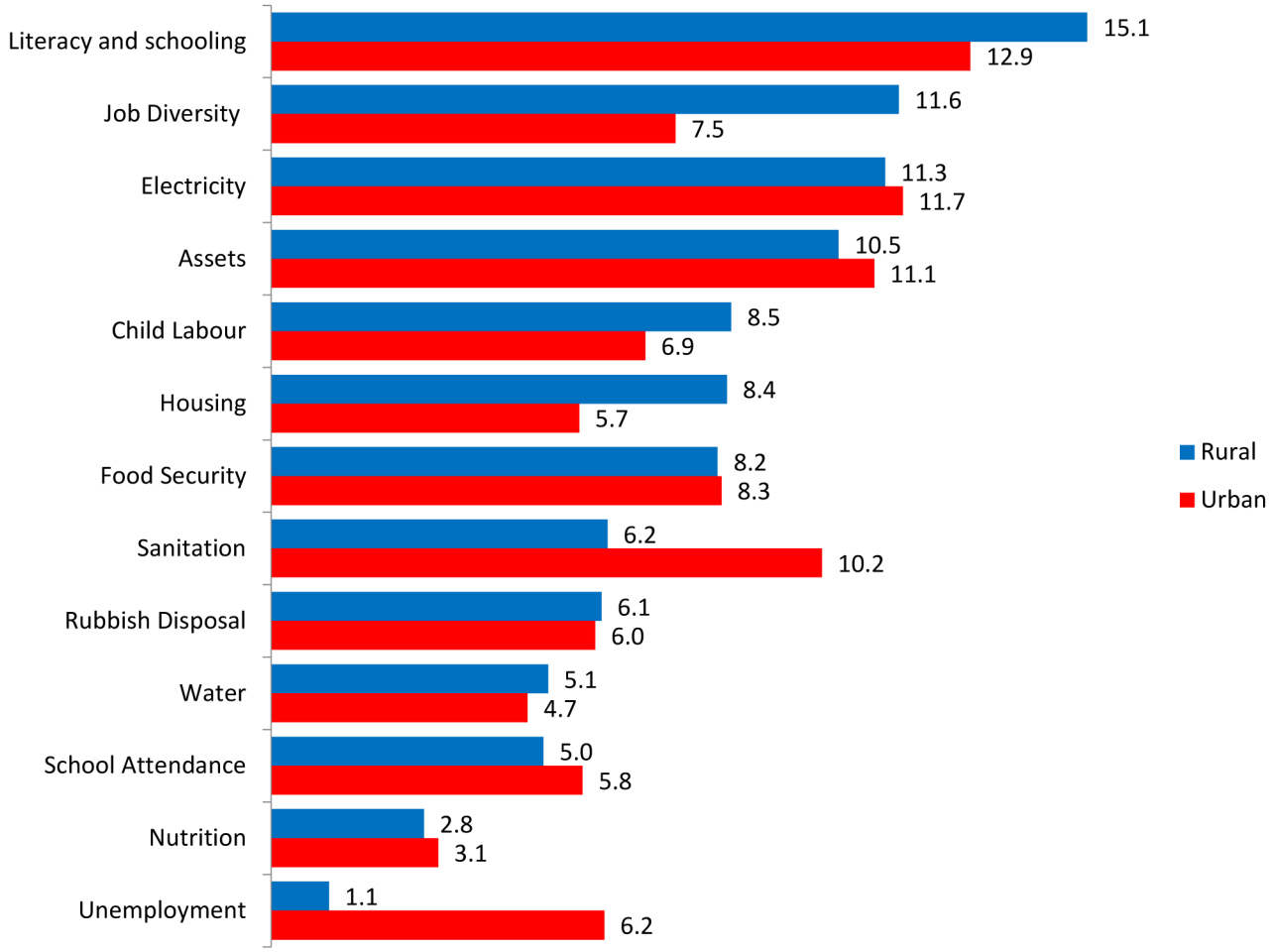
Literacy and schooling have the highest percentage contribution to the M-MPI value in rural areas contributing 15.1 percent and in urban areas contributing 12.9 percent. There is wide variation in some indicators' contribution to the M-MPI value, with job diversity contributing considerably more to M-MPI value in rural areas at 11.6 percent compared to 7.5 percent in urban areas. Similarly, housing contributes 8.4 percent to the M-MPI value in rural areas compared to 5.7 percent in rural areas. Sanitation contributes more to M-MPI value in urban areas at 10.2 percent than in rural areas at 6.2 percent. Similarly, unemployment contributes 6.2 percent to M-MPI value in urban areas compared to 1.1 percent in rural areas (Figure 7).

Figure 6: Censored Headcount Ratios (Percent) by Place of Residence (Rural/Urban), Malawi 2016-2017



Source: National Statistical Office, MPI 2016-2017

Figure 7: Percentage Contribution of Each Indicator to M-MPI for Place of Residence (rural/ urban), Malawi 2016-2017



Source: National Statistical Office, MPI 2016-2017

3.3 Multidimensional Poverty at District Level

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

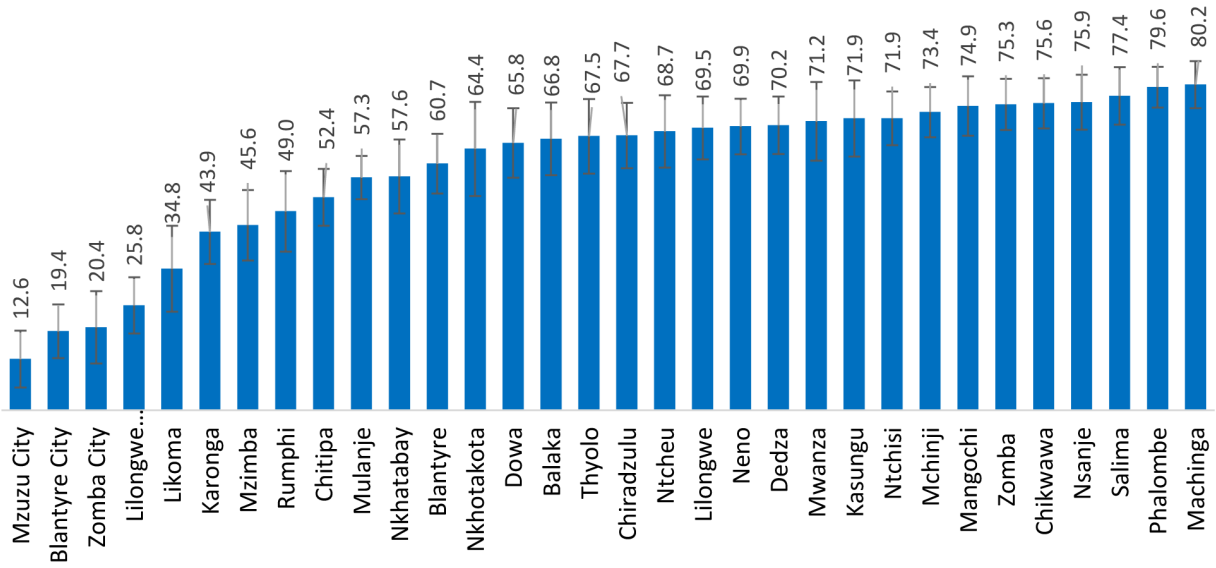
3.3.1 Incidence (H) of Multidimensional Poverty by District in Malawi

