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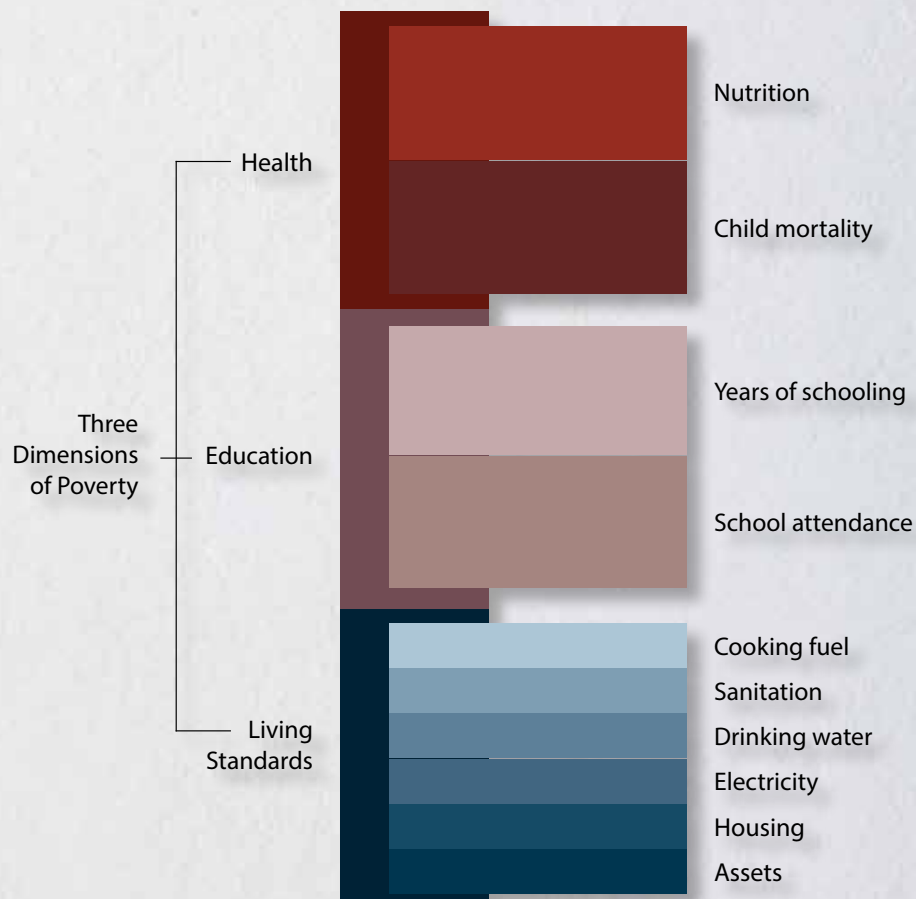Oxford Poverty & Human
Development Initiative

UNIVERSITY OF
OXFORD

GLOBAL MULTIDIMENSIONAL POVERTY INDEX 2018

The Most Detailed Picture to Date
of the World's Poorest People

Health

Three
Dimensions
of Poverty

Education

Living
Standards

Nutrition

Child mortality

Years of schooling

School attendance

Cooking fuel

Sanitation

Drinking water

Electricity

Housing

Assets

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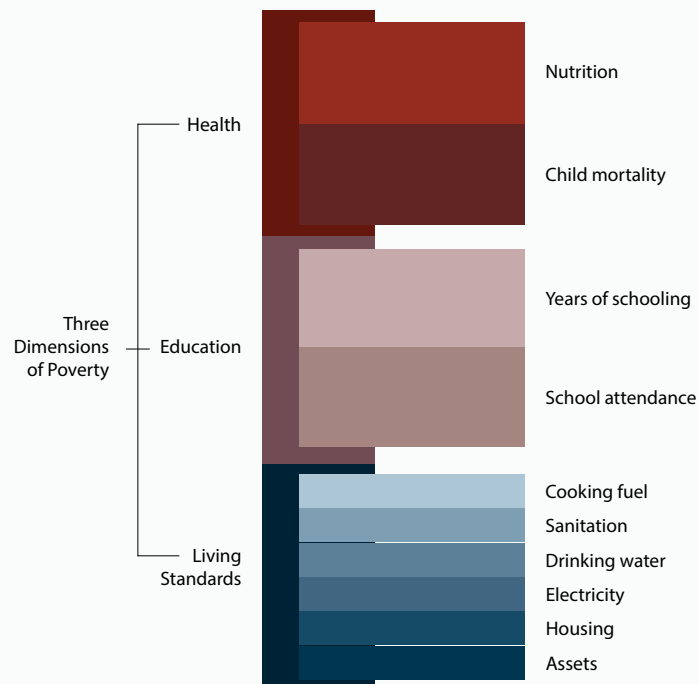of the World's Poorest People

Health		Nutrition
		Child mortality
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		School attendance
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		Sanitation
		Drinking water
		Electricity
		Housing
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Three Dimensions of Poverty

Oxford Poverty and Human Development Initiative (OPHI)
University of Oxford

Global Multidimensional Poverty Index 2018:
The Most Detailed Picture To Date of the World's Poorest People

This report is dedicated to Sir Tony Atkinson.

Foreword

The 2030 Agenda calls "eradicating poverty in all its forms and dimensions... the greatest global challenge and an indispensable requirement for sustainable development." At the start of the Third UN Decade for the Eradication of Poverty there is a clear need for concerted, creative, and rigorous efforts to measure and reduce multidimensional poverty in a way that ensures that no one is left behind.

To catalyze such progress the United Nations Development Programme (UNDP) and the Oxford Poverty and Human Development Initiative (OPHI) at the University of Oxford have reinvigorated their collaboration to develop a new version of the global Multidimensional Poverty Index (MPI). This collaboration started in 2010 when the first global MPI was published in the *Human Development Report* (HDR).

In more ways than one, the 2030 Agenda is a culmination of a multidimensional approach to sustainable development pioneered by UNDP's Human Development Report Office. That approach is premised on simple but big ideas: development is multi-faceted, and people must be at the center of sustainable development. These ideas have shaped development theory and practice for several decades. They may appear self-evident today, but they should not be taken for granted.

The 2030 Agenda tells us that sustainable development is complex and integrated, and can only be addressed holistically and systemically. Since the adoption of the 2030 Agenda, UNDP has led the UN system in providing integrated support for the implementation of the 2030 Agenda at the national level. With this revision of the global MPI, which closely aligns with the Sustainable Development Goals (SDGs), UNDP is taking a further step in that direction.

The MPI is already one of the preeminent tools to understand the many forms of poverty experienced by those left behind. The 2018 global MPI sharpens the picture of poverty worldwide, but it is about more than SDG1. The MPI assesses the intersecting impact of policy choices across multiple SDGs, and it gives us evidence to support integrated responses to complex development challenges.

However, we must recognize that the MPI alone still does not give us the full and precise picture of poverty deprivations. There are other complementary instruments, such as the Human Development Report Office's Human Development Index and

related indices, that shed light on parts of the picture. And there are parts of the picture that remain stubbornly dark, indicating either a gap in data or limitations in existing instruments. Only through collaboration and partnerships, building on the strengths and complementarity of many stakeholders, can we hope to provide the full picture of poverty needed to inform policymaking.

The 2030 Agenda is ambitious and may seem out of reach. But the findings in this report show that the world is making significant progress in reducing multidimensional poverty. UNDP is committed to working with OPHI and other partners in the coming months and years, to support multidimensional approaches to implementation and monitoring of the 2030 Agenda at global and national levels.

Abdoulaye Mar Dieye
Assistant Secretary-General, Director,
Bureau for Policy and Programme
Support, UNDP

Acknowledgements

Findings at a Glance

The 2018 global Multidimensional Poverty Index (MPI) is an internationally comparable measure of acute poverty for 105 countries, covering 5.7 billion people (approximately 77% of the global population). It is a valuable complement to income poverty measures as the MPI captures the simultaneous deprivations that each person experiences in ten indicators.

The global MPI was first developed in 2010 by the United Nations Development Programme (UNDP) and the Oxford Poverty and Human Development Initiative (OPHI) at the University of Oxford for the UNDP flagship publication *Human Development Report*. The global MPI is updated at least once per year to include newly released data.

For the 2018 global MPI, five of the ten indicators have been revised jointly by OPHI and UNDP to align the MPI with the 2030 Agenda. This is in response to the Agenda's call for a better measure of progress toward Sustainable Development Goal 1 – "to end poverty in all its forms" – and to help achieve the principle of leaving no one behind.

KEY FINDING: 1.3 billion people live in multidimensional poverty in the 105 developing countries for which the 2018 global MPI is estimated.

— This represents 23% – nearly a quarter – of the population of the 105 countries for which the 2018 MPI is calculated. These people are being left behind in multiple ways. They are deprived in at least one-third of overlapping deprivations in health, education, and living standards, lacking such things as clean water, sanitation, adequate nutrition, or primary education.

— The scale and detail of multidimensional poverty profiled here suggests that income and consumption figures need to be complemented with multidimensional measurement for a more in-depth picture.

KEY FINDING: Multidimensional poverty is found in all developing regions of the world, but it is particularly acute in Sub-Saharan Africa and South Asia.

— These two regions account together for 83% of all multidimensionally poor people in the world – more than 1.1 billion.

KEY FINDING: Two-thirds of all multidimensionally poor people live in middle-income countries.

— 889 million people in middle-income countries experience deprivations in nutrition, schooling, and sanitation, just like those in low-income countries.

KEY FINDING: In India, 271 million people moved out of poverty between 2005/6 and 2015/16, but the country still has the largest number of people living in multidimensional poverty in the world (364 million people).

— India has cut its poverty rate from 55% to 28% in ten years. This has parallels with the phenomenal level of poverty reduction achieved in China a decade or so earlier.

KEY FINDING: The level of global child poverty is staggering: children account for virtually half (49.9%) of the world's poor. Worldwide, over 665 million children live in multidimensional poverty.

— In 35 countries, at least half of all children are MPI poor. In South Sudan and Niger, some 93% of all children are MPI poor.

— Nearly two-thirds (64%) of Sub-Saharan Africa's children are multidimensionally poor; in South Asia, 39% of children are multidimensionally poor.

KEY FINDING: About 611 million people – 46% of those who are multidimensionally poor – live in severe poverty, that is, they are deprived in at least half of the weighted indicators in health, education, and living standards.

— Sub-Saharan Africa, with 342 million people living in severe poverty, accounts for 56% of the world's severely poor.

KEY FINDING: After India (364 million people), the countries with the largest number of people living in multidimensional poverty are Nigeria (97 million), Ethiopia (86 million), Pakistan (85 million), and Bangladesh (67 million).

KEY FINDING: Moving beyond country-level averages, the 2018 MPI is available for 1,127 subnational regions – showing within-country variations of multidimensional poverty levels for 88 countries.

KEY FINDING: Multidimensional poverty is much more intense in rural areas. Globally there are 1.1 billion people living in multidimensional poverty in rural areas and 0.2 billion people living in multidimensional poverty in urban areas.

— The starkest differences between rural and urban poverty are in countries of Sub-Saharan Africa.

Contents

Introduction

Multidimensional poverty considers the many overlapping deprivations that poor people experience. Explaining their disadvantages, people living in poverty regularly describe lack of education, poor health and nutrition, ramshackle housing, unsafe water and so on. These deprivations reflect the lived experiences of many poor people and the obstacles they face in achieving valuable capabilities. And they motivate the emphasis of the Sustainable Development Goals (SDGs) on addressing poverty in all its forms and dimensions (see Box on page 2).

A Multidimensional Poverty Index (MPI) takes a profile of each person's simultaneous challenges as its point of departure and uses it to measure non-monetary poverty (see Box on page 3). The motivation for doing so is to complement monetary poverty measures with relevant actionable insights. Nobel Laureate Amartya Sen observes that the "'coupling' of disadvantages between different sources of deprivation… can be a critically important consideration in understanding poverty and in making public policy to tackle it" (2009: 256).

This report presents the global MPI 2018, a newly revised index based on a short but powerful list of 10 deprivations. The box on pages 5–6 presents the structure of the global MPI 2018 – dimensions, indicators, weights and cutoffs. Conceptually, the global MPI draws on Amartya

Sen's capability perspective, which "is inescapably concerned with a plurality of different features of our lives and concerns" (2009:233). Empirically, the global MPI is deeply constrained by data and limited in relevance by the tremendous diversity of people's lives. Yet it seeks to sustain and energize attention on key disadvantages by offering the most detailed picture of poverty to date. But what is the global MPI? How is it made so as to align with the SDGs and with other priorities such as Agenda 2063 and the Third UN Decade for the Eradication of Poverty? And what data underlie it?

WHAT IS THE GLOBAL MPI?

The global MPI is an internationally comparable measure of acute poverty for over 100 countries situated in developing regions. It complements global monetary poverty measures by capturing the simultaneous deprivations that each person experiences in ten indicators related to education, health and living standards. In 2018, five of the ten indicators have been revised.

WHERE DID THE GLOBAL MPI COME FROM?

The global MPI was developed in 2010 by the United Nations Development Programme (UNDP) and the Oxford Poverty and Human Development Initiative (OPHI) at the University of Oxford for the UNDP's flagship *Human Development Reports*. The numbers and analysis are updated at least once per year to include new-

THE GLOBAL MPI
AND THE SUSTAINABLE DEVELOPMENT GOALS

Launched in 2010, the global MPI already encompassed some of the values embodied by the SDGs. For example, rather than focusing on a single aspect of poverty, the global MPI depicts poverty in its many forms and dimensions. Rather than viewing challenges one by one, in silos, the MPI shows how deprivations are concretely interlinked in poor people's lives. Rather than providing only national headlines, the global MPI is disaggregated by subnational region, area, ethnicity, or age cohort. The indicators underlying the global MPI 2018 have been revised to better align with the SDGs. So how does the global MPI 2018 support the SDG agenda?

SDG GOAL 1 OF 17. End Poverty in All Its Forms Everywhere. The preamble to the 2030 Agenda for Sustainable Development which defined the SDGs states that "eradicating poverty in all its forms and dimensions… is the greatest global challenge and an indispensable requirement for sustainable development." The global MPI addresses multidimensional poverty, focusing on the critical dimensions of health, education, and living standards.

SDG TARGET 1.2. Poverty in all its dimensions. The second out of 169 Targets in the SDGs calls for countries to halve the proportion of men, women, and children living in poverty in all its dimensions. Poverty is understood to be both multidimensional and measurable. The official national MPIs developed by countries to reflect their particular context and the global MPI, like national income poverty measures and $1.90/day, both assess progress in poverty reduction: one with respect to national priorities and the other in a comparative perspective.

LEAVE NO ONE BEHIND. The 2030 Agenda for Sustainable Development pledges that "no one will be left behind". Putting this idea into practice, the global MPI considers the depth or intensity of an individual's poverty, going beyond the overall number of poor people (headcount ratio) and providing measurement incentives to reduce the deprivations of the poorest – even if they don't yet exit poverty. This promotes policies that "leave no one behind". Disaggregation of the MPI by region, age, and urban/rural area identifies specific pockets of poverty. This enables more targeted policies and actions, and helps ensure that particular areas and groups are not left behind.

INTERLINKAGES ACROSS SDGs. The global MPI reflects deprivations each person faces in multiple SDG areas – education, water and sanitation, health, housing, etc. Connecting to at least seven SDGs, the MPI brings many concerns together into one headline measure. And, since people are MPI poor if they are deprived in one-third of the weighted indicators, the MPI focuses on people who are being left behind in multiple SDGs at the same time.

POVERTY PROFILE: AMUDHA, INDIA

Amudha[1] is a 14-year-old student in 10th grade at a school in a small rural community near Madurai. She lives with her father, mother, sister, nephew and niece.

Her father's hand was broken while picking coconuts. This stopped him from working as a manual labourer. While he was recovering, he worked as a watchman and her mother became a construction worker. Both parents now work in construction. Her father earns Rs 400 per day, and her mother earns Rs 350 and has severe knee and back pain due to the strenuous work.

Amudha' parents cook with wood, unable to afford a liquid petroleum gas (LPG) cylinder. The family live in a rented primitive shack next to a dried-up pond on wasteland owned by the local government. They have no drinking water or toilet facilities. They defecate in the open next to the pond. They obtain electricity from a neighbour's supply. The meagre wages are not sufficient to maintain a family of six. Amudha's mother dreams of having a hut of their own before she dies.

Amudha's elder sister was married at the age of 16 years but her mother wants Amudha to study more so that she can get a good job and salary to support the family.

Amudha's day starts at 6:00am. She helps her mother at home and then walks to school. Her government-provided bicycle is broken and there is no money to repair it. The Prisoners of Hope Trust sponsors her education. After school, she attends remedial classes until 9:00pm. She then comes home for dinner. Later, she helps her mother wash dishes and goes to sleep by 10:00 pm. Amudha's ambition is to become a doctor. Her mother lost two babies, giving birth at home with no access to medical care. Amudha wants to help rural women like her mother. She works hard to achieve this goal.

Amudha is poor according to the 2018 Global MPI. The coloured boxes in the graphic show the deprivations she faces.