Although districts with the highest population in Malawi are Lilongwe with 2,626,901 (15.0 percent) and Mangochi with 1,148, 611 (6.5 percent), the results show that, on average, Machinga and Phalombe have the highest proportion of individuals who are multidimensionally poor at about 80 percent each. This implies that at least eight out of every ten individuals in Machinga and Phalombe are identified as multidimensionally poor. The results for Machinga and Phalombe are not statistically different from the results of the districts starting from Nkhotakota (64.4 percent) up to Salima (77.4 percent) districts (Figure 8).

3.3.2 Intensity (A) of Multidimensional Poverty by District in Malawi

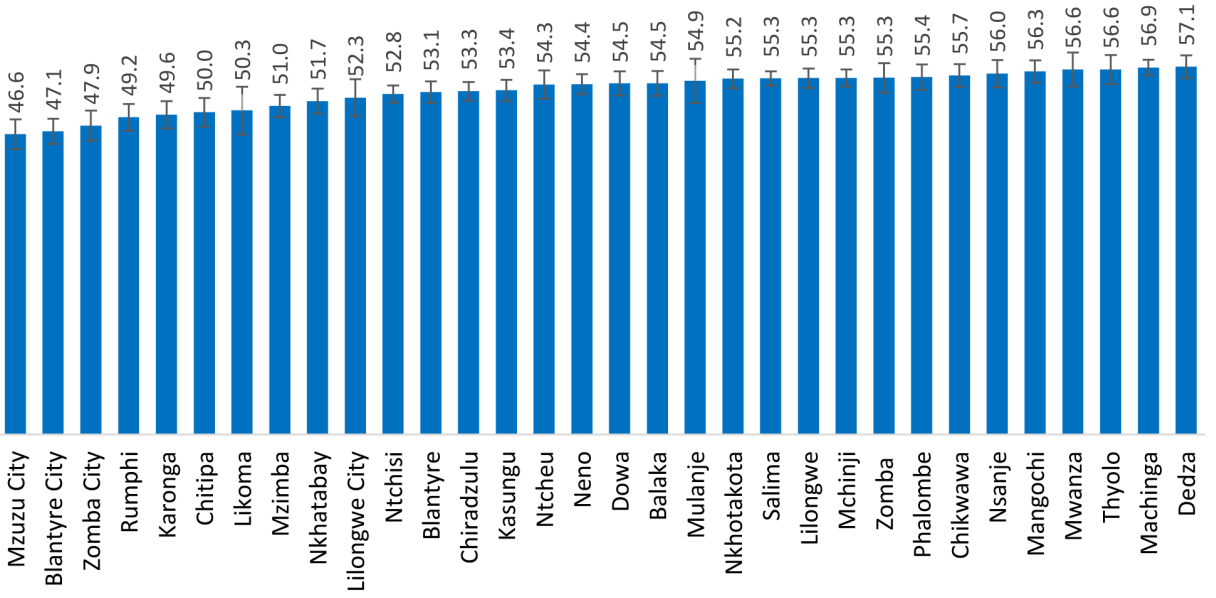
On average, the intensity of multidimensional poverty is highest in Dedza, Machinga, Thyolo and Mwanza, each registering about 57 percent in this partial index. This means that on average, a poor person in Dedza, Machinga, Thyolo and Mwanza districts was deprived in about 57 percent of the weighted indicators. The intensity of poverty was lowest in Mzuzu and Blantyre cities each registering about 47 percent in this partial index (Figure 9).

Figure 8: Incidence of M-MPI (Percent) by District, Malawi 2016-2017



Source: National Statistical Office, MPI 2016-2017

Figure 9: Intensity of M-MPI (Percent) by District, Malawi 2016-2017

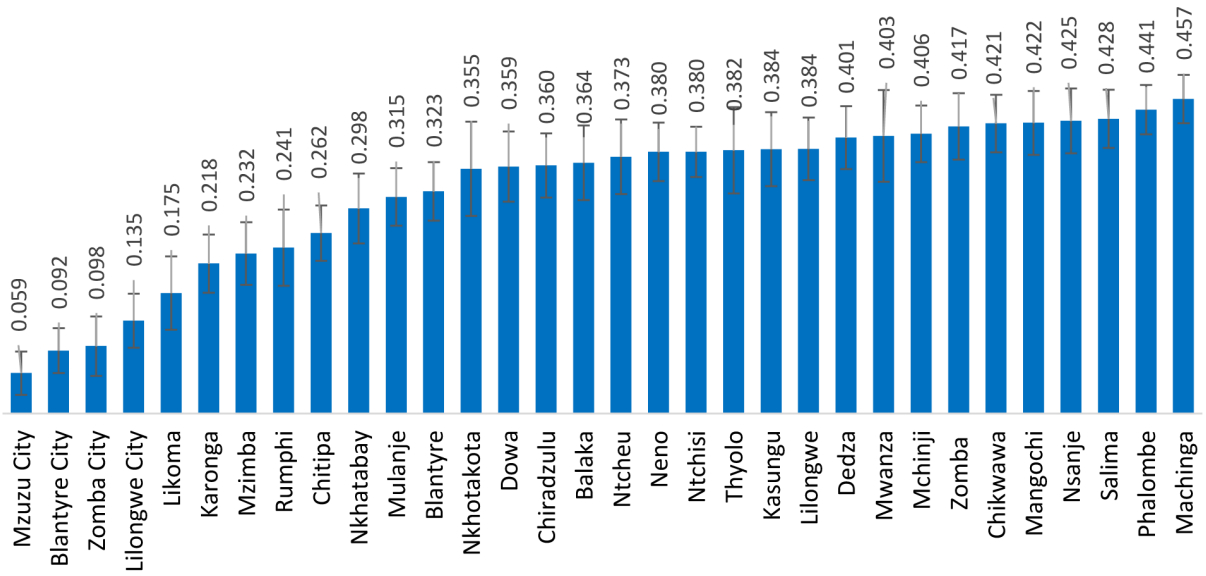


Source: National Statistical Office, MPI 2016-2017

3.3.3 Multidimensional Poverty Index by District in Malawi

The results show that, on average, Mzuzu City and Blantyre City were the districts with the lowest multidimensional poverty index of 0.059 and 0.092. This means that multidimensionally poor people in Mzuzu City and Blantyre City experienced about 6 percent and 9 percent, respectively of the weighted deprivations out of the total possible deprivations that could be experienced if everyone was multidimensionally poor and deprived in all indicators. Phalombe and Machinga had the highest multidimensional poverty index of 0.441 and 0.457 percent respectively. This means that multidimensionally poor people in Phalombe and Machinga experienced about 44 percent and 46 percent, respectively of the weighted deprivations (Figure 10).

Figure 10: M-MPI by District (k=38 percent), Malawi 2016-2017



Source: National Statistical Office, MPI 2016-2017

3.4 Multidimensional Poverty by Sex of the Household Head

This section provides the M-MPI results disaggregated by the sex of the household head. The results of the headcount (H), intensity (A) and the adjusted headcount ratio (M-MPI) are presented. The section also discusses the percentage contributions of each indicator to the MPI disaggregated by the sex of the household head.

3.4.1 Aggregate Measures (H, A and M-MPI) by Sex of the Household Head

The incidence of multidimensional poverty is higher for individuals living in female-headed households at 72.3 percent compared to those living in male-headed households at 58.1 percent. Similarly, the intensity of poverty is higher for individuals living in female-headed households compared to male-headed households at 56.4 percent and 53.9 percent, respectively. This means that on average a poor person living in a female-headed household is deprived in 56.4 percent of the weighted indicators compared to the poor living in male-headed households who on average is deprived in 53.9 percent of the weighted indicators. The results also clearly show that female-headed households are overall multidimensionally poorer than male-headed households with M-MPI values of 0.408 and 0.313, respectively (Table 6).

3.4.2 Censored Headcount Ratios by Sex of Household Head

The proportion of people who are poor and deprived in electricity was generally higher in female-headed households than male-headed

Table 6: Aggregate Measures (H, A and M-MPI) by Sex of the Household Head, 2016-2017

Sex	Population Share	MPI			Headcount (H) Ratio/ Incidence			Intensity (A)		
	(%)	Value	Confidence Interval		Value	Confidence Interval		Value	Confidence Interval	
Male	71.1	0.313	0.302	0.324	58.1	56.2	60.0	53.9	53.4	54.3
Female	28.9	0.408	0.393	0.422	72.3	70.0	74.5	56.4	55.7	57.1

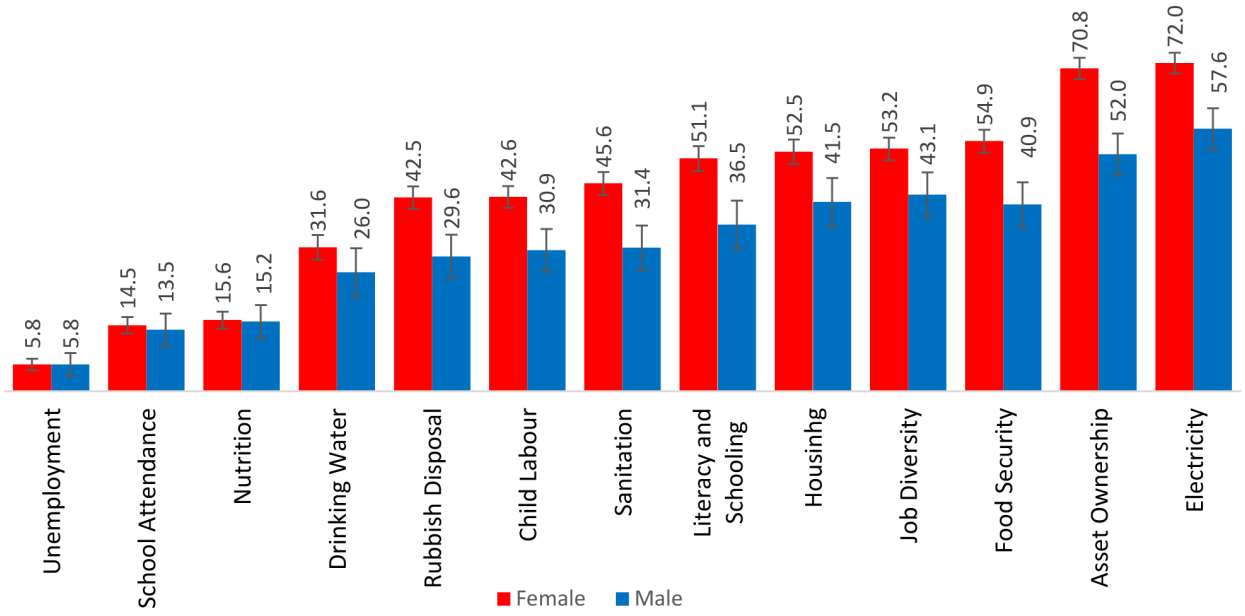
Source: National Statistical Office, MPI 2016-2017

households at 72.0 percent and 57.6 percent, respectively. The proportion of individuals that are poor and deprived in ownership of assets was 70.8 percent for female-headed households compared to 52.0 percent for male-headed households. As for nutrition, the proportion of individuals who are multidimensionally poor and deprived in electricity was higher in female-headed households (15.6 percent) compared to male-headed households (15.2 percent), but the result is not statistically significant (Figure 11).

3.5 Multidimensional Poverty by Age Group

The section presents the results of the headcount (H), intensity (A) and the adjusted headcount ratio (M-MPI) disaggregated by the age group of individuals, and also discusses the percentage contributions of each indicator to the M-MPI disaggregated for each age group.