_____

1. Name has been changed.

10 Indicators

Nutrition	Child mortality	Years of schooling	School attendance	Cooking fuel	Sanitation	Drinking water	Electricity	Housing	Assets
Health		Education		Living Standards					

3 Dimensions of Poverty
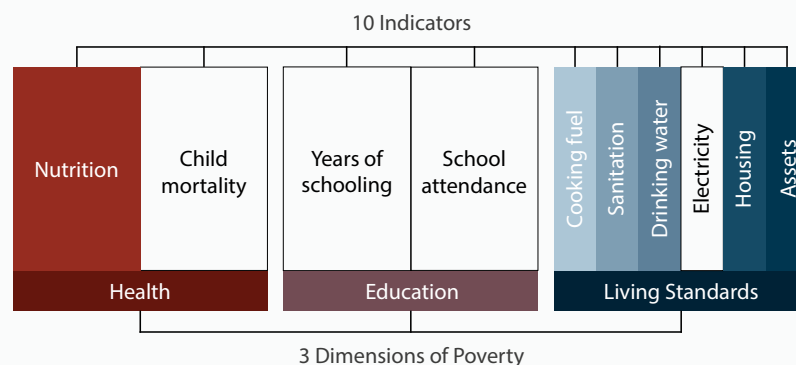
ly released data. The revised global MPI is the joint work of OPHI and UNDP, and serves to better align the global MPI with the SDGs (Alkire and Jahan 2018).

HOW IS IT COMPUTED?

The global MPI uses the Alkire-Foster (AF) method to measure multidimensional poverty. The AF method sums up the deprivations each person experiences in a weighted deprivation score, identifies who is poor, and aggregates this information into a headline and associated information platform. It has come to be widely used because of its simplicity yet specificity. There are three key figures for the global MPI (See box on page 8):

- **Incidence** is the percentage of people who are poor (or headcount ratio, **H**).

- **Intensity** is the average share of indicators in which poor people are deprived (**A**).

- **MPI** is the multidimensional poverty index, which is the product of incidence and intensity (**MPI = H × A**).

The recent World Bank Commission *Monitoring Global Poverty* chaired by the late Sir Tony Atkinson advised that global poverty monitoring should include a non-monetary MPI using this methodology (World Bank 2017) to complement the international monetary poverty line.

IS THE GLOBAL MPI JUST ONE NUMBER?

The MPI is reported with an associated information platform that shows the number and percentage of people who are poor. The information platform also shows the intensity and composition of poverty by each indicator. It shows who is poor (incidence), how poor they are (intensity), and how they are poor (by each indicator). Additionally, the MPI is disaggregated – by age group and urban/rural

Amudha. Photo: Lady Doak College.

THE GLOBAL MPI 2018: STRUCTURE AND DATA

This report marks the launch of a new version of the global MPI that is adapted to the SDGs and makes use of newly available data. The 2018 global MPI uses the same methodology as in previous years but has changes in indicators to reflect these new developments.
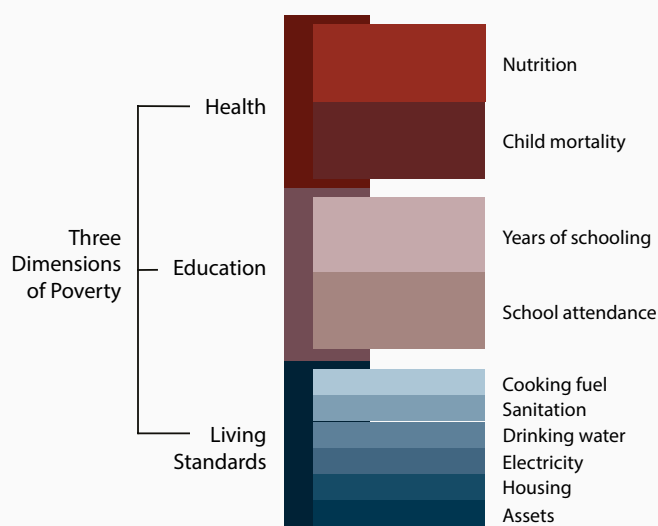
DIMENSIONS, INDICATORS, WEIGHTS, AND CUTOFFS. The global MPI is composed of three dimensions (health, education, and living standards) and 10 indicators. Each dimension is equally weighted, and each indicator within a dimension is also equally weighted. A person is identified as multidimensionally poor if they are deprived in at least one third of the weighted indicators.

GLOBAL MPI 2018 INDICATOR CHANGES. The changes from the original MPI are in the indicators for nutrition, child mortality, years of schooling, housing, and assets. Nutrition now also considers child stunting and age-specific BMI cutoffs. For child mortality, the 2018 global MPI considers only child deaths within the five-year period preceding the survey, if this information is available. In the years of schooling indicator, the new measure requires six years of schooling to be non-deprived, not five. For housing, a person is deprived if they have inadequate housing materials for their roof, walls, or floor – not just floor. Computer and animal cart were added to the list of assets for which a person is considered deprived if they do not own one.

DATA. In 2018, the global MPI relies on Demographic and Health Surveys (DHS) for 51 countries, Multiple Indicator Cluster Surveys (MICS) for 43 countries, two combined DHS-MICS surveys, three Pan Arab Project for Family Health (PAPFAM) surveys, plus national surveys for China, Ecuador, Jamaica, Mexico, and South Africa. The 2018 tables use data that was gathered 2006–2016.[1] Ninety-six of the datasets date from 2010 to 2016, and 63 were fielded in 2014 to 2016. The population covered by the 2018 global MPI represents 5.73 billion people, a total aggregated using 2016 population figures.

1. Two datasets, Burundi and Nigeria, contain data from 2016–2017.

DIMENSIONS OF POVERTY	INDICATOR	SDG AREA	DEPRIVED IF…	WEIGHT
Health	Nutrition[1]	SDG 2	Any person under 70 years of age for whom there is nutritional information is undernourished.	1/6
	Child mortality[2]	SDG 3	Any child has died in the family in the five-year period preceding the survey.	1/6
Education	Years of schooling	SDG 4	No household member aged 10 years or older has completed six years of schooling.	1/6
	School attendance[3]	SDG 4	Any school-aged child[+] is not attending school up to the age at which he/she would complete class 8.	1/6
Living Standards	Cooking fuel	SDG 7	A household cooks with dung, agricultural crop, shrubs, wood, charcoal or coal.	1/18
	Sanitation[4]	SDG 11	The household's sanitation facility is not improved (according to SDG guidelines) or it is improved but shared with other households.	1/18
	Drinking water[5]	SDG 6	The household does not have access to improved drinking water (according to SDG guidelines) or safe drinking water is at least a 30-minute walk from home, roundtrip.	1/18
	Electricity	SDG 7	The household has no electricity.	1/18
	Housing[6]	SDG 11	The household has inadequate housing: the floor is of natural materials or the roof or walls are of rudimentary materials.	1/18
	Assets	SDG 1	The household does not own more than one of these assets: radio, TV, telephone, computer, animal cart, bicycle, motorbike, or refrigerator, and does not own a car or truck.	1/18

[1] Adults 20 to 70 years are considered malnourished if their Body Mass Index (BMI) is below 18.5 m/kg². Those 5 to 20 are identified as malnourished if their age-specific BMI cutoff is below minus two standard deviations. Children under 5 years are considered malnourished if their z-score of either height-for-age (stunting) or weight-for-age (underweight) is below minus two standard deviations from the median of the reference population. In a majority of the countries, BMI-for-age covered people aged 15 to19 years, as anthropometric data was only available for this age group; if other data were available, BMI-for-age was applied for all individuals above 5 years and under 20 years.

[2] Child mortality draws on information from women aged 15–49. If this information is missing, and if the male in the household age 15–59 reports no child mortality, that record is included.

[3] Data source for age children start compulsory primary school: DHS, MICS and national country reports, United Nations Educational, Scientific and Cultural Organization, Institute for Statistics database, Table1. Education (fulldataset) [UIS, link].

[4] A household is considered to have access to improved sanitation if it has some type of flush toilet or latrine, or ventilated improved pit or composting toilet, provided that they are not shared. If survey report uses other definitions of "adequate" sanitation, we follow the survey report.

[5] A household has access to clean drinking water if the water source is any of the following types: piped water, public tap, borehole or pump, protected well, protected spring or rainwater, and it is within 30 minutes' walk (round trip). If survey report uses other definitions of "safe" drinking water, we follow the survey report.

[6] Deprived if floor is made of mud/clay/earth, sand, or dung; or if dwelling has no roof or walls or if either the roof or walls are constructed using natural materials such as cane, palm/trunks, sod/mud, dirt, grass/reeds, thatch, bamboo, sticks, or rudimentary materials such as carton, plastic/ polythene sheeting, bamboo with mud/stone with mud, loosely packed stones, adobe not covered, raw/reused wood, plywood, cardboard, unburnt brick, or canvas/tent.

area, and (data permitting) by subnational region or characteristics such as ethnicity and disability status – to see how poverty differs within a society. Results identify those on the cusp of poverty and those suffering from severe poverty.

HOW RECENT AND COMPLETE ARE THE DATA USED?

Recent data:
In terms of the years of coverage,

- Thirty-two countries with 2.58 billion people and 797 million poor people draw on data from 2015–2016.

- Thirty-five countries with 2.46 billion people and 390 million MPI poor people draw on data from 2013–2014.

- Twenty-three countries with 541 million people and 89 million MPI poor people draw on data from 2011–2012.

- Fifteen countries with 151 million people and 68 million MPI poor people draw on data from 2006–2010.

Thus information for 59% of MPI poor people draws on surveys that were fielded in 2015 or later, and information for 88% of MPI poor people draws on surveys fielded in 2013 or later. That being said, the year must always be taken into consideration when analyzing the MPI.

Indicator coverage: As mentioned, in 2018, the global MPI relies on DHS, MICS and PAPFAM surveys plus national surveys, all dated 2006–2016.[1] Of the 105 countries covered by the global MPI, 87 have information for all ten indicators. Seven countries (Afghanistan, Colombia, Dominican Republic, Indonesia,

the Philippines, Ukraine, and Viet Nam) lack information on nutrition. Seven countries (Barbados, Bosnia and Herzegovina, Jamaica, the former Yugoslav Republic of Macedonia, Mexico, Saint Lucia, and Suriname) lack information on child mortality. Egypt lacks information on cooking fuel, Honduras on electricity, and China on housing. The Philippines also lacks information on school attendance – the only country without data on two indicators. If an indicator is missing, the remaining indicators in that dimension are re-weighted such that each dimension weighs one-third.

Fourteen countries lack information on the date of death of children who have died, so we cannot identify child mortality that occurred in the five years prior to the survey.[2] For these countries, we use any child mortality information reported by women or men in the household, so deprivations are comparatively higher and comparisons require caution.

How robust are the comparisons? The global MPI, like any poverty measure, involves normative choices in selecting the indicators, weights, and poverty cutoffs (Alkire and Jahan 2018). Amartya Sen advises poverty measures to be assessed as

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1. Two datasets, Burundi and Nigeria, contain data from 2016–17.

2. Bhutan, Central African Republic, Ecuador, Djibouti, Kazakhstan, Montenegro, Morocco, Syrian Arab Republic, Serbia, Thailand, Trinidad and Tobago, Vanuatu, and Uzbekistan.

USER'S GUIDE TO INTERPRETING THE GLOBAL MPI

Sometimes people presume that the MPI is "just" an index – a single number – showing the level of poverty. But the MPI is much more than that: it can also be broken down to show **who is poor** and **how they are poor.** Below is an example of how the global MPI does this.

INCIDENCE OR HEADCOUNT RATIO. Let's start with the most familiar number: the percentage of people who are MPI poor. This is called the headcount ratio, incidence of poverty, or poverty rate. For example, in Togo, 48.4% of people are MPI poor because they are deprived in one-third or more of the weighted MPI indicators.

INTENSITY. This is the average deprivation score among the poor or the average share of deprivations that poor people experience. In Togo, intensity is 51.7%, which means that poor people in Togo experience, on average 51.7% of the weighted deprivations. Because the poverty cut-off is one-third – all people identified as MPI poor experience at least one-third of weighted deprivations – their deprivation scores lie between 33.33% and 100%.

THE MPI. The MPI is the product of incidence and intensity: it is calculated by multiplying them together. For instance, Togo has an MPI of 0.294 because 48.4% x 51.7% = 0.294. This shows that poor people in Togo experience 29.4% of the deprivations that would be experienced if every person in Togo was poor and deprived in all indicators. The MPI always ranges from zero to one, and a higher number signifies greater poverty.

HOW TO REDUCE THE MPI. Because the MPI is made up of two sub-indices – incidence and intensity – it goes down if either of these decreases. So if a poor person becomes non-poor, the MPI will go down. And if a poor person becomes non-deprived in an indicator in which they were previously deprived, the MPI will also go down. The MPI thus tracks not just movement over the poverty line but also improvements among the poor, incentivizing policies that target the poorest of the poor.

The **censored headcount ratio** of an indicator is the percentage of the total population who are MPI poor and are deprived in that particular indicator. The global MPI is the weighted sum of the 10 censored headcount ratios. What this means is that a decrease in any deprivation of any poor person will decrease poverty as measured by the MPI.

The **percentage contribution** of an indicator shows how much it contributes to the overall MPI. This is used to understand how the poor are poor, or the composition of their poverty. The percentage contribution depends on both the number of poor people who are deprived in that indicator and its weight. Using this – often visualized as a striped bar – we can compare at-a-glance the indicators that most contribute to the global MPI for different countries or groups.

to whether they are robust to a "plausible range" of specifications. A core robustness test evaluates the percentage of pairwise comparisons between countries, considering standard errors, that remain unchanged if the poverty cutoff is set at 20% or 40% instead of 33.33%. That is, if country A was poorer than country B (at 95% significance) with a poverty cutoff of 33.33%, is it also poorer if the poverty cutoff is fixed at 20%? In the case of the global MPI, 94.9% of the statistically significant pairwise comparisons across 104[3] countries are robust, taking the MPI cutoff of 33.33% as the baseline. This means that the relative values of the MPI remain unchanged to a quite large extent, across alternative cutoffs for identifying multidimensionally poor people. To share information about alternative levels of poverty, all data tables provide information based on five poverty cutoffs: 1%, 20%, 33.33%, 40%, and 50%. To understand the robustness of national comparisons to the choice of weights, the weights on each dimension are adjusted such that each dimension in turn is given 50% of the relative weight and the other two dimensions obtain 25% weight each. Each indicator is re-weighed accordingly. We find that, considering 95% confidence intervals, 89% of the pairwise comparisons

between countries are robust to changes of weights between 25% to 50% per dimension. OPHI technical documents corresponding to the global MPI 2018 present the full sets of robustness tests, including also robustness to indicators and weights.

Moving forward: The next chapter sketches global aggregates, thereby demonstrating the value added of a global MPI that is as comparable as present data permit and can offer both a global headline and fine-grained analysis for children, rural areas, 1127 subnational regions across 88 countries, 640 districts in India, and other critical subgroups. The purpose is only in part to inform and at times alarm. More fundamentally, the purpose is to empower and incite action that ends acute poverty across many dimensions.

Unless otherwise stated, all tables and figures draw on Alkire, Kanagaratnam and Suppa 2018, and Alkire, Kanagaratnam, Mitchell, Nogales and Suppa 2018.

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3. The only missing country is Armenia, as the MPI is zero for the poverty cutoff value of 40%.

Asian Development Bank | Flickr CC BY-NC-ND 2.0

I. Global Overview

This chapter provides a global overview of findings from the global MPI 2018. Chapter 2 focuses on India, presenting a case study on MPI from 2005/06 to 2015/16, with analyses of trends by age, state, caste, and religion, and a direct mapping of poverty at the district level in 2015/16. Turning first to the youngest on our planet, Chapter 3 assesses child poverty across all countries. Multidimensional poverty varies both within and across major geographic regions like Latin America or East Asia and the Pacific, and Chapter 4 presents some notable highlights. Going within countries, Chapter 5 scrutinizes poverty levels and composition across rural and urban areas. Finally, Chapter 6 zooms in to investigate circumstances within and across countries according to subnational regions.

1.3 BILLION PEOPLE ARE POOR ACROSS THE 105 COUNTRIES COVERED

Across the 105 countries covered by the global MPI, 1.3 billion people live in acute multidimensional poverty.[4] This amounts to 23% of the 5.7 billion people living in these countries. These people are deprived in at least one-third of overlapping deprivations in health, education, and living standards indicators. They may lack adequate housing or sanitation, proper nutrition or primary education. They are found in every region and every country, showing that acute poverty remains a global phenomenon.

MOST POOR PEOPLE LIVE IN SUB-SAHARAN AFRICA (42%) AND SOUTH ASIA (41%)

While poverty exists everywhere, most of the world's poor people – more than 1.1 billion – live in Sub-Saharan Africa or South Asia. Poor people in Sub-Saharan Africa tend to experience more intense poverty. East Asia, despite having the largest population, has a much smaller share of the world's multidimensionally poor people.

IN 2015/16, THERE WERE 271 MILLION FEWER POOR PEOPLE IN INDIA

As Chapter 2 elaborates, a change of global proportions occurred in India. Between 2005/06 and 2015/16, the number of multidimensionally poor people in India fell from 635 million to 364 million – an historic shift. Furthermore, in sharp contrast with the trend from 1999 to 2006, when the poorest groups reduced multidimensional poverty the slowest, from 2005/06 to 2015/16 the poorest reduced MPI the fastest. That is, poverty reduction among children, the poorest states,

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4. All population aggregates in this report multiply the headcount ratio by the 2016 population data from United Nations Department of Economic and Social Affairs, Population Division (2017). Data tables also provide the population data from the year of the survey.