Figure 11: Censored headcount ratios by Sex of the Household Head, Malawi 2016-2017



Source: National Statistical Office, MPI 2016-2017

3.4.3 Contribution of Each Indicator to the M-MPI by Sex of the Household Head

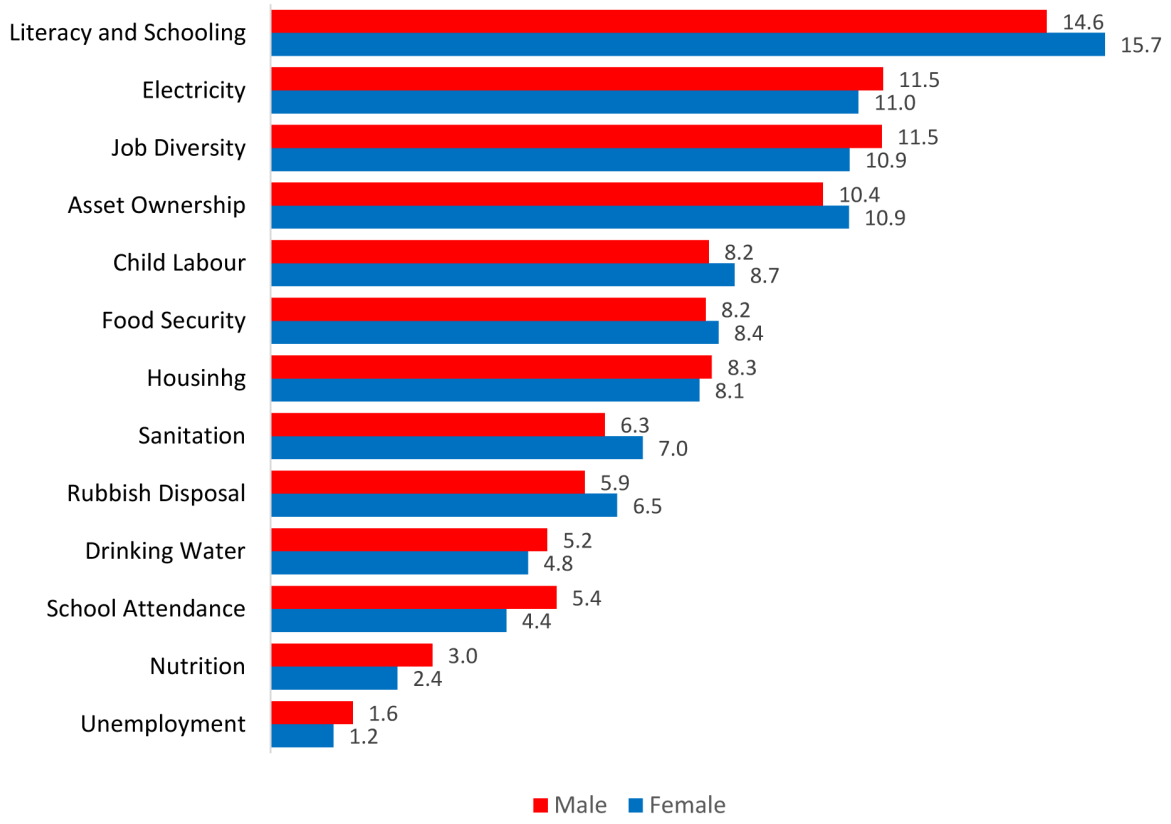
The indicators with the highest contributions to the M-MPI for individuals living in female-headed households are literacy and schooling (15.7 percent), electricity 11.0 percent, and job diversity at 10.9 percent. Similarly, literacy and schooling (14.6 percent), electricity (11.5) percent, and job diversity at 11.5 percent are the highest contributing indicators to the M-MPI values for individuals living in male-headed households. Unemployment is the indicator with the least contribution to the M-MPI value for both male-headed households and female-headed households at 1.6 percent and 1.2 percent respectively (Figure 12).

3.5.1 Aggregate Measures (H, A and M-MPI) by Age Group

The results show that individuals in the age group 0-9 years had the highest proportion (67.0 percent) of population that were multidimensionally poor followed by the age group 50+ years with 64.0 percent of its population being multidimensionally poor. However, individuals in the age group 20-34 year had the lowest proportion of multidimensionally poor individuals (54.0 percent).

The average intensity of poverty (A) reflects the average share of deprivations each poor person experiences and this varies considerably by age groups. Despite having a high proportion of individuals in age groups of 0-9 at 29.5 percent, 10-19 at 26.0 percent and 20-34 percent at 22.7 percent, the results show that individuals in the age groups

Figure 12: Percentage Contribution of Each Indicator to M-MPI for Sex of Head of Household, Malawi 2016-2017



Source: National Statistical Office, MPI 2016-2017

20-34 years and 50+ years experienced, on average, the lowest share of deprivations at 53.0 percent and 52.3 percent, respectively. The remaining age groups (0-9 years, 10-19 years and 35-50 years) experience higher deprivations at 55.8 percent, 55.6 percent and 55.5 percent, respectively.

Taking the M-MPI into account, the results show that, on average individuals in the age groups 0-9 years and 50+ years are the ones suffering multidimensional poverty the most (0.374 and 0.335, respectively) compared to 10-19, 20-34 and 35-50 age groups (Table 7).

Table 7: Aggregate Measures (H, A and M-MPI) by Age Group, Malawi 2016-2017

Age Group		M-MPI			Incidence (H)			Intensity (A)		
	Share of Population	Value	95% Confidence Interval		Value (%)	95 % Confidence Interval		Value (%)	95% Confidence Interval	
0-9	29.5	0.374	0.362	0.385	67.0	65.2	68.8	55.8	55.3	56.3
10-19	26.0	0.347	0.335	0.358	62.9	61.0	64.8	55.1	54.6	55.6
20-34	22.7	0.286	0.275	0.298	54.0	51.9	56.0	53.0	52.6	53.5
35-50	12.7	0.319	0.306	0.332	58.1	55.9	60.3	55.0	54.4	55.5
50+	9.0	0.335	0.322	0.347	64.0	61.7	66.2	52.3	51.8	52.8