FIGURE I.1   Where Do the 1.3 Billion MPI Poor People Live?
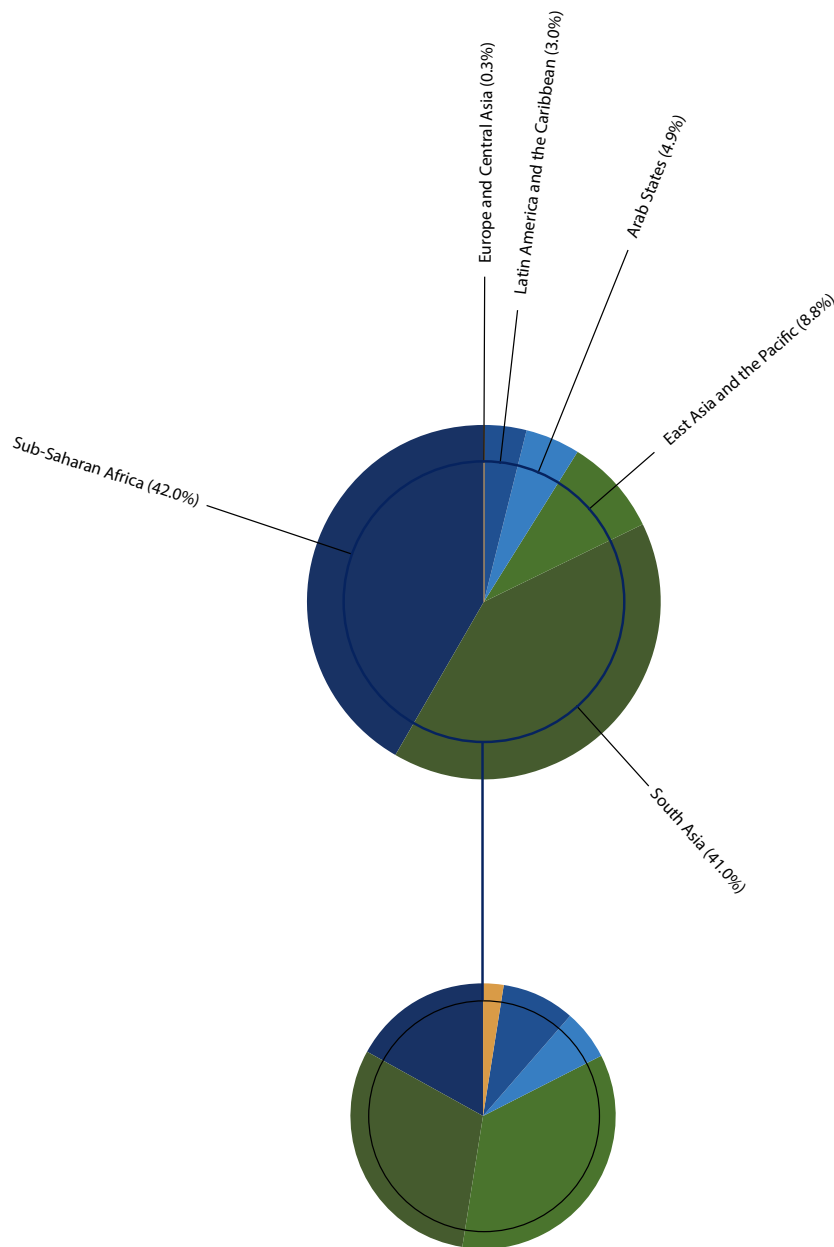
FIGURE I.2   Population Coverage by Geographic Area

TABLE I.1 MPI Poverty by World Region

Developing Regions (UN Statistics Division)	MPI[1]	Headcount ratio (H)[2]	Intensity (A)[3]	Number of poor people (millions)[4]	Population coverage by MPI
Arab States	0.098	19.2%	50.8%	65.7	85%
East Asia and the Pacific	0.025	5.9%	43.1%	117.7	94%
Eastern Europe and Central Asia	0.009	2.4%	38.3%	3.5	43%
Latin America and the Caribbean	0.033	7.7%	43.2%	39.7	81%
South Asia	0.143	31.3%	45.8%	545.9	95%
Sub-Saharan Africa	0.317	57.7%	54.9%	559.4	99%
Global MPI (developing regions)	**0.115**	**23.2%**	**49.5%**	**1.33 billion**	**91%**

Source: Own computations; all aggregates are population-weighted.

1. The *Multidimensional Poverty Index (MPI)* ranges from 0 to 1.

2. The *headcount ratio* is the percentage of the population with deprivation score of 1/3 or above.

3. The *intensity* is the average percentage of weighted deprivations among the poor.

4. The *number of poor people* uses 2016 population figures.

Scheduled Tribes, and Muslims was fastest, indicating that, far from being left behind, they were catching up. Trends in the global MPI using 2018 specifications are at present available only for India; harmonized analyses of trends over time for other countries are under construction.

ABOUT TWO-THIRDS OF ALL MPI POOR PEOPLE LIVE IN MIDDLE-INCOME COUNTRIES

Just under 900 million poor people live in middle-income countries. These people experience deprivations in clean water, nutrition, and schooling – just like those in

FIGURE I.3

A. Where Do the World's Poor Live?

Upper middle-income countries, 8%
High-income countries, 0%
Low-income countries, 33%
Lower middle-income countries, 59%

B. Population Coverage

Low-income countries, 12%
High-income countries, 0%
Upper middle-income countries, 38%
Lower middle-income countries, 50%
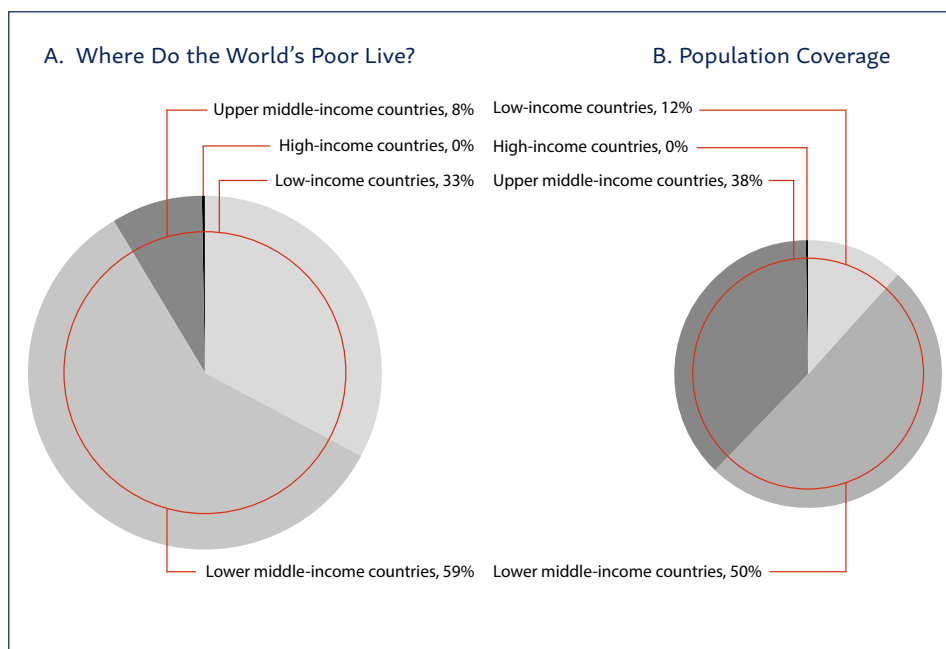
low-income countries (LICs), despite the higher national GNI per capita. In absolute terms, their lives face clustered disadvantages similar to those living in low income countries, and merit equivalent priority.

However, LICs do have higher proportions of their population living in multidimensional poverty. Whereas LICs are home to only 12% of the people covered by the 2018 global MPI, 33% of MPI poor people live in them. Nearly 65% of people in LICs are poor (compared to 18% in middle- or high-income countries), and the average poor person in a LIC is deprived in 55% of weighted indicators (compared to 47% in middle- or high-income countries). The 17 poorest countries by MPI are LICs. Yet within LICs there is great variety: the percentage of MPI poor people ranges from 92% in South Sudan and 91% in Niger to 12% in Tajikistan. School attendance contributes the most to the average MPI in LICs and is responsible for 18% of the overall MPI, followed by nutrition (16%), and child mortality (14%).

LEAST DEVELOPED COUNTRIES ARE AMONG THE POOREST

The 2018 global MPI covers 43 of the 47 'least-developed countries' (LDCs) as identified by the UN. While those 43 countries represent only 17% of the total population covered by the global MPI, they represent 43% of the poor population.

Nearly 60% of the population in the LDCs (579 million) are multidimensionally poor with an average of 54% of weighted deprivations experienced by the poor. Twenty-eight of the 29 poorest countries by the global MPI are LDCs, with Nigeria as the sole exception.

FIGURE I.4

A. Where Do the World's Poor Live?

Least-developed countries, 43%

Non-least developed countries, 57%

B. Population Coverage

Least-developed countries, 17%

Non-least developed countries, 83%

FIGURE I.5   Comparing the Headcount Ratios of MPI Poor and $1.90/day Poor
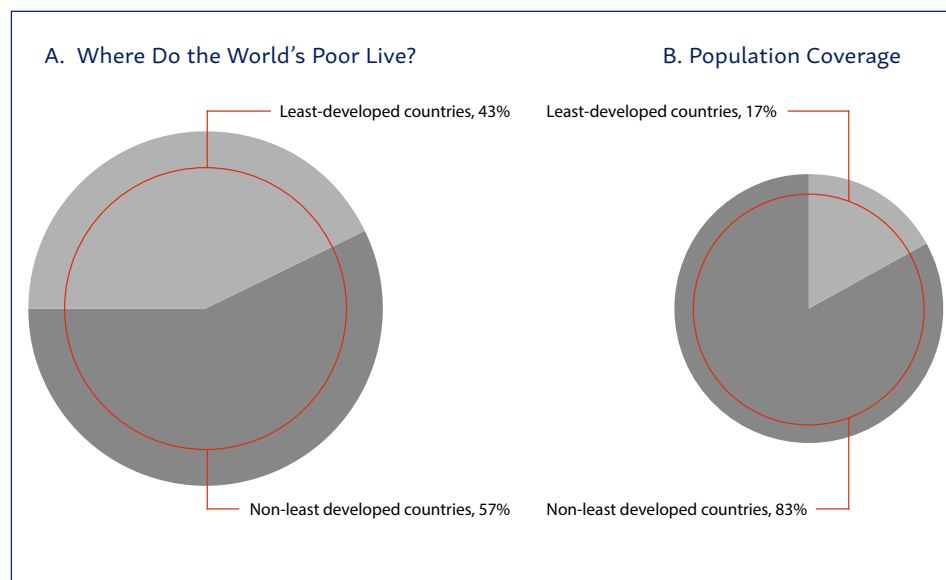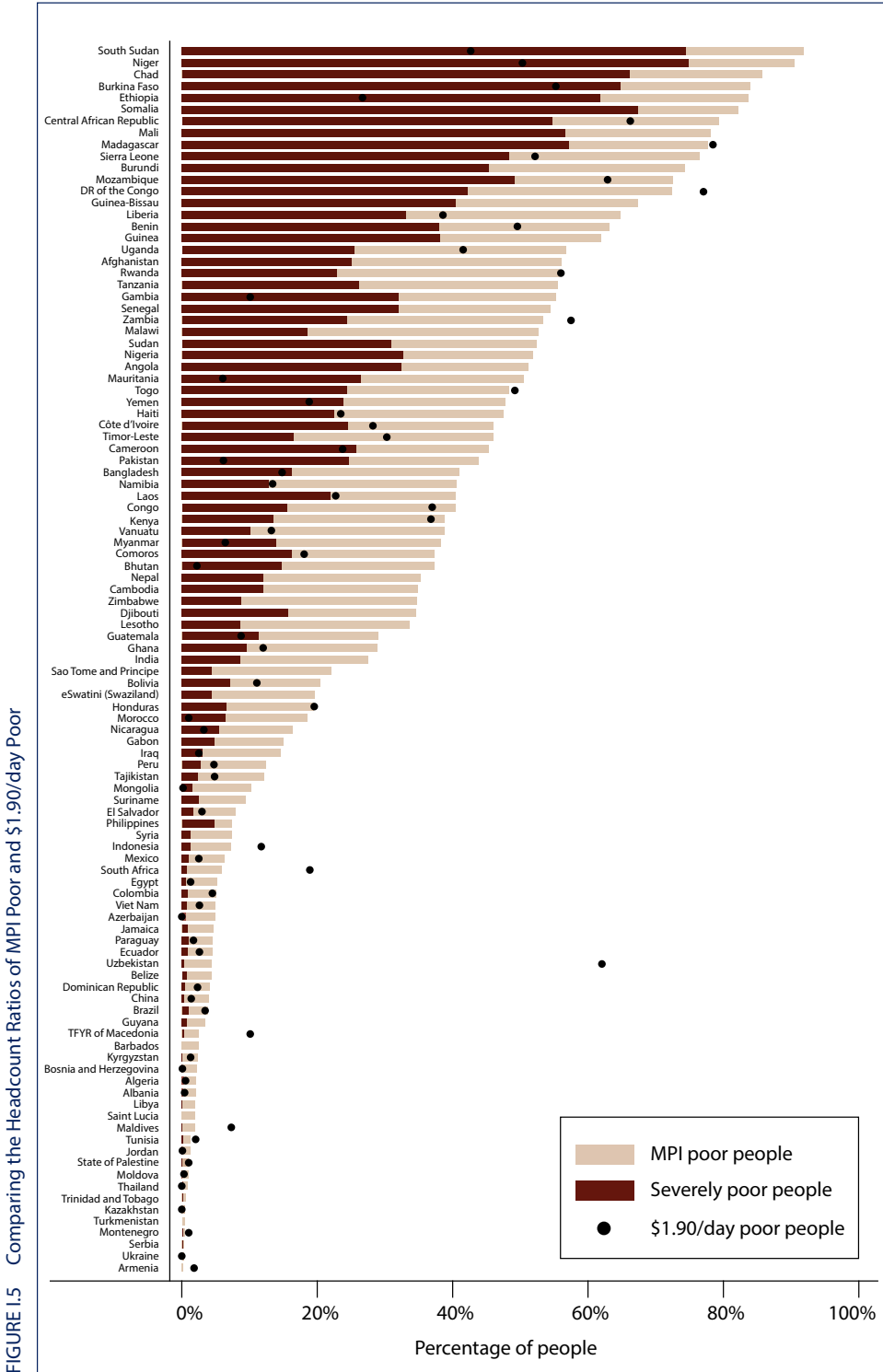
FORTY-SIX PERCENT OF ALL POOR PEOPLE ARE SEVERELY POOR

Across the countries covered, over one in ten – 611 million – are deprived in at least half of the weighted indicators – not just the one-third which is the minimum deprivation score to be identified as MPI poor. This means that 46% of the 1.3 billion MPI poor people are not close to the MPI poverty cutoff, but live in severe poverty. Each of these persons experiences a clustering of disadvantages that single indicators overlook. The MPI makes them visible.

This being said, the percentage of MPI poor people who are severely poor varies. Malawi (2015–16) and Cameroon (2014) both have the same MPI of 0.244, but in Cameroon, 57% of poor people are severely poor whereas in Malawi the comparable figure is 35%. While the global MPI reports five poverty cutoffs: 1%, 20%, 33.33%, 40%, and 50%, every country briefing reports additional cutoffs up to 90%, in order to make visible different patterns of intensity among the poor.

HALF OF ALL POOR PEOPLE ARE CHILDREN

When we look at who the MPI poor people are according to their ages, we find that half of all multidimensionally poor people – 49.9% – are children under 18 years of age. So across the countries covered, over 665 million children are passing their childhood in multidimensional poverty – which is one out of every three children. Among these children, around 52% live in severe poverty. And in terms of conflict, more than half of the MPI poor children live in the weakest fragile states with alert, high alert or very high alert warning.

The MPI includes indicators of children's achievements such as school attendance and nutrition. It includes indicators that affect children's life chances, such as adequate sanitation, safe water, housing, and clean cooking fuel. And it reflects household features that shape children's lives, such as whether a child has died and whether anyone has six years of schooling. Given that demographically the world has more children on it than, probably, it ever has had, the high prevalence of child poverty is a clarion call for action.

THE GLOBAL MPI IS DISAGGREGATED INTO 1,127 SUBNATIONAL REGIONS

The global MPI is disaggregated into 1127 subnational regions across 88 countries to find pockets of poverty in otherwise prosperous countries and pockets of progress in otherwise poor countries. This also enables higher granularity analysis within and across borders and encourages more targeted and efficient poverty alleviation policies. In addition to this disaggregation of 88 countries into 1127 regions, India has a second level of disaggregation into 640 districts, bringing the total number of subnational regions investigated by the global MPI to 1767. Because the global MPI is based on deprivations that are measured directly – malnutrition, clean water, housing, and school attendance – comparisons across, as well as within, countries can be done directly. In this sense, disaggregated comparisons are simpler than for monetary poverty.

HOW ARE POOR PEOPLE POOR?

We have observed that 1.3 billion people live in acute multidimensional poverty. Each one of these children, women, or men are being left behind in multiple

FIGURE I.6

ways: they are deprived in one-third or more of the weighted indicators. But how are they poor, according to each indicator? This closing section shares insights into the circumstances in which this group of acutely poor people live.

The MPI poor people together experience 7.4 billion deprivations. Table I.2 shows how many of those 1.3 billion poor people experience each of the MPI deprivations. The magnitude of human suffering underlying these figures, written in black and white, remains staggering in the information age, especially in contexts of bounding economic growth. And is all the more distressing when we remember that this does not even include all persons who are deprived in each indicator – only those who are also MPI poor because they are deprived in that indicator and other indicators adding up to at least one dimension.

Over 90% of all 1.3 billion MPI poor persons cannot simply light a burner or turn on an electric burner to cook: they must gather or purchase cooking materials, bring them home, and assemble a fire made out of wood, dung, coal, or charcoal. Solid cooking fuel is a health risk: those exposed without ventilation – usually women and children – experience the indoor air pollution that irritates eyes and lungs and is a leading cause of preventable death.

Four out of five MPI poor persons live in a house where the floor is dirt, sand, or natural; or where the walls and roof are rudimentary – maybe cardboard, plastic sheeting, grass, or mud. In a heavy rainstorm, or in strong winds, or if a thief investigates, such a home is no safe haven.

The same number lack an adequately hygienic toilet such as a composting toilet, protected pit latrine, or a toilet that flushes to a sewage system.

Over 60% of poor persons share their households with someone who is nutritionally deprived. In many cases, more than one household member faces the nutritional challenges of being stunted or underweight. In those households, mere survival cannot be taken for granted, although in the wider world obesity is so often a presenting problem. Child malnutrition is especially worrying because it affects a child's physical and mental development and shapes his or her life chances and future.

Electricity is a service many take for granted, feeling wistful if buses and aircraft do not have in-seat power. But over half of MPI poor persons do not have even a solar-powered light bulb. The data here are problematic because even those who have access to electricity may experience hours of load shedding, costs that may be out of reach, and variability of current. So there are many additional challenges to consider. Yet 740 million people – one in ten on the planet – are multiply deprived and cannot turn on a light or fan, or charge a cell phone when evening falls.

Picture that half of the MPI poor people, if a newspaper or letter is delivered, do not have anyone who has completed six years of schooling at home. So unless someone is self-taught, it may be that there is no one who can read the letter – they would have to ask for help. In a society where texting, surfing the internet, and filling

TABLE I.2   How Many People are MPI Poor and Deprived in…

How many people are MPI poor and deprived in:	Million	Share of MPI poor
Nutrition	827	62%
Child mortality	173	13%
Years of schooling	671	50%
School attendance	493	37%
Cooking fuel	1.218	91%
Sanitation	1.058	79%
Water	602	45%
Electricity	740	56%
Housing	1.064	80%
Assets	585	44%

Rod Waddington | Flickr CC BY-SA 2.0

out forms all require education, this is a huge obstacle to forming social connections, participating in economic activities, obtaining decent work, and engaging in political processes.

Forty-four percent of poor persons around the world lack access to clean drinking water within a 30-minute roundtrip walk from their home. These people are at risk for water-borne infections and diseases, which can also affect their health and, for children, their school attendance. Having to travel long distances for water can also place an additional burden on women and children, who are more likely to be responsible for fetching water for the household.

More than two-fifths of poor people do not own basic assets (either a car or truck or at least two of these items: radio, television, telephone, computer, bicycle, motorbike, or refrigerator) that contribute to their wellbeing and economic activity and also can act as insurance against the economic shocks so often experienced in poor and fragile communities. Telephone includes both landlines and the mobile telephones that are used for gathering information on job opportunities, tracking weather patterns, and, in some countries, banking. Cars and trucks and, to a lesser extent, bicycles and motorbikes, can be critical for getting to and from work or visiting families and friends. Lacking access to transportation can leave people feeling isolated and make it harder for them to get the jobs needed to improve conditions for themselves and their families.

More than one-third of poor persons live in a household in which a school-age child is not attending school. This reflects the reality that, despite significant gains in access to schooling, the world failed to meet

the Millennium Development Goal of universal primary education (UN 2017). Lack of education not only affects the child but also the household, which will not be able to benefit from the increased earnings the child would be able to gain as an educated adult. Of course, years of schooling are an imperfect proxy for educational quality and learning outcomes, so some children who are attending school are still not enjoying the SDG requirement for "equitable and quality" education. But children who are not in school have even less of a chance.

Finally, 173 million poor people live in a household in which a child has died in the five years prior to the survey. Though this is lower than the number of deprivations in the other indicators, considering the traumatic and devastating toll that the loss of a child can have on a household, this remains an appalling statistic.

The global MPI 2018 is, like any global poverty measure, imperfect and incomplete. In terms of indicators it does not include a lack of decent work, violence, or disempowerment – which also are key aspects of poor people's lives and experiences of poverty – nor quality of education or health functionings. And, reflecting acute poverty, it does not capture moderate poverty of a sort that might be of more interest in low-MPI countries. But the global MPI nevertheless does focus on a core set of SDG indicators. Going beyond silos, it gives a vivid overview of the simultaneous deprivations that, as Amartya Sen observed, continue to batter and diminish poor people's lives. These overlapping deprivations merit measurement, acknowledgement, and action.

NOT JUST A HEADLINE – GOING INSIDE THE MPI

A key advantage of the MPI is that it not only provides a headline number for each country, but it can also be broken down by indicator to show what deprivations create poverty in that country.

For instance, Tajikistan and Peru have very similar MPIs: 0.049 and 0.052, respectively. The incidence (12%) and intensity (40–41%) of poverty across these two countries are also similar. What is not similar is the composition of their poverty.

In Peru, 18% of the overall MPI is due to deprivations in years of schooling, while in Tajikistan, that indicator only contributes 1%. By contrast, Tajikistan has a much higher contribution from malnutrition (35%), double that of Peru. Overall, the living standards dimension is responsible for more than half (56%) of poverty in Peru, while the health dimension contributes the most in Tajikistan.

By delving deeper into the numbers, we can see how two countries that look similar in terms of who is poor actually have very different compositions of poverty. How people are poor varies a lot – necessitating very different policy responses.

FIGURE I.7   Percentage Contribution of Each Indicator to Poverty in Tajikistan and Peru
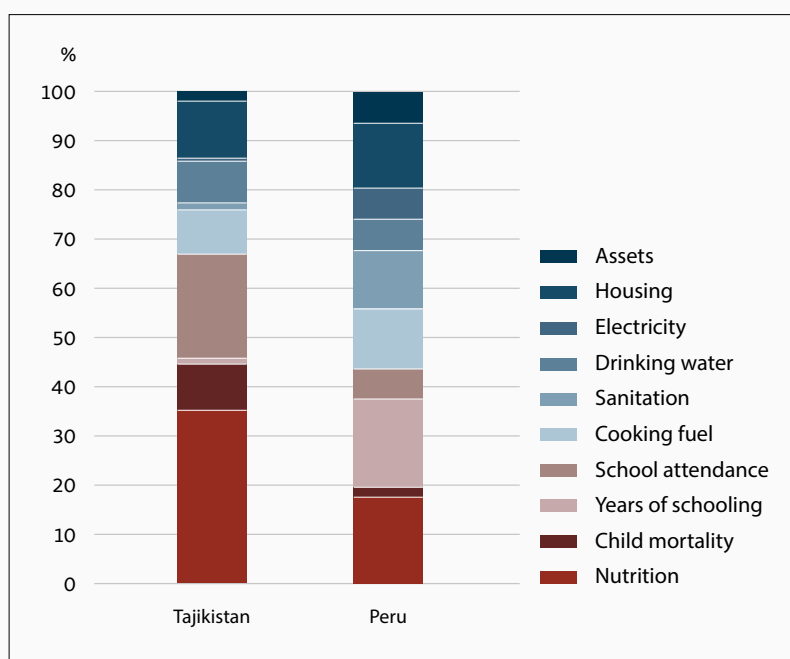
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II. MPI in India: A Case Study

271 MILLION FEWER POOR PEOPLE IN INDIA

The scale of multidimensional poverty in India deserves a chapter on its own. India has made momentous progress in reducing multidimensional poverty. The incidence of multidimensional poverty was almost halved between 2005/06 and 2015/16, climbing down to 27.5%. The global Multidimensional Poverty Index (MPI) was cut by half due to faster progress among the poorest. Thus within ten years, the number of poor people in India fell by more than 271 million – a truly massive gain.

India's scale of multidimensional poverty reduction over the decade from 2005/06 to 2015/16 – from 635 million poor persons to 364 million – brings to mind the speedy pace of China's income poverty reduction, which occurred over more than 20 years. The data necessary to measure changes in China's global MPI over time are not available. But according to China's 2010 monetary poverty line, 268 million people exited poverty between 1995 and 2005 (at which point there were still 287 million poor people). By 2015, only 56 million people were 'consumption poor'. If the World Bank's $1.25/day poverty line is used instead, 267 million people came out of poverty from 1990 to 2000 in China.[5] Even allowing that monetary poverty and multidimensional poverty affect people differently, the scale of In-

dia's multidimensional poverty reduction has global implications that could parallel China's progress.

ONE IN FOUR POOR PEOPLE IS A CHILD UNDER 10

If one considers the 364 million people who are MPI poor in 2015/16, 156 million (34.6%) are children. In fact, of all the poor people in India, just over one in four – 27.1% – has not yet celebrated their tenth birthday. The good news is that multidimensional poverty among children under 10 has fallen the fastest. In 2005/06 there were 292 million poor children in India, so the latest figures represent a 47% decrease or 136 million fewer children growing up in multidimensional poverty. When considering the durable and lifetime consequences of childhood deprivation, particularly in nutrition and schooling, this is a tremendously good sign for India's future.

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5. Chen and Ravallion (2010) report the number of people who were poor in 1990, 1999, and 2002. In the case of either a linear extrapolation forward from 1999 or back from 2002, roughly 267 million people appear to have emerged from poverty between 1990 and 2000. Also, Shen, Zhan, and Li (2018) track a modified MPI for rural residents over three time periods: 1995, 2002, and 2013. According to their estimations, 202.6 million rural residents exited poverty from 1995 to 2002, which if the trend continued in a linear fashion to ten years, would be 289.6 million.

FASTEST PROGRESS FOR THE POOREST GROUPS

Traditionally disadvantaged subgroups such as rural dwellers, lower castes and tribes, Muslims, and young children are still the poorest in 2015/16. For example, half of the people belonging to any of the Scheduled Tribes communities are MPI poor, whereas only 15% of the higher castes are. Every third Muslim is multidimensionally poor, compared to every sixth Christian. Two in five children under 10 years of age are poor (41%), but less than one quarter of people aged 18 to 60 (24%) are poor.

But the landscape of the poorest has improved dramatically and, if current trends continue, is set to change. The poorest groups – across states, castes, religions, and ages – had the biggest reductions in

MPI 2005/06 to 2015/16, showing that they have been "catching up," though they still experience much higher rates of poverty. This marks a dramatic reversal. From 1998/99 to 2005/06 the opposite trend prevailed: India's poorest groups had the slowest progress. They were being left behind (Alkire and Seth 2015).

Among states, Jharkhand had the greatest improvement, with Arunachal Pradesh, Bihar, Chhattisgarh, and Nagaland only slightly behind. However, Bihar is still the poorest state in 2015/16, with more than half of its population in poverty. In 2015/16, the four poorest states – Bihar, Jharkhand, Uttar Pradesh, and Madhya Pradesh – were still home to 196 million MPI poor people – over half of all the MPI poor people in India. Yet the least

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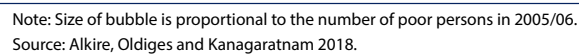
24

FIGURE II.1   Absolute Change in MPI between 2005/06 and 2015/16

Note: Size of bubble is proportional to the number of poor persons in 2005/06.
Source: Alkire, Oldiges and Kanagaratnam 2018.

FIGURES II.2 – II.4   Absolute Change in MPI between 2005/06 and 2015/16…

poor regions were not at all stagnant either. Rather, they also reduced poverty. In fact, relative to their starting levels, they netted some of the highest relative rates of reduction. For example Kerala, one of the least poor regions in 2006, reduced its MPI by around 92%.

This positive trend of pro-poor poverty reduction is seen also across religions and caste groups. In both cases, the poorest groups (Muslims and Scheduled Tribes) reduced poverty the most over the ten years from 2005/06 to 2015/16. Yet these two groups still have the highest rates of poverty. For instance, while 80% of those who identified themselves as being in a Scheduled Tribe had been poor in 2005/06, in 2015/16, 50% of people belonging Scheduled Tribes are still poor. In fact, if we look at the societal distribution of deprivations in India among the

poor, vulnerable, and non-poor, we see that whereas 91% of people experienced any deprivation in 2005/06, it is 82.4% in 2015/16. So deprivation-free persons have doubled from 9% to 18% of the population, and those with very low deprivations rose also. But the percentage of vulnerable people increased by only 2%, and across all the poor people, the poorer they were, the more their poverty decreased. So for example, while 7.3% of the population were deprived in 70% or more of the weighted indicators in 2005/06 it is 1.2% in 2015/16. This slightly technical mapping of all experienced deprivations verifies the societal change that is evident in the faster reduction for the poorest groups.

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AT-A-GLANCE: MULTIDIMENSIONAL POVERTY IN INDIA IN 2015/16

In 2015/16, more than 364 million people are still MPI poor in India. This number is higher than the combined populations of the most populous Western European countries, including Germany, France, the United Kingdom, Spain, Portugal, Italy, the Netherlands, and Belgium.

India's 2015/16 MPI is 0.121, with 27.5% of the population identified as multidimensionally poor and poor people experiencing an average of 43.9% of weighted deprivations. Just over 9% of the population are still vulnerable to poverty, meaning that they are deprived in 20% to 33% of weighted indicators. And, sadly, 113 million people – 8.6% of India's people – live in severe poverty. Each one of these people experiences more than 50% of weighted deprivations.

Across nearly every state, poor nutrition is the largest contributor to multidimensional poverty, responsible for 28.3% of India's MPI. Not having a household member with at least six years of education is the second largest contributor, at 16%. Insufficient access to clean water and child mortality contribute least, at 2.8% and 3.3%, respectively. Relatively few poor people experience deprivations in school attendance – a significant gain.

INDIA'S 640 DISTRICTS: POCKETS OF POVERTY AND PROGRESS

The 2015/16 district-level data for India reveal deep pockets of poverty but also impressive progress across the country. The poorest district is Alirajpur in Madhya Pradesh, where 76.5% of people are poor – the same as Sierra Leone in Sub-Saharan Africa. Only eight countries have higher rates of MPI.[6] In four districts more than 70% of people are poor; these are located in Uttar Pradesh and Madhya Pradesh. Twenty-seven districts have 60 to 70% of their people in poverty. At the other end of the scale, in 19 districts less than 1% of people are poor, and in 42 districts, poverty rates are 2 to 5%.

The map depicts a clear divide between districts located in southern and north-central India. For example, in the 134 districts of Maharashtra, Telangana, Andhra Pradesh, Karnataka, Tamil Nadu, and Kerala, there are just two districts with poverty rates above 40%. These are Nandurbar in northern Maharashtra bordering Gujarat (60%) and Yadgir in northeastern Karnataka, where almost every second person is multidimensionally poor. In Tamil Nadu and Kerala, most district-level headcount ratios hover around 10% or less – rates that are comparable to those of Eastern European and South American regions. Interestingly, districts in the far northern states such as Punjab, Haryana, and Himachal Pradesh show a similar pattern.

The major contrast, however, are districts that spread all the way from northwestern Uttar Pradesh to eastern Bihar along the Indo-Gangetic Plain, and from pockets in western Madhya Pradesh to Odisha via many isolated and neglected districts in Jharkhand and Chhattisgarh (note that DHS 2015/16 district level disaggregation

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6. South Sudan, Niger, Chad, Burkina Faso, Ethiopia, Somalia, Mali, and Madagascar.