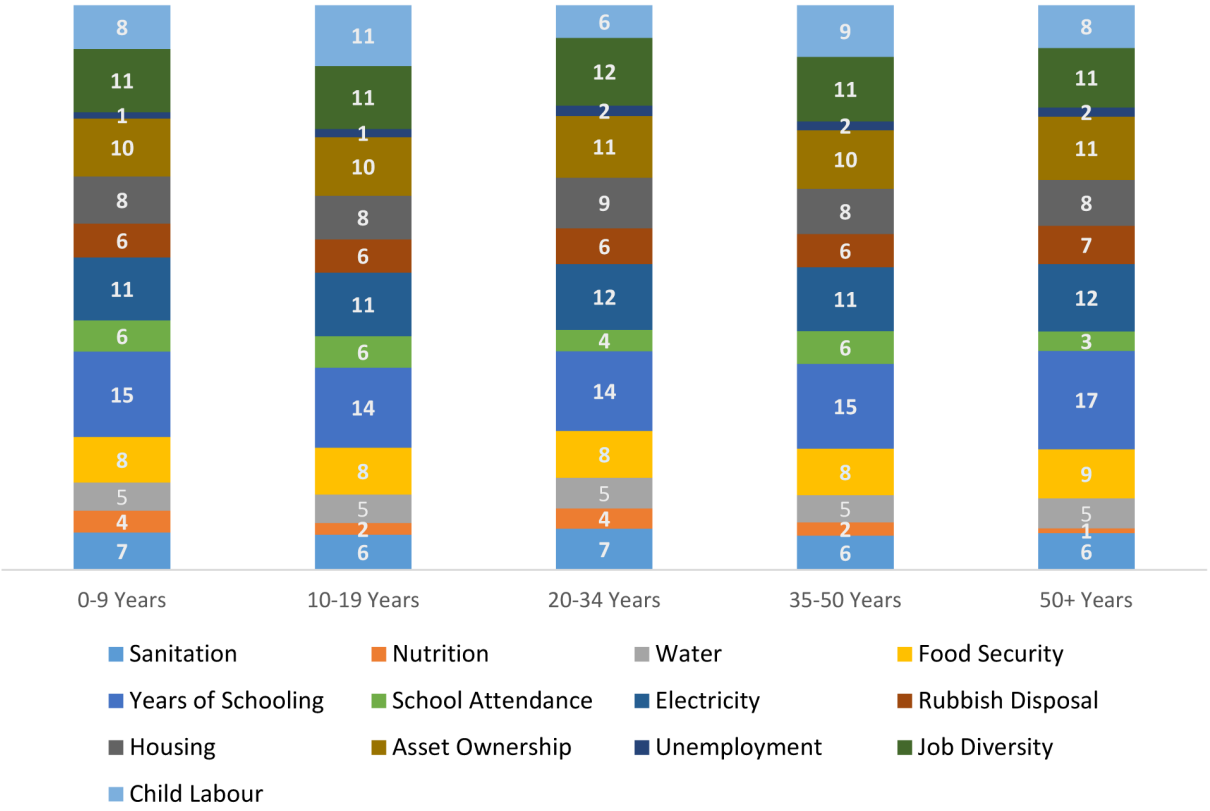
Source: National Statistical Office, MPI 2016-2017

3.5.2 Contribution of Each Indicator to the M-MPI by Age Group

The results show that literacy and schooling had the highest contribution to the M-MPI across all age group MPI. Specifically, literacy and schooling contributed about 17 percent to the M-MPI of the age group 50 years and above, about 15 percent in the age groups 0-9 years and 35-50 years; and about 14 percent in the age groups 10-19 years and 20-34 years (Figure 13).

poverty line of K137, 428 per person per year in 2017. As detailed above, a larger proportion (61.7%) are poor according to the multidimensional definition of poverty. How different are these two groups of people? The overlap between the two is shown in Figure 14, where the size of the circles is proportionate to the size of the population of these two groups in Malawi, and the rectangle around the circles represents the total population of the country. More than a quarter (28.5%) of all people in Malawi are found to be non-poor, regardless of the measure used to define poverty.

Figure 13: Percentage Contribution of Indicators to the M-MPI for Each Age Group



Source: National Statistical Office, MPI 2016-2017

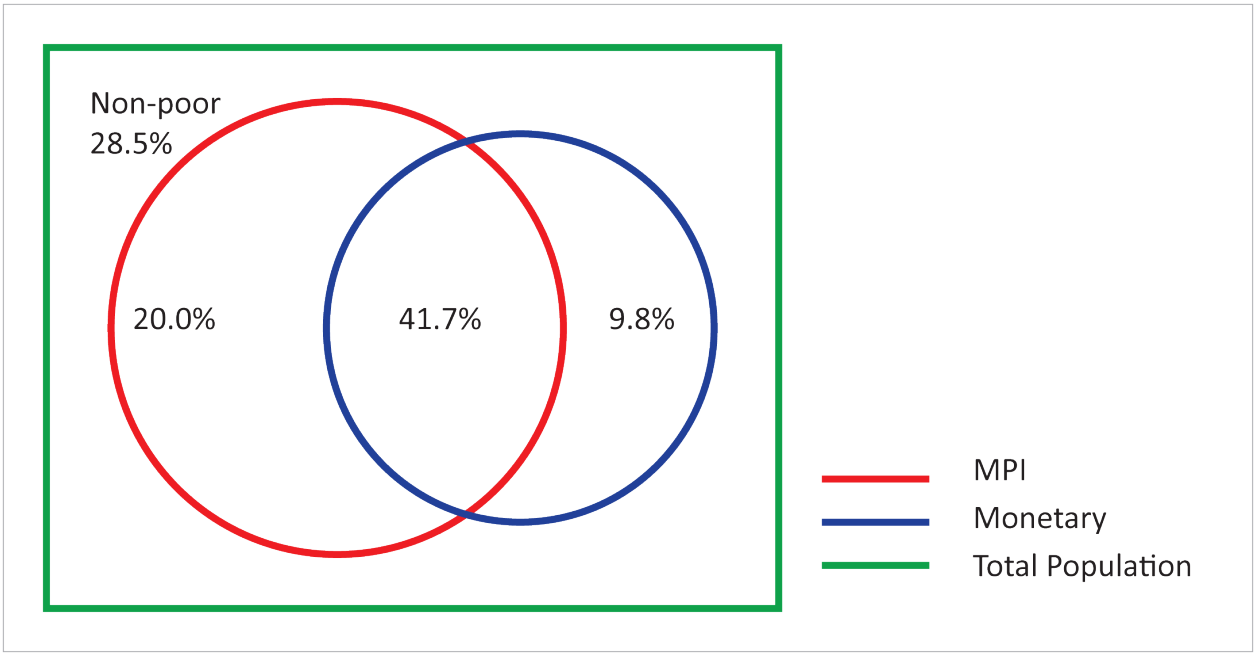
3.6 Multidimensional poverty and monetary poverty

The M-MPI seeks to broaden the understanding of poverty in Malawi, providing a complementary measure to the monetary measure of poverty that has traditionally been used in the country. Given that both measures are derived from the same data source, an analysis of the complementarity is possible.