FIGURE II.5   Percentage of MPI Poor People by District in India 2015/16

Legend:
- (.6, 1]
- (.5, 6]
- (.4, 5]
- (.3, 4]
- (.2, 3]
- (.1, 2]
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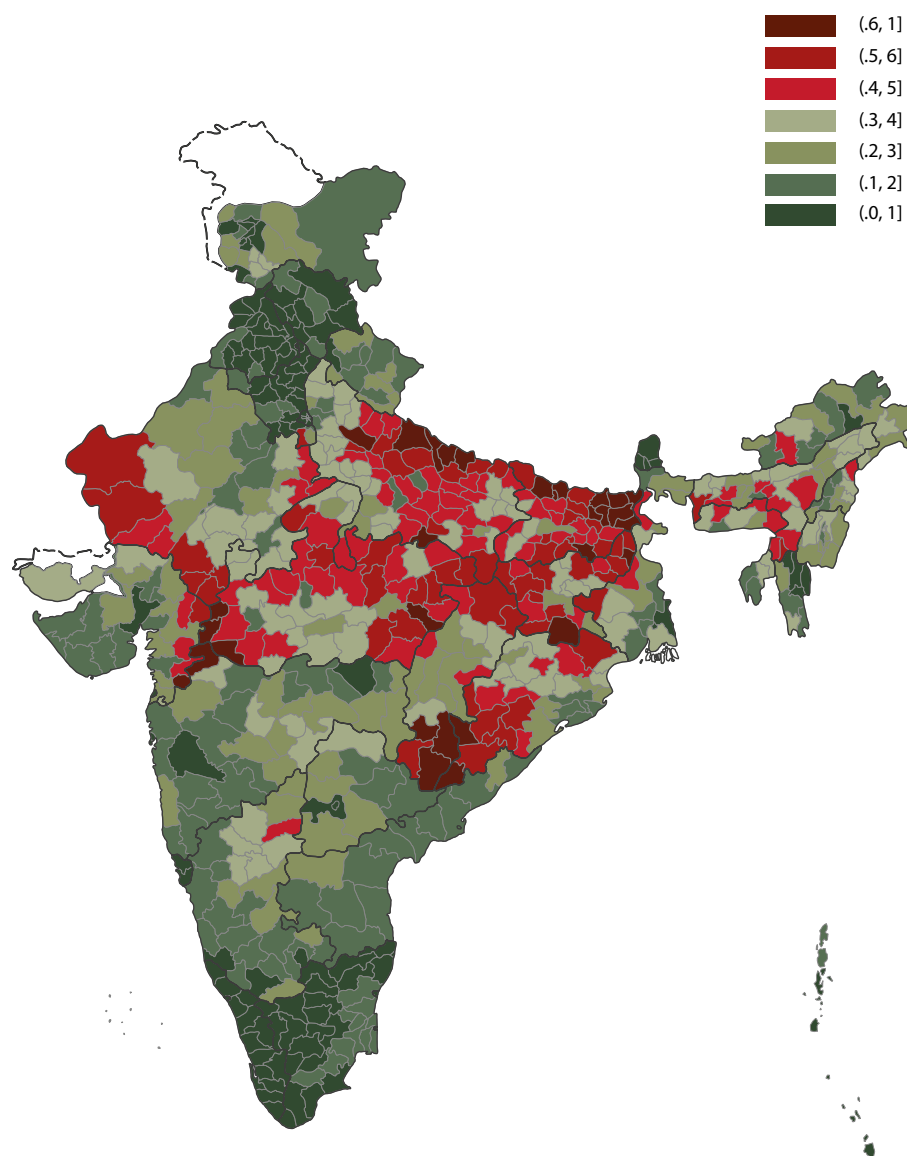
Note: The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP or OPHI concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

FIGURE II.6   Absolute Change in Censored Headcount Ratio by State from 2005/06 to 2015/16
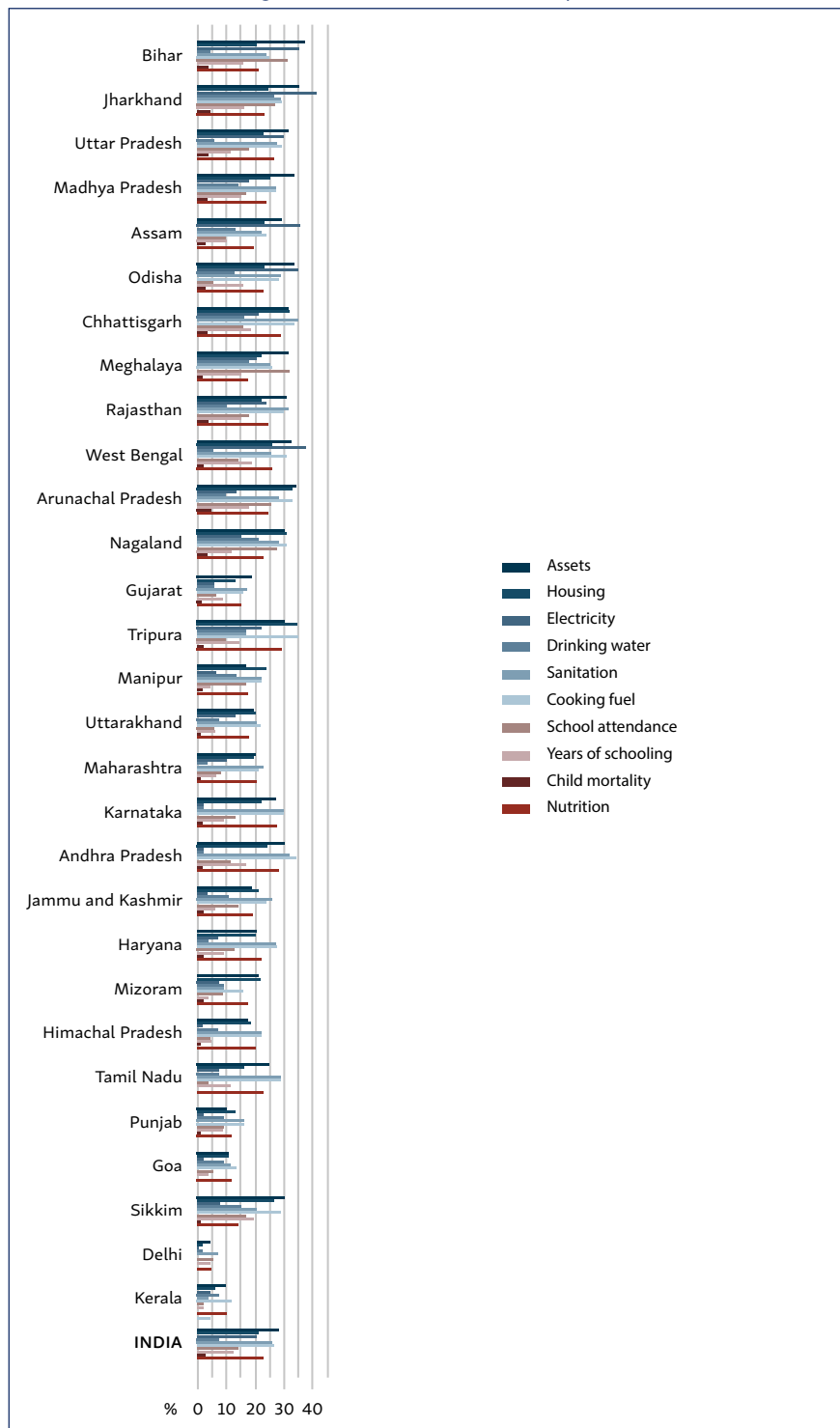
groups together some of Chhattisgarh's districts). These states reduced MPI at a record pace, yet many districts still face daunting challenges. A case in point is Bihar. In 11 of its 38 districts more than six in ten people are poor, and in two districts almost 70 percent are multidimensionally poor (Madhepura, Araria).

Within India, 40.4 million people live in districts where more than 60% of people are poor – 20.8 million live in the poorest districts in Bihar, 10.6 million in the poorest districts in Uttar Pradesh, and the remainder in the poorest districts in Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, and Odisha. Outside India, in South Asia, 27.4 million people live in subnational regions where more than 60% of people are poor – 6.5 million in Pakistan's Balochistan (72.6%), 8.5 million in Bangladesh's Sylhet (62.3%), and the remaining 12.4 million in Afghanistan.

SUSTAINING MOMENTUM

The finding that 271 million fewer Indians are MPI poor in 2015/16 is dramatic – especially as it came during a decade of population growth. Over a quarter of a billion people are no longer forced to battle simultaneous deprivations. When observing these remarkable results, it is important to reflect on the time period considered – much can change in ten years. Also, these figures are from 2015/16, so they may not reflect the situation in India currently. It is fervently hoped that India's data will be updated more regularly and, more importantly, that the trends will continue.

India's MPI reduction redraws the global picture on MPI, with South Asia no longer housing the largest share of the world's poor. The world has already acknowledged China's global leadership in monetary poverty reduction. Although these are different measures, by any standard, India's MPI reduction could be momentous – yet to end poverty it needs to be sustained across the next 15 years.

TABLE II.1 MPI, H, A, and Reduction in MPI and H 2005/06–2015/16 by Group

	2005/06				2015/16				ABSOLUTE REDUCTION 2005/06 – 2015/16	
	MPI	H Incidence	A Intensity	Population Share 2006	MPI	H Incidence	A Intensity	Population Share 2016	Change in MPI	Change in H
INDIA	0.279	54.7%	51.1%	100.0%	0.121	27.5%	43.9%	100.0%	-0.158*	-27.2%*
Andhra Pradesh	0.234	49.9%	47.0%	7.1%	0.065	15.8%	40.9%	6.8%	-0.17*	-34.1%*
Arunachal Pradesh	0.309	59.7%	51.8%	0.1%	0.106	24.0%	44.1%	0.1%	-0.203*	-35.7%*
Assam	0.312	60.7%	51.4%	2.7%	0.16	35.8%	44.6%	2.4%	-0.152*	-24.8%*
Bihar	0.446	77.1%	57.8%	8.0%	0.246	52.2%	47.2%	8.9%	-0.2*	-25.0%*
Chhattisgarh	0.353	70.0%	50.5%	2.2%	0.151	36.3%	41.4%	2.3%	-0.203*	-33.7%*
Delhi	0.051	11.5%	44.4%	1.1%	0.016	3.8%	42.3%	1.3%	-0.035*	-7.7%*
Goa	0.087	20.4%	42.5%	0.1%	0.021	5.6%	37.2%	0.1%	-0.066*	-14.8%*
Gujarat	0.185	38.5%	48.0%	4.9%	0.09	21.4%	42.2%	4.7%	-0.095*	-17.1%*
Haryana	0.182	38.5%	47.2%	2.0%	0.046	11.0%	42.3%	2.3%	-0.135*	-27.5%*
Himachal Pradesh	0.129	31.1%	41.5%	0.6%	0.031	8.2%	37.4%	0.5%	-0.098*	-22.9%*
Jammu and Kashmir	0.189	40.8%	46.4%	0.9%	0.063	15.2%	41.7%	1.0%	-0.126*	-25.6%*
Jharkhand	0.425	74.7%	57.0%	2.7%	0.205	45.8%	44.7%	2.7%	-0.221*	-28.8%*
Karnataka	0.224	48.1%	46.5%	5.6%	0.068	17.1%	39.8%	4.9%	-0.156*	-31.0%*
Kerala	0.052	13.2%	39.6%	2.5%	0.004	1.1%	37.4%	2.9%	-0.048*	-12.2%*
Madhya Pradesh	0.358	67.7%	52.8%	6.3%	0.18	40.6%	44.2%	6.5%	-0.178*	-27.1%*
Maharashtra	0.182	39.4%	46.2%	9.4%	0.069	16.8%	41.3%	9.6%	-0.113*	-22.6%*
Manipur	0.207	45.1%	45.8%	0.2%	0.083	20.7%	40.3%	0.2%	-0.123*	-24.4%*
Meghalaya	0.334	60.5%	55.2%	0.3%	0.145	32.7%	44.5%	0.2%	-0.188*	-27.8%*
Mizoram	0.139	30.8%	45.0%	0.1%	0.044	9.7%	45.2%	0.1%	-0.095*	-21.2%*
Nagaland	0.294	56.9%	51.6%	0.1%	0.097	23.3%	41.7%	0.1%	-0.196*	-33.6%*
Odisha	0.33	63.5%	52.0%	3.7%	0.154	35.5%	43.3%	3.4%	-0.176*	-28.0%*

TABLE II.1   MPI, H, A, and Reduction in MPI and H 2005/06–2015/16 by Group (continued)

	2005/06				2015/16				ABSOLUTE REDUCTION 2005/06 – 2015/16	
	MPI	H Incidence	A Intensity	Population Share 2006	MPI	H Incidence	A Intensity	Population Share 2016	Change in MPI	Change in H
Punjab	0.108	24.0%	45.0%	2.5%	0.025	6.0%	41.2%	2.3%	-0.083*	-18.0%*
Rajasthan	0.327	61.7%	52.9%	5.8%	0.143	31.6%	45.2%	5.5%	-0.183*	-30.0%*
Sikkim	0.176	37.6%	46.7%	0.1%	0.019	4.9%	38.1%	0.0%	-0.157*	-32.7%*
Tamil Nadu	0.155	37.0%	41.8%	5.5%	0.028	7.4%	37.5%	6.6%	-0.127*	-29.6%*
Tripura	0.265	54.4%	48.6%	0.3%	0.086	20.1%	42.7%	0.3%	-0.179*	-34.3%*
Uttar Pradesh	0.36	68.9%	52.2%	16.6%	0.18	40.4%	44.7%	15.7%	-0.18*	-28.5%*
Uttarakhand	0.179	38.7%	46.1%	0.8%	0.072	17.1%	41.8%	0.8%	-0.107*	-21.6%*
West Bengal	0.298	57.3%	52.0%	7.9%	0.109	26.0%	41.9%	7.6%	-0.189*	-31.4%*
Scheduled Caste	0.338	65.0%	51.9%	19.1%	0.145	32.9%	44.1%	20.7%	-0.193*	-32.2%*
Schedule Tribe	0.447	79.8%	56.0%	8.4%	0.229	50.0%	45.8%	9.4%	-0.218*	-29.8%*
Other Backward Class	0.291	57.9%	50.2%	40.2%	0.117	26.9%	43.5%	42.9%	-0.174*	-31.0%*
Other Caste Group	0.176	36.1%	48.9%	29.3%	0.065	15.3%	42.5%	22.7%	-0.111*	-20.8%*
Hindu	0.277	54.9%	50.4%	80.3%	0.12	27.7%	43.5%	80.2%	-0.156*	-27.2%*
Muslim	0.331	60.3%	54.9%	14.1%	0.144	31.1%	46.4%	14.1%	-0.187*	-29.3%*
Christian	0.191	38.8%	49.2%	2.3%	0.069	16.1%	42.9%	2.4%	-0.122*	-22.7%*
Other Religion	0.172	35.2%	48.9%	3.3%	0.067	15.5%	43.0%	3.3%	-0.105*	-19.7%*
Age 0–9 Years	0.371	68.1%	54.5%	22.3%	0.189	40.9%	46.3%	18.2%	-0.182*	-27.3%*
Age 10–17 Years	0.289	56.1%	51.6%	17.7%	0.121	27.3%	44.1%	15.8%	-0.169*	-28.7%*
Age 18–60 Years	0.244	49.2%	49.5%	53.6%	0.102	23.6%	43.0%	57.5%	-0.142*	-25.6%*
Age 60+ Years	0.228	49.2%	46.2%	6.3%	0.105	25.4%	41.3%	8.5%	-0.122*	-23.8%*

* All changes are significant at 1% level.

III. Child Poverty

HALF OF ALL MULTIDIMENSIONALLY POOR PEOPLE ARE CHILDREN

With the adoption of the Sustainable Development Goals (SDGs), the international community affirmed the importance of eradicating child poverty, identifying within Goal 1 the need to reduce the proportion of men, women, and children living in multidimensional poverty. The international definition of a child, also used here, is anyone less than 18 years of age.

This briefing disaggregates the 2018 global Multidimensional Poverty Index by age group to analyze the situation of the 1.96 billion children who live in 105 countries. Carrying forward our findings from 2017, these most recent results continue to be deeply concerning:

- Half of all multidimensionally poor people – 49.9% – are children. A total of 665 million children are living in multidimensional poverty.

- One out of every three children – 34% – are multidimensionally poor, whereas it's 18% of adults. Fully 18% of children – over one in six – live in severe poverty.

- Eighty-five percent of poor children are growing up in South Asia (37%) and Sub-Saharan Africa (48%). Yet the India case study shows that between 2005/06 to 2015/16, child poverty reduced the fastest of all age cohorts – a sign of what is possible.

- Nearly two-thirds (64%) of Sub-Saharan Africa's children are multidimensionally poor. In 35 countries, at least half of all children are MPI poor. In South Sudan and Niger, around 93% of all children are MPI poor. Furthermore, in Burkina Faso and Ethiopia, over 90% of children aged 0 to 9 years are MPI poor.

- More than half of the MPI poor children (53%) live in the weakest fragile states with alert, high alert or very high alert warning.

The MPI includes indicators of children's achievements such as school attendance and nutrition. It includes indicators that affect children's life chances, such as adequate sanitation, safe water, flooring, and clean cooking fuel. Furthermore, it reflects household features that shape children's lives, such as whether a child has died and whether anyone has six years of schooling.

OVER ONE IN THREE CHILDREN ARE POOR

Of the 1.96 billion children covered by the global MPI, 34% are multidimensionally poor, whereas for adults aged 18 and above it is close to 18%. That means that more than one in three children is living in acute multidimensional poverty. The urgency of addressing child deprivations in nutrition and education that have long-term consequences on that child's life chances as well as on their society – deprivations

CHILD MPIs

The Alkire-Foster method, used in the global MPI, can also be used to define a Child MPI. In Child MPIs, each child is identified as poor or non-poor based on both household deprivations (which may be the global MPI itself) and age-specific overlapping deprivations she or he experiences personally across the cycle of childhood. For example, the education indicators could include cognitive development for children aged 0–2, preschool or stimulating activities for 3–5 years old, school attendance for those 6–14, and not being in education, employment, or training for people aged 15 and above.

Child MPIs are disaggregated by age and gender and are analyzed to see whether all children in a household are poor and whether poor children live in households that are poor according to the global MPI or a nationally defined MPI. They are broken down by indicator to shape policy responses. While many national Child MPIs are being designed, data are not available to compute a global Child MPI that can be compared across over 100 countries.

that are, for MPI poor children, embedded in a nexus of additional disadvantages in health, housing, assets, and services – is clear.

SOUTH ASIA AND SUB-SAHARAN AFRICA ARE HOME TO 85% OF POOR CHILDREN

Most of the 665 million poor children – 85% of them – live in South Asia (37%) or Sub-Saharan Africa (48%). Two factors explain why. First, these two regions constitute 58% of the children in our sample. Second, and more troubling, the incidence of poverty among children is about 64% in Sub-Saharan Africa, much higher than any other part of the world. The incidence of poverty among children in South Asia is about 39%, the second highest regional incidence. The region with the third highest incidence is the Arab States, with 25% of children living in poverty.

In terms of countries, nearly one-fourth of the 665 million poor children (23%) live in India, followed by Nigeria (9%), Ethiopia (7%), and Pakistan (7%).

HOW POOR ARE THE CHILDREN?

In our sample, poor children are on average deprived in 52% of the weighted indicators, compared to 47% of the indicators for adults.

The region with the highest intensity of poverty is Sub-Saharan Africa, where poor children are simultaneously deprived on average in 56% of the indicators. In Niger, the intensity of poverty among children is the highest, at 67%; thus poor children on average are deprived in the equivalent of two dimensions.

In both the regions of East Asia and the Pacific and South Asia, children are on average deprived in 47% of the weighted indicators. The Lao People's Democratic Republic (54%), the Philippines (53%), Myanmar (48%) and Timor-Leste (47%) drive the high intensity of poverty for East Asia and the Pacific. Pakistan (53%) and Afghanistan (49%) have the highest intensity of poverty among children in South Asia.

MORE THAN HALF OF POOR CHILDREN LIVE IN THE WEAKEST FRAGILE STATES

The Index of Fragile States 2018 codes 32 countries as 'alert', 'high alert', or 'very high alert'.[7] The global MPI is available for 30 of these 32 countries. The Democratic People's Republic of Korea and Eritrea are the only two countries for which we did not have data. Some 53% of the children in these 30 countries are living in multidimensional poverty. Among alert-level countries, around 59% of children are poor. In high alert-level and very high alert-level countries – where nearly one in six global MPI poor children live – the figure is 60%.

ALMOST TWO-THIRDS OF POOR CHILDREN LIVE IN MIDDLE-INCOME COUNTRIES

Thirty-eight percent of poor children live in low-income countries, even though these countries are home to only 18.4% of the children in our sample, and the highest child poverty levels are in low-income

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7. The classification is based on the 2018 numbers of the Fragile State Index published by The Fund for Peace. Link (accessed on 22.08.2018).

FIGURE III.1   Incidence and Intensity of MPI Child Poverty by Region
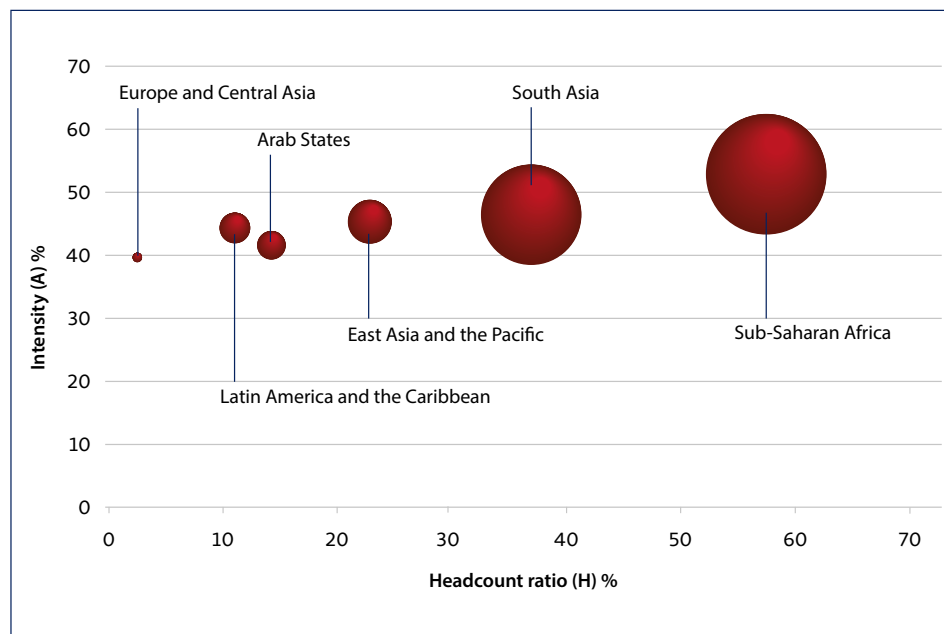
countries.[8] Still, the majority of poor children – over 62% – pass their childhood in middle-income countries. So because of many intervening factors including inequalities, a higher national average income per capita does not automatically imply that children's acute need for nutrition and schooling, clean water, sanitation and so forth, are met in middle income countries. Once again, direct policy attention to these deprivations is required.

This chapter profiles children – more of whom dwell on this planet than at any time in the past. But for that reason it is even more the case that the high level of multidimensional poverty among children globally, merits energetic attention.

8. This income level categorization comes from the World Bank 2018 classification scheme. Data and methodology available here (accessed on 24.08.2018).

IV. World Regions

Across major geographical regions, roughly equal numbers of multidimensionally poor people live in Sub-Saharan Africa (42%) and South Asia (41%), but variations within regions at the national level can be stark. This chapter introduces the commonalities and diversities among multidimensionally poor people by region, beginning in Africa.

SUB-SAHARAN AFRICA

Sub-Saharan Africa has the highest rate of multidimensional poverty and the greatest number of poor people of any of the world regions. The global MPI datasets cover 969 million people in 40 countries in Sub-Saharan Africa, making it the region with the most countries in the global MPI. Of these, some 559 million are MPI poor. Overall, the region has an MPI of 0.317, with 58% of the population experiencing multidimensional poverty and an average intensity of 55%.

FIGURE IV.1   MPI by Subnational Region in Nigeria

1	Kebbi,	0.49
2	Sokoto,	0.54
3	Zamfara,	0.52
4	Katsina,	0.46
5	Kano,	0.40
6	Jigawa,	0.53
7	Bauchi,	0.50
8	Yobe,	0.49
9	Borno,	0.34
10	Gombe,	0.46
11	Adamawa,	0.32
12	Taraba,	0.34
13	Plateau,	0.28
14	Kaduna,	0.30
15	Niger,	0.36
16	FCT Abuja,	0.12
17	Nasarawa,	0.28
18	Benue,	0.18
19	Cross River,	0.12
20	Ebonyi,	0.17
21	Enugu,	0.04
22	Anambra,	0.04
23	Imo,	0.04
24	Abia,	0.04
25	Akwa Ibom,	0.09
26	Rivers,	0.03
27	Bayelsa,	0.10
28	Delta,	0.05
29	Edo,	0.02
30	Kogi,	0.14
31	Ondo,	0.09
32	Lagos,	0.01
33	Ogun,	0.06
34	Oyo,	0.11
35	Kwara,	0.15
36	Ekiti,	0.05
37	Osun,	0.05

Legend:
0.5+
0.4 – 0.5
0.3 – 0.4
0.2 – 0.3
0.1 – 0.2
0.05 – 0.1
0 – 0.05

FIGURE IV.2   Where Do the 559M Poor People in Sub-Saharan Africa Live?
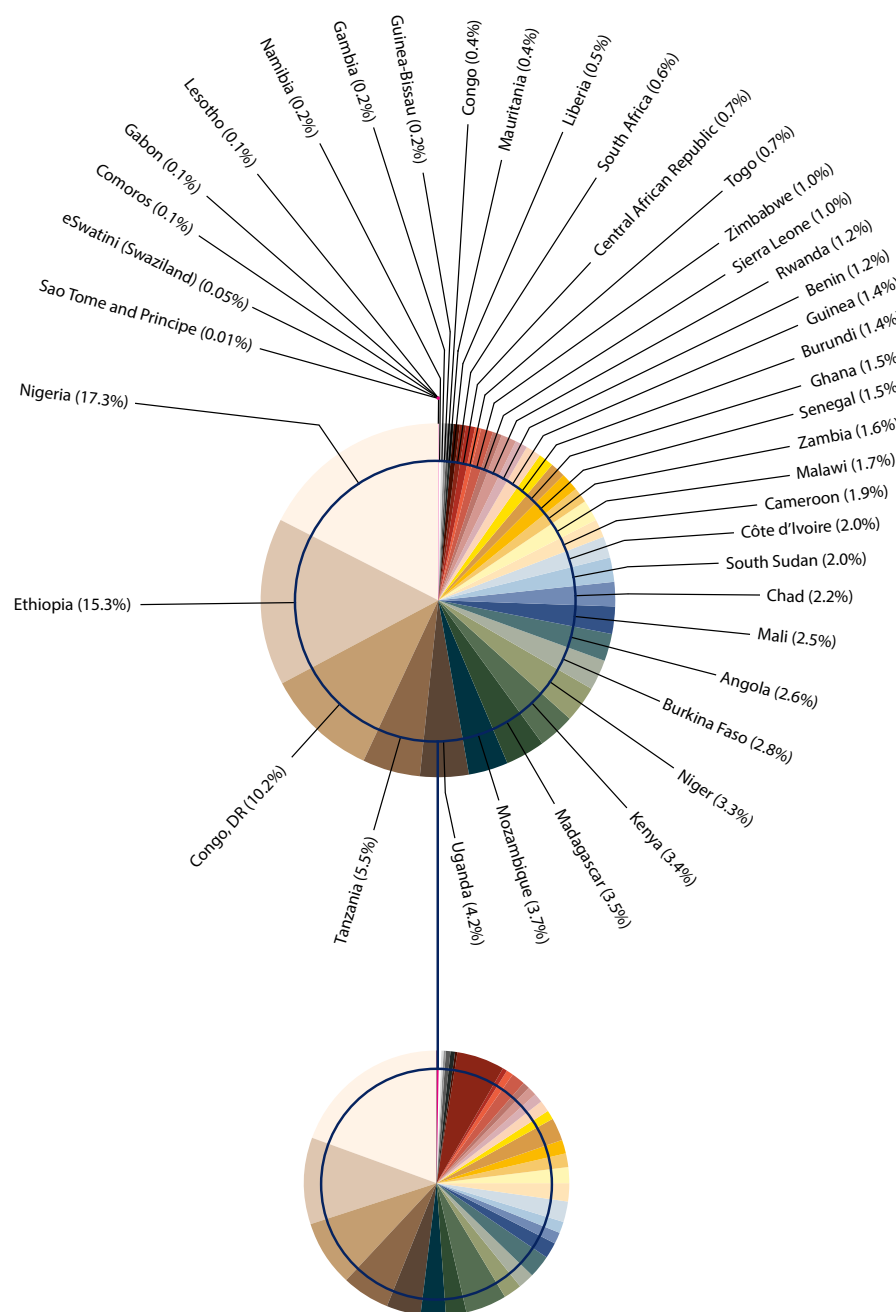
FIGURE IV.3   Population Coverage in Sub-Saharan Africa

The poorest countries in the region are South Sudan and Niger, where more than 90% of the populations are multidimensionally poor. Nearly three-quarters of the populations of both countries experience severe poverty, with at least 50% of weighted deprivations. South Africa is the least poor country in Sub-Saharan Africa, with a headcount ratio under 6%. Nigeria and Burundi have the most recent datasets: 2016–17. But Nigeria is still home to more MPI poor people than any other country: 97 million.

Using UN geographic definitions, we find that East and Central Africa are the poorest, with 64% of people living in multidimensional poverty. Southern Africa is by far the least poor, with only 8.6% of its population in poverty.

The 2018 global MPI is disaggregated by 458 subnational regions in Sub-Saharan Africa. In 310 regions more than half of the people are poor, and in 160 regions the figure is over three-quarters. In fully 42 regions, over 90% of people are poor, and these are found in ten countries: Burkina Faso, Central African Republic, Chad, Ethiopia, Gambia, Madagascar, Mali, Niger, Sierra Leone and Uganda.

The subnational region in Sub-Saharan Africa with the highest incidence is Wadi Fira in Chad with a staggering headcount ratio of 99% and a severity rate of 95%, meaning that they are deprived in at least half of the weighted indicators. This means that of the 350,000 people who live in Wadi Fira, 347,900 are multidimensionally poor, of whom 335,000 are severely poor.

Intra-country variations are particularly pronounced between cities and rural or remote areas. For example, in the capitals and largest cities of Kenya (Nairobi),

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FIGURE IV.4   Sub-Saharan Africa: Level of the MPI and its Composition
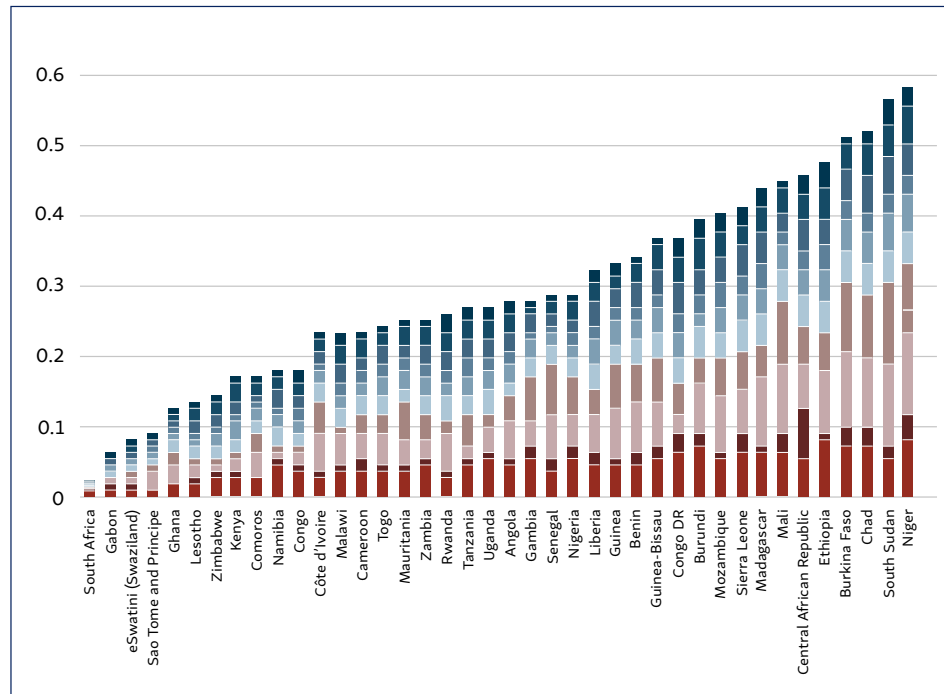
Nigeria (Lagos), Uganda (Kampala) and Mozambique (Maputo), MPI poverty affects less than one in ten people, while the provinces of North Eastern in Kenya, Sokoto in Nigeria, Karamoja in Uganda and Zambezia in Mozambique show poverty rates of 85% or above.

The largest contributor to poverty in Sub-Saharan Africa is nutrition (responsible for nearly 19% of the overall MPI), closely followed by years of schooling (15%) and school attendance (13%). In Sao Tome and Principe, deprivation in years of schooling accounts for nearly 28% of its MPI, while in Zimbabwe it is less than 5%. The Central African Republic is the only country in the world with high levels of poverty (headcount ratio of 79%) in which child mortality is the leading contributor.