IHS4 found that more than half (51.5%) of the population are monetarily poor, living below the

What is clear in Figure 14 is that there is substantial overlap between those who are monetary poor and those who are multidimensionally poor. More than four out of every ten (41.7%) people in Malawi are poor according to both measures. Looked at in another way, the vast majority (80.9%) of people who are living under the monetary poverty line of K137, 428 per person per year in 2017 are also multidimensionally poor. However, there are also significant numbers of people who are poor according to only one of the measures. Figure 14 shows that 9.8% are poor only using the monetary definition of poverty, while 20.0% of the population in Malawi are only multidimensionally poor. This

Figure 14: Overlap of multidimensional and monetary poverty



Source: National Statistical Office, MPI 2016-2017

large proportion of the population is experiencing real deprivations, not captured by the monetary measure, highlighting the value of the M-MPI as a complementary measure.

3.7 Robustness Analysis: M-MPI using Alternative Poverty Cutoffs

The results of the 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 M-MPI structure is proven to be robust.

Three robustness tests are carried out. All of them consist of analyzing 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 m in the poverty ordering by the M-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 of the $d(m)=0$. Spearman's rank correlation coefficient, ρ, is calculated as follows:

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

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

The **second** test consists of calculating the Kendall correlation coefficient. Considering two districts m and ρ, the 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_D, against the number of concordant pairwise orderings n_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 agreement there is between the district poverty orderings defined by the structures that are being compared.

The **third** test consists of performing similar pairwise comparisons taking into account sampling errors in the 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 M-MPI. The results of these comparisons can be summarized 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).

3.7.1 Robustness Results

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

Furthermore, when it comes to assessing the stability of pairwise poverty orderings for the 32 districts considering sampling errors, it is found that 80.9 percent of the 496 possible pairwise comparisons are robust to changes in the poverty threshold from the original (38 percent) to any of those presented in Table 8. Thus, overall, it is found that choosing a different poverty threshold does not greatly alter the district poverty orderings. In this sense, the structure of the M-MPI is effectively robust to changes in the poverty line (see Table 8).

Table 8 presents the results that compare the preferred structure for the M-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 an importance equal to twice all the previous ones was considered. Thus, for example, if the Education dimension is considered to be twice as important as the other three dimensions of the 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 greater than 88 percent. This indicates that the M-MPI is robust to changes in the weighting structure for each dimension. Similarly, it is also found that 336 (67.7 percent) of the possible comparisons (496) are robust to changes in the weighting structure from the original to any of those defined in (Table 9).

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

Table 8: Robustness to changes in the poverty cut-off (k)

Alternative poverty cut-off	Spearman ρ	Kendall τ
k = 25%	0.9226	0.9838
k = 50%	0.8667	0.9665

Source: National Statistical Office, MPI 2016-2017

Table 9: Robustness to changes in the weighting structure of the dimensions

Alternative dimensional weighting	Spearman ρ	Kendall τ
40% to Health and Population	0.9657	0.8839
40% to Education	0.9750	0.8925
40% to Environment	0.9774	0.9054
40% to Work	0.9706	0.8667

Source: National Statistical Office, MPI 2016-2017

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Chapter 4 CONCLUSIONS AND POLICY IMPLICATIONS

4.1 Conclusions

This is the first MPI report for Malawi and it provides a detailed analysis of poverty by using non-monetary poverty dimensions. Over the past years, much focus was made on monetary poverty measurement that mainly focused on consumption expenditure or household income. The MPI is a complementary measure to the traditional monetary poverty measure. In this case, both measures provide detailed statistics which can be used for policy formulation and actions that can be taken to address poverty and inequality in Malawi.

This report has presented the Multidimensional Poverty Index (M-MPI) for Malawi using data from IHS4 that was conducted in 2016-2017 and described the composition of poverty among different groups. The national M-MPI was at 0.337 meaning that multidimensionally poor people in Malawi experienced about 34 percent of the weighted deprivations out of the total possible deprivations. About 62 percent of individuals in Malawi were identified as multidimensionally poor and these individuals were deprived in 54.6 percent of the indicators. These individuals were multidimensionally poor and found to be highly deprived in electricity (61.3 percent), ownership of assets (56.8 percent) and job diversity (45.7 percent). The main contributor to the national M-MPI was literacy and schooling (14.9 percent) followed by electricity (11.4 percent) and job diversity (11.3 percent).

The incidence and intensity of multidimensional poverty also vary between rural and urban areas. In almost all dimensions, individuals in rural areas were poorer than those in urban areas. About 70 percent of Individuals in rural areas were identified as poor and these were deprived in 55.0 percent of the indicators compared to 25.7 percent of those in urban areas who were deprived in 50.7 percent of the indicators. In rural areas, nearly 70 percent of individuals were multidimensionally poor and deprived in electricity compared to 24.4 percent in urban areas.

Disparities in poverty levels were also found between regions and districts. About 44 percent of individuals in the Northern region were multidimensionally poor and were deprived in 50.2 percent of indicators, 64.3 percent of individuals in the Central region were multidimensionally poor and were deprived in 54.8 percent of indicators and 63.7 percent of individuals in the Southern region were multidimensionally poor and were deprived in 55.1 percent of indicators.

Across districts in each region, results show that Nkhata Bay had the highest proportion of individuals who were multidimensionally poor at 57.6 percent in the Northern region and these were deprived in 51.7 percent of indicators. The least was Mzuzu City which had 12.6 percent of individuals who were multidimensionally poor and these were deprived in 44.6 percent of indicators. In the Central region, Salima had the highest proportion of individuals who were multidimensionally poor at 77.4 percent and these were deprived in 55.3 percent of indicators. The least was Lilongwe City with 25.8 percent multidimensionally poor individuals who were deprived in 52.3 percent of indicators. Finally, in the Southern Region, Phalombe and Machinga had the highest proportion of individuals who were multidimensionally poor at 80.0 percent each and these were deprived in 55.4 percent and 56.9 percent of indicators for Phalombe and Machinga respectively. In general, the incidence of poverty was above 60 percent in 21 out of the 32 census districts of Malawi and the intensity of poverty was more than 45 percent in almost all the districts.