Legend:
- Assets
- Housing
- Electricity
- Drinking water
- Sanitation
- Cooking fuel
- School attendance
- Years of schooling
- Child mortality
- Nutrition

TABLE IV.1   Global MPI for Sub-Saharan Africa

Country	Survey	Year	MPI (MPI = H×A)[1]	Headcount ratio (H)[2]	Intensity (A)[3]	Number of poor people[4]	Vulnerable to poverty[5]	In severe poverty[6]	Missing indicators
South Africa *	NIDS	2014/15	0.021	5.6	38.4	3,131,867	14.1	0.6	0
Gabon	DHS	2012	0.067	15.0	44.3	297,744	17.6	4.8	0
eSwatini (Swaziland)	MICS	2014	0.083	19.6	42.4	263,057	20.9	4.4	0
Sao Tome and Principe	MICS	2014	0.092	22.1	41.7	44,228	19.4	4.4	0
Ghana	DHS	2014	0.132	28.9	45.5	8,157,952	21.4	9.6	0
Lesotho	DHS	2014	0.146	33.6	43.5	741,292	24.5	8.6	0
Zimbabwe	DHS	2015	0.149	34.7	42.9	5,602,321	26.3	8.8	0
Kenya	DHS	2014	0.179	38.9	46.0	18,837,111	34.7	13.4	0
Comoros	DHS-MICS	2012	0.181	37.4	48.5	297,292	22.2	16.2	0
Namibia	DHS	2013	0.183	40.6	45.1	1,006,583	19.3	12.9	0
Congo	DHS	2011/12	0.185	40.4	45.7	2,071,707	25.7	15.5	0
Côte d'Ivoire	MICS	2016	0.236	46.1	51.2	10,925,568	17.6	24.5	0
Malawi	DHS	2015/16	0.244	52.7	46.2	9,539,039	28.4	18.5	0
Cameroon	MICS	2014	0.244	45.4	53.7	10,641,124	17.3	25.8	0
Togo	DHS	2013/14	0.250	48.4	51.6	3,678,922	21.8	24.4	0
Mauritania	MICS	2015	0.261	50.6	51.6	2,176,339	18.6	26.4	0
Zambia	DHS	2013/14	0.262	53.4	49.1	8,856,280	22.4	24.3	0
Rwanda	DHS	2014/15	0.266	55.8	47.7	6,654,948	24.9	22.9	0
Tanzania	DHS	2015/16	0.275	55.6	49.4	30,915,256	24.1	26.1	0
Uganda	DHS	2016	0.279	56.8	49.1	23,548,842	23.9	25.4	0
Angola	DHS	2015/16	0.283	51.2	55.3	14,742,761	15.5	32.5	0
Gambia	DHS	2013	0.286	55.3	51.8	1,127,013	21.8	32.0	0
Senegal	DHS	2016	0.293	54.4	53.9	8,388,727	17.2	32.0	0
Nigeria	MICS	2016/17	0.294	52.0	56.7	96,622,555	16.9	32.7	0

TABLE IV.1   Global MPI for Sub-Saharan Africa (continued)

Country	Survey	Year	MPI (MPI = HxA)[1]	Headcount ratio (H)[2]	Intensity (A)[3]	Number of poor people[4]	Vulnerable to poverty[5]	In severe poverty[6]	Missing indicators
Liberia	DHS	2013	0.331	64.9	50.9	2,994,230	20.4	33.2	0
Guinea	MICS	2016	0.337	62.0	54.5	7,679,276	17.1	38.1	0
Benin	MICS	2014	0.346	63.2	54.8	6,875,105	16.1	38.0	0
Guinea-Bissau	MICS	2014	0.373	67.4	55.4	1,224,064	19.1	40.5	0
Congo, Democratic Republic of the	DHS	2013/14	0.378	72.5	52.2	57,049,758	17.7	42.2	0
Burundi	DHS	2016/17	0.404	74.3	54.3	7,822,559	16.2	45.4	0
Mozambique	DHS	2011	0.412	72.5	56.8	20,913,041	13.5	49.2	0
Sierra Leone	DHS	2013	0.422	76.5	55.2	5,657,425	14.4	48.4	0
Madagascar	DHS	2008/09	0.453	77.8	58.2	19,365,604	11.8	57.3	0
Mali	MICS	2015	0.457	78.1	58.5	14,055,659	10.9	56.7	0
Central African Republic	MICS	2010	0.465	79.4	58.6	3,646,305	13.1	54.7	0
Ethiopia	DHS	2016	0.490	83.8	58.5	85,834,453	8.7	61.8	0
Burkina Faso	DHS	2010	0.520	84.0	61.9	15,664,814	7.3	64.8	0
Chad	DHS	2014/15	0.535	85.9	62.3	12,409,278	9.7	66.2	0
South Sudan	MICS	2010	0.581	91.9	63.2	11,241,959	6.3	74.5	0
Niger	DHS	2012	0.591	90.6	65.3	18,726,852	5.0	74.9	0

* Child mortality reported by mothers of ages 15 to 49 were considered. If child mortality was considered as reported by mothers of ages 15 and above, the value of MPI would be 0.032 with the headcount ratio of 8.2%. For details click here.

1. The *Multidimensional Poverty Index (MPI)* ranges from 0 to 1.
2. The *headcount ratio* is the percentage of the population with deprivation score of 1/3 or above.
3. The *intensity* is the average percentage of weighted deprivations among the poor.
4. The *number of poor people* uses 2016 population figures.
5. *Vulnerable to poverty* shows the percentage of the population that experiences 20%–33.32% of weighted deprivations.
6. *In severe poverty* shows the percentage of the population with an intensity of 1/2 or above.

SOUTH ASIA

The global MPI covers seven countries in South Asia, representing more than 1.7 billion people of whom 546 million are poor. South Asia is the second poorest region in the world, behind only Sub-Saharan Africa in both MPI and poverty rate. Additionally, 11% of people in South Asia are severely poor, being deprived in at least half of the weighted indicators, and 19% are vulnerable to poverty, meaning that they are deprived in 20% to 33% of the weighted indicators.

Even in 2009, the Maldives had by far the lowest poverty rates, with less than 2% of its population identified as multidimensionally poor and 5% being vulnerable to poverty. In the poorest country, Afghanistan, over half (56%) of the population are poor. In Afghanistan and Pakistan one in four people lives in severe poverty.

In South Asia, nutrition deprivations alone contribute more than one-quarter to the overall MPI, even though nutrition information was not available for Afghanistan. This is more than in any other region except Europe and Central Asia, where low levels of poverty make analysis by indicator difficult. Child mortality and electricity each contribute less than 4%.
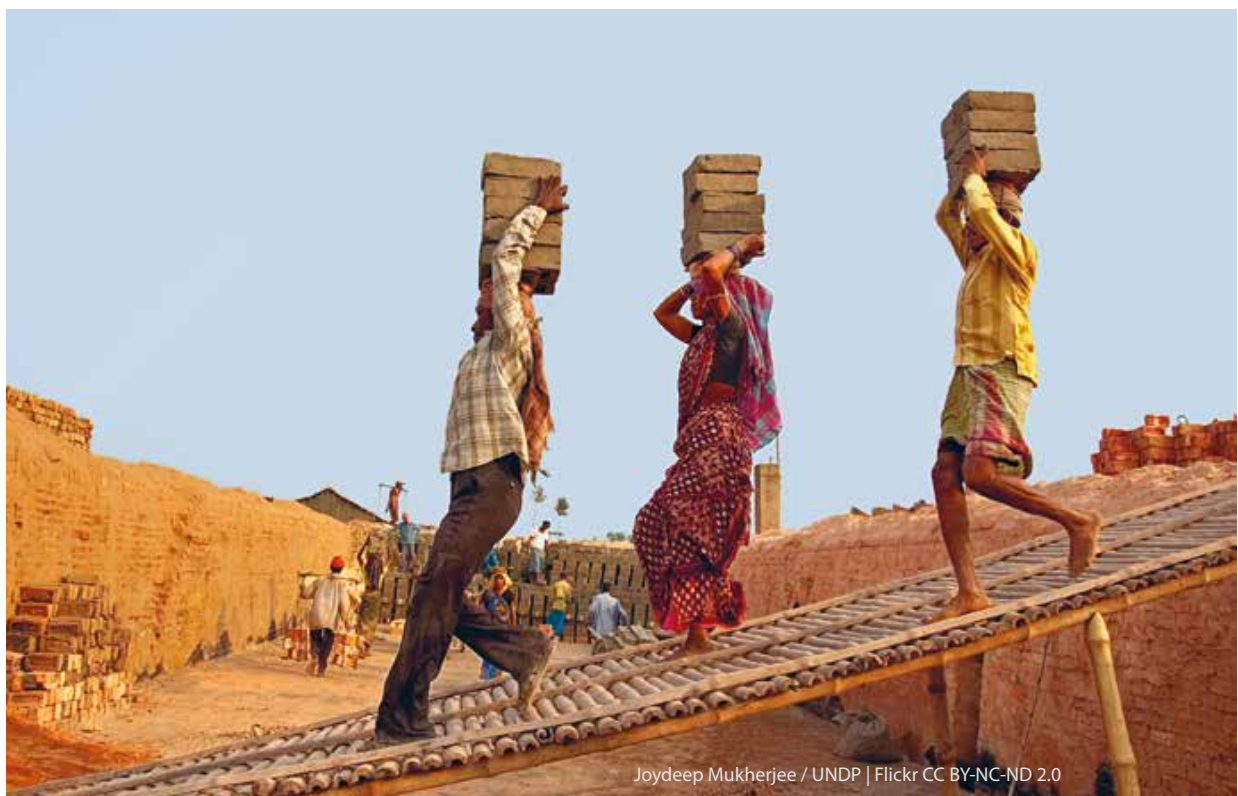
Joydeep Mukherjee / UNDP | Flickr CC BY-NC-ND 2.0

FIGURE IV.5   Where Do the 546M Poor People in South Asia Live?

Bhutan (0.05%)

Nepal (1.9%)

Afghanistan (3.6%)

Bangladesh (12.3%)

Maldives (0.001%)

Pakistan (15.5%)

India (66.7%)
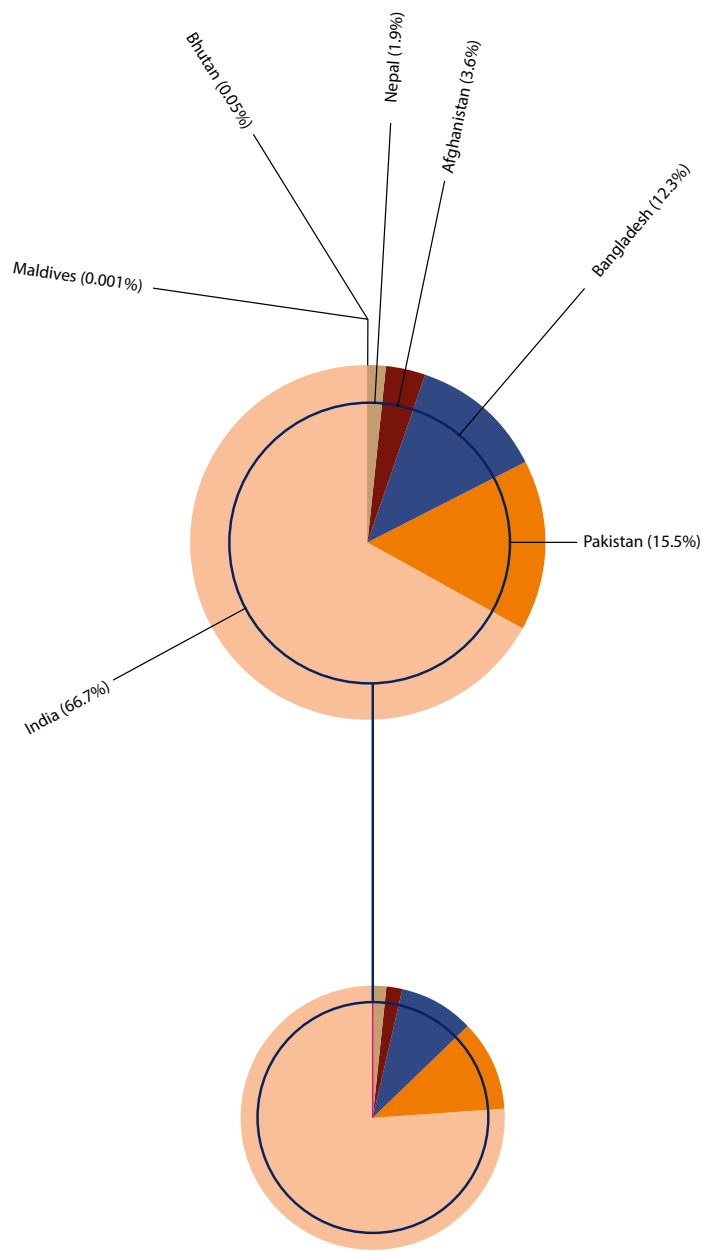
FIGURE IV.6   Population Coverage in South Asia

Seventeen of the 19 poorest subnational regions in South Asia were in Afghanistan. The other two regions were Sylhet in Bangladesh and Balochistan in Pakistan. The poorest subnational regions were Nooristan and Urozgan in Afghanistan, where 94% and 95% of people were poor, respectively. Other regions are doing better. In Kabul, the capital city, 18% of people are multidimensionally poor and 5% are severely poor.

The data in South Asia at present vary greatly in terms of years collected. The Maldives (2009) and Pakistan (2012/13) will both be updated shortly with datasets fielded in 2016 – at which point in time Afghanistan, India, the Maldives, Nepal and Pakistan will all have data from 2015 or 2016, which will make for fascinating comparisons.

FIGURE IV.7   South Asia: Value of the MPI and its Composition

ARAB STATES

Analysis of poverty in the Arab States is affected by older data that may not reflect the current situation. The most recent data from Somalia and Djibouti dates from 2006; the Syrian Arab Republic's data is from 2009; and Yemen's data is from 2013. But according to existing data, poverty varies dramatically. In Somalia, 82% of people were multidimensionally poor whereas in Palestine, Jordan and Libya it is less than 2%. Seventy percent of MPI poor people in the Arab States live in Sudan, Yemen, and Somalia.

Altogether, the global MPI covers 342 million people in 13 countries in the Arab region of whom 66 million (19%) are multidimensionally poor. The population-adjusted MPI is 0.089, and poor people are deprived, on average, in 51% of weighted indicators.

Education and health contribute relatively more to multidimensional poverty across the region (44% and 33%, respectively), while living standards indicators contribute relatively less (22%).

In many countries in this region, and also in Latin America and the Caribbean and in Europe and Central Asia, the global MPI rates are low. Thus, the global MPI – which measures acute multidimensional poverty – is not sufficient for understanding poverty in these countries. The global MPI analysis of acute poverty must be complemented by a measure of moderate multidimensional poverty, whose indicators and cutoffs reflect the aspirations and standards of poverty across each region.

Mark Fischer | Flickr CC BY-SA 2.0

FIGURE IV.8   Where Do the 66M Poor People in the Arab States Live?
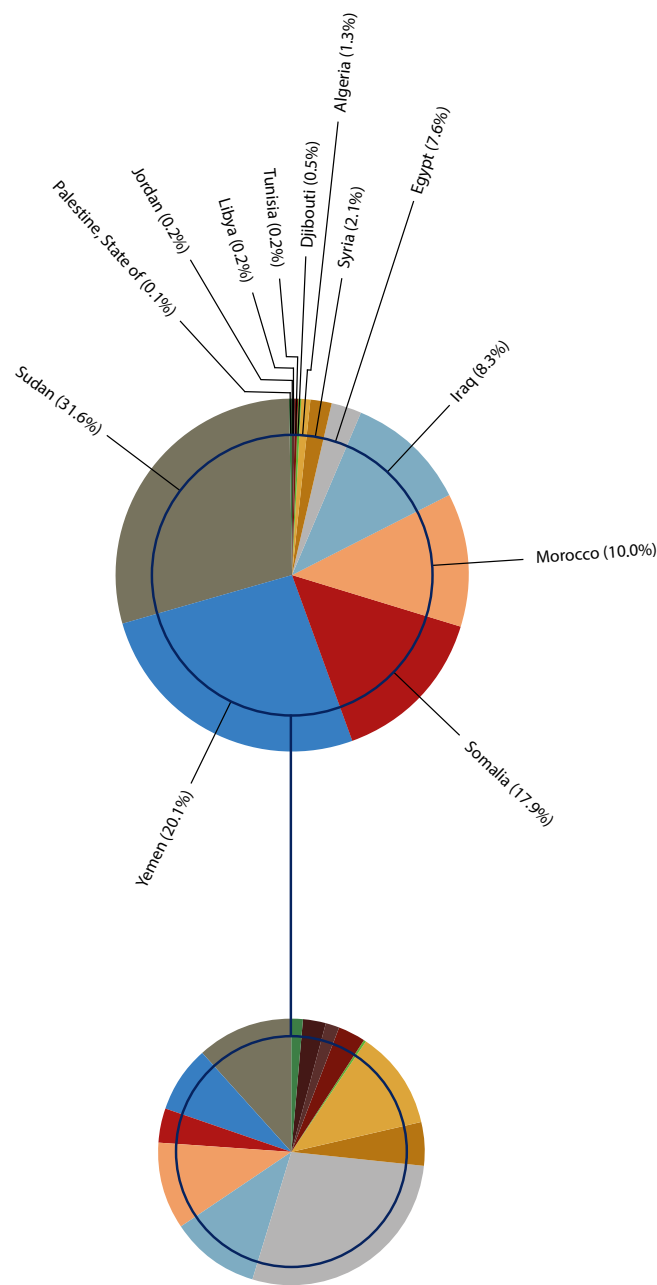
FIGURE IV.9   Population Coverage in Arab States

An example can be found in the 2017 *Arab Multidimensional Poverty Report* published by UN-ESCWA.[9] These figures also give further credence to the recommendation of the World Bank's Atkinson Commission on Global Poverty that work and security be included in a multidimensional poverty measure to better reflect the conditions of the poor (World Bank 2017). Unfortunately, data does not yet permit this for the global MPI; it is necessary to include these dimensions in the future.