About 72.3 percent of individuals in female-headed households were multidimensionally poor and deprived in 56.4 percent of the indicators compared to 58.2 percent in male-headed households who were multidimensionally poor and deprived in 53.9 percent of the indicators.

The incidence and intensity of poverty also varies by age of individuals. About 67 percent of Individuals aged between 0-9 years were identified as multidimensionally poor and experienced higher deprivations at 55.8 percent compared to 54.0

percent of individuals in the age group 20-34 who were deprived in 53.0 percent of the indicators.

4.2 Policy Implications

The MPI which is a non-monetary measurement of poverty has focused on a number of dimensions and these are Health and Population, Education, Environment and Work. Each dimension is made up of several other indicators. For example, Environmental indicator consists of Electricity, Rubbish Disposal, Housing and Asset ownership.

This report has used data from the IHS4 Survey conducted between 2016 and 2017 and it will be revised using data from the IHS5 survey which was conducted between 2019 and 2020. The second report which will be based on IHS5 will provide an update to this report.

The findings presented in this report will help to monitor social progress made with regards to indicator 1.2.2 of the Sustainable Development Goals and the Malawi 2063 national vision which aims to reduce poverty from 51 percent in 2016 to 26 percent by 2030. The report highlights areas that need immediate attention if poverty is to be addressed such as electricity, asset ownership, job diversity, literacy and schooling. The results in this report have also been presented at a national level, regional level, place of residence, sex of individuals and age groups which would allow for targeting of specific places as well as categories of persons.

The results obtained after computing the incidence of multidimensional poverty show that there was a higher proportion of people who were multidimensionally poor at 61.7 percent compared to monetary poverty which was at 50.9 percent. Across regions, the Southern region was ranked the poorest for both monetary poverty and multidimensional poverty.

The results obtained show that there is variation in the proportion of multidimensionally poor people by place of residence, regional and district levels, age and sex of individuals. Multidimensionally poor people were mainly deprived in the following indicators in ascending order: electricity, asset ownership, job diversity, food security and literacy and schooling. This means that deliberate efforts in terms of policies and strategies should be directed towards reducing deprivations being faced by different population segments in various places of the country.

Further analysis shows variations in indicators that contributed to poverty and the main indicators which contributed to poverty are literacy and schooling, electricity, job diversity and food security. This also calls for concerted effort and action to tackle those indicators which are major contributors to poverty.

This report, therefore, acts as a guide in the prioritization of policies, programmes, strategies and resources towards the eradication of poverty in Malawi based on the findings. The report should therefore be used as the basis for further analysis and discussion in designing policies and programmes that will reduce multi-dimensional poverty and improve the well-being of people by targeting some sectors, places and population segments that are worse off.

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APPENDIX

Table 10: Censored Headcount Ratios by District (k=38 percent), Malawi 2016-2017

District	Sanitation	Nutrition	Water	Food Security	Years of Schooling	School Attendance	Electricity	Rubbish Disposal	Housing	Asset Ownership	Un-employment	Job Diversity	Child Labour
Chitipa	20.5	6.6	38.3	26.5	19.9	5.5	52.0	25.5	37.7	49.8	2.5	44.6	36.6
Karonga	23.2	7.9	21.7	24.4	18.3	6.2	42.8	16.2	25.9	41.7	5.4	37.6	28.8
Nkhatabay	31.6	15.0	30.5	37.7	21.7	14.3	56.8	33.5	30.4	52.1	10.6	41.8	35.2
Rumphi	21.3	9.6	26.1	31.7	11.2	9.3	49.0	25.9	35.6	44.9	4.0	38.6	33.0
Mzimba	31.4	13.6	30.2	27.9	23.7	6.6	45.6	12.0	32.3	41.6	2.0	33.6	21.7
Likoma	14.8	5.5	7.9	21.3	9.5	11.5	29.4	22.7	24.0	34.0	15.9	31.3	11.6
Mzuzu City	10.7	3.2	6.1	7.5	2.6	3.3	11.7	1.4	6.3	12.5	7.1	4.4	5.7
Kasungu	29.8	20.1	41.1	49.7	43.1	14.1	71.9	31.2	59.1	64.6	2.4	54.3	42.5
Nkhotakota	19.4	20.8	34.3	39.7	37.3	15.9	64.4	44.3	51.4	55.3	6.2	52.2	40.9
Ntchisi	19.3	19.3	31.2	45.5	42.0	17.4	70.7	40.2	60.2	62.5	5.1	60.2	39.8
Dowa	32.6	17.2	33.6	42.9	44.0	13.1	65.8	28.8	52.3	61.2	2.2	51.1	40.6
Salima	36.5	18.9	22.6	43.7	60.1	23.9	76.8	50.4	62.3	73.7	6.6	60.2	32.2
Lilongwe	42.7	17.3	21.6	52.2	52.9	18.3	69.5	27.2	56.8	63.0	7.4	49.4	35.1
Mchinji	54.0	18.5	15.5	64.5	41.4	20.5	73.4	24.0	59.1	68.5	7.4	61.7	42.5
Dedza	36.6	18.3	33.1	56.2	47.9	15.2	70.2	40.0	57.7	68.8	10.5	57.4	32.5
Ntcheu	36.7	17.4	28.7	48.5	41.6	18.1	68.7	41.2	51.7	64.3	7.4	54.1	28.5
Lilongwe City	22.0	6.2	9.2	18.0	15.4	7.9	25.0	9.7	13.7	22.8	9.3	11.7	10.9
Mangochi	40.4	21.4	35.6	43.0	61.0	15.1	74.7	45.6	59.5	68.3	3.5	66.0	31.5
Machinga	55.4	21.5	36.6	60.2	55.7	14.9	79.8	48.2	58.6	73.5	3.7	54.9	58.0
Zomba	48.3	19.4	34.8	57.0	50.8	12.4	75.3	38.5	54.3	65.9	5.5	51.6	53.2
Chiradzulu	39.4	15.5	27.2	49.5	41.7	12.6	67.3	42.9	39.9	63.6	3.4	52.0	36.8
Blantyre	45.9	13.5	22.6	47.4	39.6	9.3	60.2	32.9	36.6	56.8	4.4	42.5	29.9
Mwanza	46.7	18.9	27.7	41.9	52.7	19.5	70.5	50.5	50.5	66.0	1.8	48.0	46.1
Thyolo	41.5	12.2	40.1	51.6	48.3	18.6	67.5	48.1	36.9	63.3	2.3	45.4	39.8
Mulanje	30.1	12.0	30.4	50.7	39.4	9.6	57.2	29.8	34.3	54.7	5.0	38.3	36.2
Phalombe	38.6	12.8	41.8	69.9	55.4	13.0	79.6	52.9	55.0	73.7	2.8	64.2	41.7
Chikwawa	39.7	16.1	35.3	67.5	50.9	21.1	74.1	40.6	48.3	67.4	3.6	53.3	48.7
Nsanje	50.8	21.8	25.3	69.5	45.9	17.8	75.5	40.3	53.2	72.0	4.1	54.3	49.5
Balaka	34.7	17.7	35.9	41.7	42.4	14.4	66.8	43.0	46.7	59.5	5.5	49.6	37.2
Neno	42.8	16.8	37.3	43.8	38.8	11.2	69.7	52.7	52.8	62.4	3.8	48.8	44.6
Zomba City	14.4	4.7	5.8	15.0	10.1	2.3	20.4	8.9	9.0	18.3	3.3	11.3	12.0
Blantyre City	18.3	5.8	4.6	13.6	9.1	3.5	16.9	10.0	4.2	18.3	13.9	4.0	4.1

Source: National Statistical Office, MPI 2016-2017

Table 11: Percentage Contribution of Each Indicator to the M-MPI by District, Malawi 2016-2017

District	Sanitation	Nutrition	Water	Food Security	Years of Schooling	School Attendance	Electricity	Rubbish Disposal	Housing	Asset Ownership	Un-employment	Job Diversity	Child Labour
Chitipa	4.9	1.6	9.1	6.3	9.5	2.6	12.4	6.1	9.0	11.9	0.8	14.2	11.6
Karonga	6.6	2.3	6.2	7.0	10.5	3.6	12.3	4.6	7.4	12.0	2.1	14.4	11.0
Nkhatabay	6.6	3.1	6.4	7.9	9.1	6.0	11.9	7.0	6.4	10.9	3.0	11.7	9.9
Rumphi	5.5	2.5	6.8	8.2	5.8	4.8	12.7	6.7	9.2	11.6	1.4	13.3	11.4
Mzimba	8.4	3.7	8.1	7.5	12.8	3.6	12.3	3.2	8.7	11.2	0.7	12.1	7.8
Likoma	5.3	2.0	2.8	7.6	6.8	8.2	10.5	8.1	8.6	12.1	7.6	14.9	5.5
Mzuzu City	11.4	3.4	6.5	8.0	5.5	6.9	12.4	1.5	6.7	13.2	10.1	6.2	8.1
Kasungu	4.9	3.3	6.7	8.1	14.0	4.6	11.7	5.1	9.6	10.5	0.5	11.8	9.2
Nkhotakota	3.4	3.7	6.0	7.0	13.1	5.6	11.3	7.8	9.0	9.7	1.5	12.2	9.6
Ntchisi	3.2	3.2	5.1	7.5	13.8	5.7	11.6	6.6	9.9	10.3	1.1	13.2	8.7
Dowa	5.7	3.0	5.9	7.5	15.3	4.6	11.5	5.0	9.1	10.7	0.5	11.9	9.4
Salima	5.3	2.8	3.3	6.4	17.6	7.0	11.2	7.4	9.1	10.8	1.3	11.7	6.3
Lilongwe	6.9	2.8	3.5	8.5	17.2	5.9	11.3	4.4	9.2	10.2	1.6	10.7	7.6
Mchinji	8.3	2.8	2.4	9.9	12.7	6.3	11.3	3.7	9.1	10.5	1.5	12.7	8.7
Dedza	5.7	2.9	5.2	8.8	15.0	4.7	11.0	6.2	9.0	10.7	2.2	11.9	6.8
Ntcheu	6.1	2.9	4.8	8.1	14.0	6.1	11.5	6.9	8.7	10.8	1.6	12.1	6.4
Lilongwe City	10.2	2.9	4.2	8.3	14.3	7.4	11.6	4.5	6.4	10.6	5.8	7.2	6.7
Mangochi	6.0	3.2	5.3	6.4	18.0	4.5	11.1	6.7	8.8	10.1	0.7	13.0	6.2
Machinga	7.6	2.9	5.0	8.2	15.2	4.1	10.9	6.6	8.0	10.1	0.7	10.0	10.6
Zomba	7.2	2.9	5.2	8.6	15.2	3.7	11.3	5.8	8.1	9.9	1.1	10.3	10.6
Chiradzulu	6.8	2.7	4.7	8.6	14.4	4.4	11.7	7.4	6.9	11.0	0.8	12.0	8.5
Blantyre	8.9	2.6	4.4	9.2	15.4	3.6	11.7	6.4	7.1	11.0	1.1	11.0	7.7
Mwanza	7.2	2.9	4.3	6.5	16.4	6.0	10.9	7.8	7.8	10.2	0.4	9.9	9.5
Thyolo	6.8	2.0	6.6	8.4	15.8	6.1	11.0	7.9	6.0	10.4	0.5	9.9	8.7
Mulanje	6.0	2.4	6.0	10.1	15.7	3.8	11.4	5.9	6.8	10.9	1.3	10.2	9.6
Phalombe	5.5	1.8	5.9	9.9	15.7	3.7	11.3	7.5	7.8	10.4	0.5	12.1	7.9
Chikwawa	5.9	2.4	5.2	10.0	15.1	6.3	11.0	6.0	7.2	10.0	0.7	10.6	9.6
Nsanje	7.5	3.2	3.7	10.2	13.5	5.2	11.1	5.9	7.8	10.6	0.8	10.6	9.7
Balaka	6.0	3.0	6.2	7.2	14.6	4.9	11.5	7.4	8.0	10.2	1.2	11.3	8.5
Neno	7.0	2.8	6.1	7.2	12.8	3.7	11.5	8.7	8.7	10.3	0.8	10.7	9.8
Zomba City	9.2	3.0	3.7	9.6	12.9	2.9	13.0	5.7	5.7	11.7	2.8	9.6	10.2
Blantyre City	12.5	4.0	3.2	9.3	12.4	4.8	11.5	6.9	2.9	12.5	12.7	3.6	3.8

Source: National Statistical Office, MPI 2016-2017

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