_____

9. Accessed here.

FIGURE IV.10   Arab States: Value of the MPI and its Composition

Legend:
- Assets
- Housing
- Electricity
- Drinking water
- Sanitation
- Cooking fuel
- School attendance
- Years of schooling
- Child mortality
- Nutrition
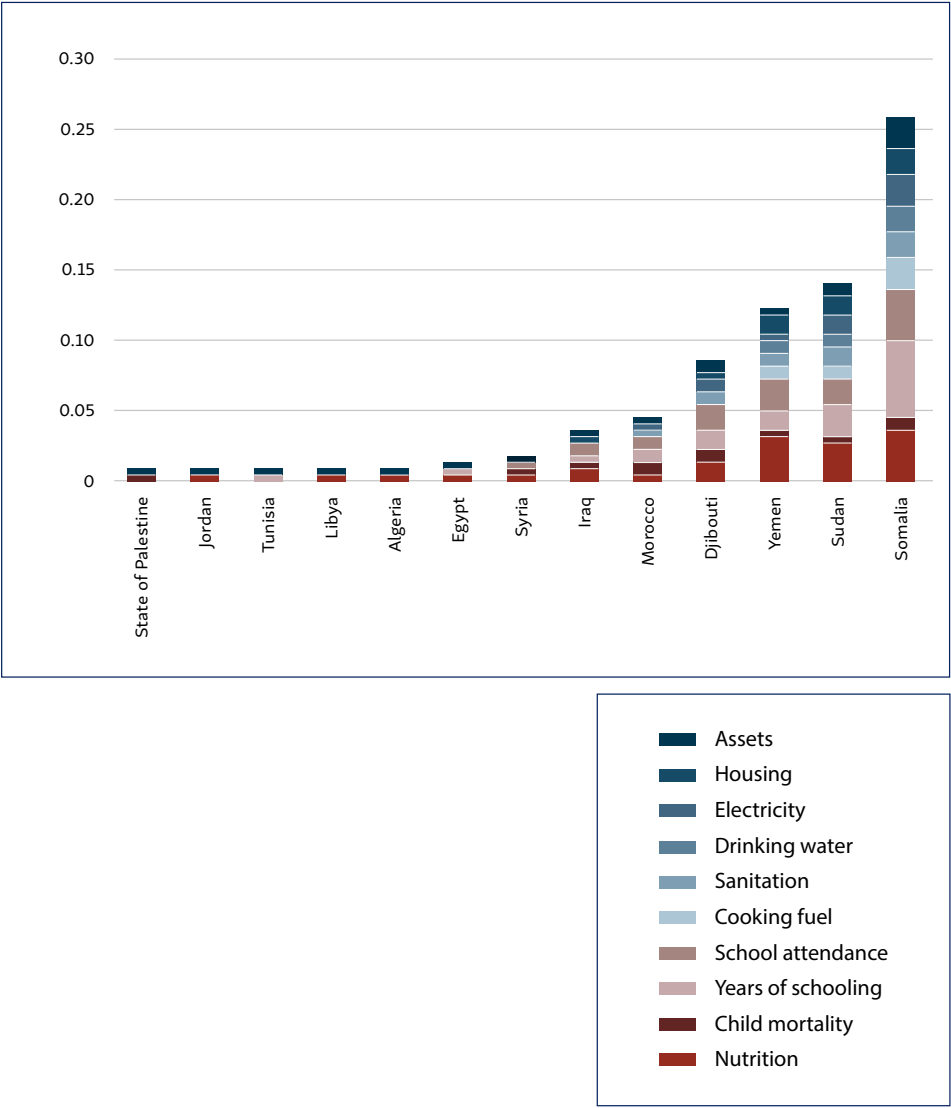
TABLE IV.3 Global MPI for Arab States

Country	Survey	Year	MPI (MPI = H×A)[1]	Headcount ratio (H)[2]	Intensity (A)[3]	Number of poor people[4]	Vulnerable to poverty[5]	In severe poverty[6]	Missing indicators
Palestine, State of	MICS	2014	0.004	1.0	37.6	47,367	5.4	0.1	0
Jordan	DHS	2012	0.005	1.3	35.5	122,678	0.9	0.1	0
Tunisia	MICS	2011/12	0.005	1.3	39.7	150,943	3.7	0.2	0
Libya	PAPFAM	2014	0.007	2.0	37.1	124,121	11.3	0.1	0
Algeria	MICS	2012/13	0.008	2.1	38.8	858,484	5.9	0.3	0
Egypt	DHS	2014	0.020	5.2	37.6	4,991,978	6.1	0.6	Cooking fuel
Syrian Arab Republic	PAPFAM	2009	0.029	7.4	38.9	1,362,336	7.7	1.2	0
Iraq	MICS	2011	0.059	14.7	40.0	5,452,938	7.9	3.0	0
Morocco	PAPFAM	2011	0.085	18.6	45.7	6,549,637	13.2	6.5	0
Djibouti	MICS	2006	0.170	34.6	49.0	326,305	18.5	15.7	0
Yemen	DHS	2013	0.241	47.8	50.5	13,178,290	22.1	23.9	0
Sudan	MICS	2014	0.280	52.4	53.4	20,738,000	17.6	30.9	0
Somalia	MICS	2006	0.518	82.2	62.9	11,772,865	8.7	67.5	0

1. The *Multidimensional Poverty Index (MPI)* ranges from 0 to 1.
2. The *headcount ratio* is the percentage of the population with deprivation score of 1/3 or above.
3. The *intensity* is the average percentage of weighted deprivations among the poor.
4. The *number of poor people* uses 2016 population figures.
5. *Vulnerable to poverty* shows the percentage of the population that experiences 20%–33.32% of weighted deprivations.
6. *In severe poverty* shows the percentage of the population with an intensity of 1/2 or above.

LATIN AMERICA AND THE CARIBBEAN

The global MPI covers 20 countries in Latin America and the Caribbean, which are home to 516 million people. Around 40 million (8%) live in multidimensional poverty and experience an average of 43% of weighted deprivations. This results in an MPI of 0.033.

In this region, 11 million people (2%) suffer severe multidimensional poverty, meaning that they are deprived in 50% or more of the weighted indicators. The incidence of severe poverty is below 5% except in Haiti (23%), Guatemala (11%), Bolivia (7%), Honduras (7%), and Nicaragua (6%). So most poor people have deprivation scores that are relatively close to the poverty cutoff.

Interestingly, the latter statement is also true for a non-negligible part of the non-poor population. More than 39 million people (8%) are identified as vulnerable to multidimensional poverty, meaning that they are deprived in 20% to 33% of the weighted indicators. The share of the vulnerable population is higher than that of severe poverty in all countries except Haiti, where they are similar (2.4 and 2.2 million). Over 5% of people are vulnerable in most of the countries, and over 20% of people are vulnerable in Haiti (20%), Guatemala (21%), and Honduras (22%).

There is a high amount of heterogeneity across countries at different levels. Taking the region as a whole, the multidimensional poverty headcount ratio ranges from 48% (Haiti) and 29% (Guatemala) to 2% (Saint Lucia) and 0.6% (Trinidad and Tobago). Surprisingly, both the highest and the lowest incidences of poverty can be found in Central America and the Caribbean. Multidimensional poverty rates in South American countries are towards the middle of the regional distri-

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FIGURE IV.11   Where Do the 43M Poor People in Latin America and the Caribbean Live?
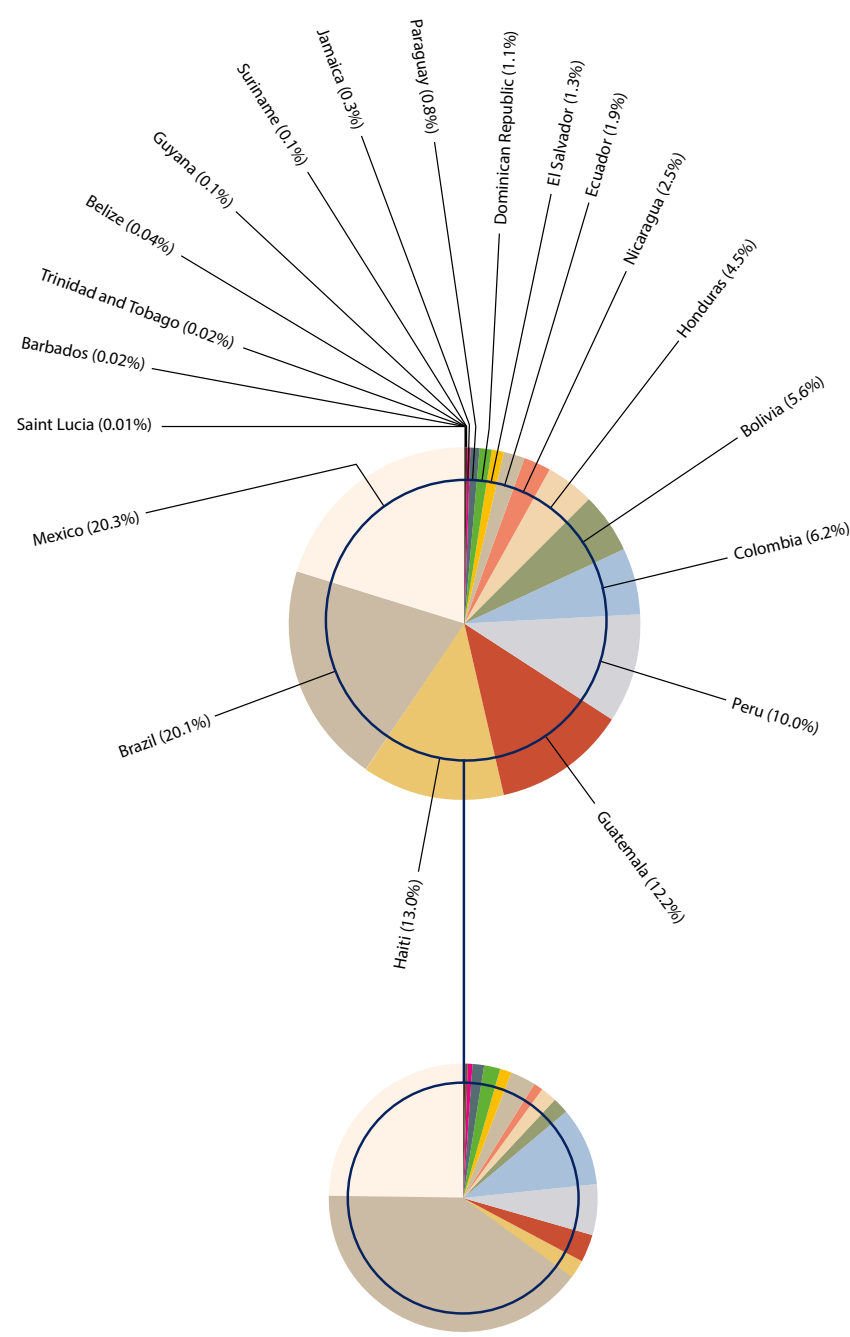
FIGURE IV.12   Population Coverage in Latin America and the Caribbean

bution. The highest incidence is found in Bolivia (20%) and the lowest incidence in Guyana (3%). The largest number of severely poor people live in Haiti, Brazil and Guatemala.

On average, multidimensionally poor people tend to be concentrated in rural areas across the region (68%), though this is a smaller disparity than in other world regions and there is considerable heterogeneity between countries. Internal disparities are most flagrant in Colombia and Bolivia. Other countries, such as Mexico and Saint Lucia, have a smaller urban-rural poverty gap.

Digging into the contribution of each indicator to the MPI value, child mortality (23%), nutrition (21%) and years of schooling (18%) are most responsible for the region's overall MPI. In Haiti, more than 5% of the total population is poor and living in a household that has experienced the death of a child in the last five years.

FIGURE IV.13 Latin America and the Caribbean: Value of the MPI and its Composition
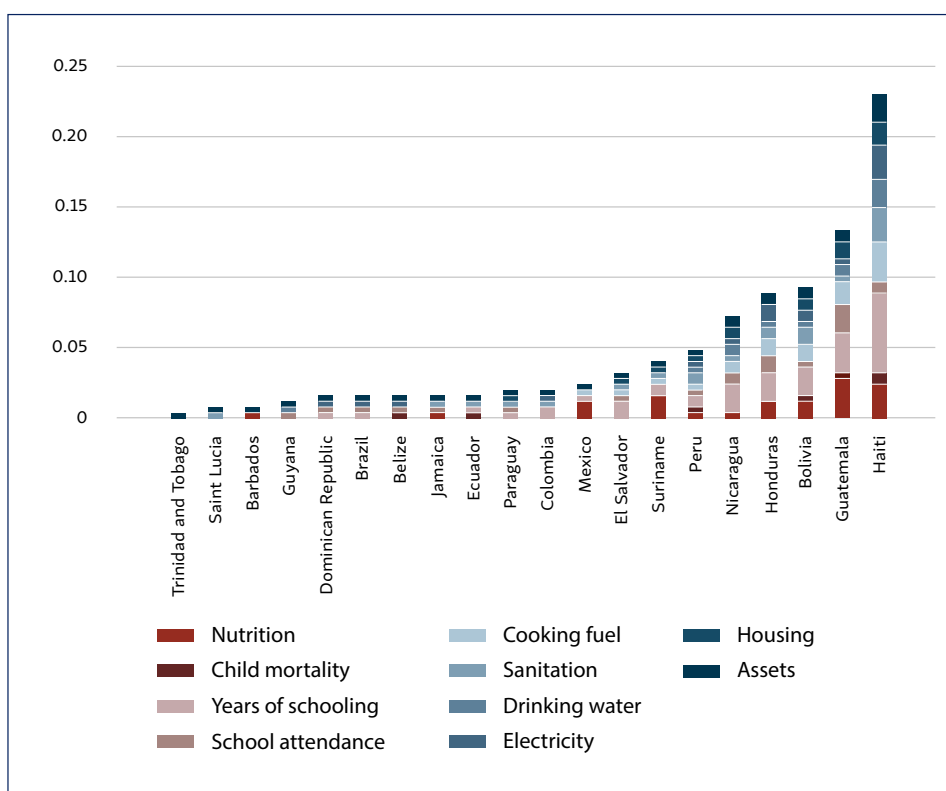
TABLE IV.4   Global MPI for Latin America and the Caribbean

Country	Survey	Year	MPI (MPI = H×A)[1]	Headcount ratio (H)[2]	Intensity (A)[3]	Number of poor people[4]	Vulnerable to poverty[5]	In severe poverty[6]	Missing indicators
Trinidad and Tobago	MICS	2011	0.002	0.6	38.0	8,689	3.7	0.1	0
Saint Lucia	MICS	2012	0.007	1.9	37.5	3,420	1.6	0.0	Child mortality
Barbados	MICS	2012	0.009	2.5	34.2	7,100	0.5	0.0	Child mortality
Guyana	MICS	2014	0.014	3.4	41.9	26,031	5.9	0.7	0
Dominican Republic	MICS	2014	0.016	4.1	38.9	441,439	5.2	0.5	Nutrition
Brazil	PNAD	2015	0.016	3.8	42.5	7,978	6.2	0.9	Nutrition
Belize	MICS	2015/16	0.017	4.4	39.8	15,968	8.5	0.6	0
Ecuador	ECV	2013/14	0.018	4.5	40.0	735,554	7.5	0.8	0
Jamaica	JSLC	2014	0.018	4.7	38.7	135,046	6.4	0.8	Child mortality
Paraguay	MICS	2016	0.019	4.6	42.0	307,607	7.3	1.0	0
Colombia	DHS	2015/16	0.021	5.0	40.8	2,448,496	6.2	0.9	Nutrition
Mexico	ENSANUT	2016	0.025	6.3	39.2	8,060,969	4.7	1.0	Child mortality
El Salvador	MICS	2014	0.033	7.9	41.3	504,315	9.9	1.7	0
Suriname	MICS	2010	0.041	9.4	43.4	52,392	4.5	2.5	Child mortality
Peru	DHS	2012	0.052	12.4	41.5	3,954,358	12.5	2.7	0
Nicaragua	DHS	2011/12	0.074	16.3	45.2	1,002,709	13.2	5.5	0
Honduras	DHS	2011/12	0.090	19.5	46.4	1,775,853	22.2	6.6	Electricity
Bolivia	DHS	2008	0.094	20.5	46.0	2,226,616	15.6	7.1	0
Guatemala	DHS	2014/15	0.134	29.1	46.2	4,820,614	21.1	11.3	0
Haiti	DHS	2012	0.231	47.6	48.6	5,162,817	20.4	22.5	0

1. The *Multidimensional Poverty Index (MPI)* ranges from 0 to 1.
2. The *headcount ratio* is the percentage of the population with deprivation score of 1/3 or above.
3. The *intensity* is the average percentage of weighted deprivations among the poor.
4. The *number of poor people* uses 2016 population figures.
5. *Vulnerable to poverty* shows the percentage of the population that experiences 20%–33.32% of weighted deprivations.
6. *In severe poverty* shows the percentage of the population with an intensity of 1/2 or above.

EAST ASIA AND THE PACIFIC

The global MPI covers 11 countries in East Asia and the Pacific, representing more than 2 billion people, of whom fewer than 6%, or 118 million, are multidimensionally poor. The percentage of poor people in each country ranges from 46% in Timor-Leste to less than 1% in Thailand. This region has the largest population of any region covered by the global MPI, but it does not have the most poor people, reflecting its relatively low levels of poverty.

The low level of poverty in the region is largely reflective of very low multidimensional poverty in China, where the headcount ratio of the global MPI is now just over 4%. However, due to the great population differentials between countries, nearly half of the region's poor in 2014 resided in China.

The average population-adjusted MPI across the region is 0.025. However, there is a significant amount of variation across the countries. The Lao People's Democratic Republic and Timor-Leste have the two highest MPIs, at 0.211, while Thailand has the lowest MPI at 0.003.

Zooming further within the countries, we can see that even some countries with relatively low levels of poverty have pockets of higher levels of poverty. For example, in Indonesia, 7% of people are poor nationally, but in the Papua region of Indonesia, nearly 44% are multidimensionally poor. In Cambodia, the levels of poverty across the subnational regions range from 7% in Phnom Penh to 64% in Preah Vihear and Steung Treng – one of the poorest regions in East Asia and the Pacific.

Tom Cheatham / UNDP | Flickr CC BY-NC-ND 2.0

FIGURE IV.14   Where Do the 118M Poor People in East Asia and the Pacific Live?
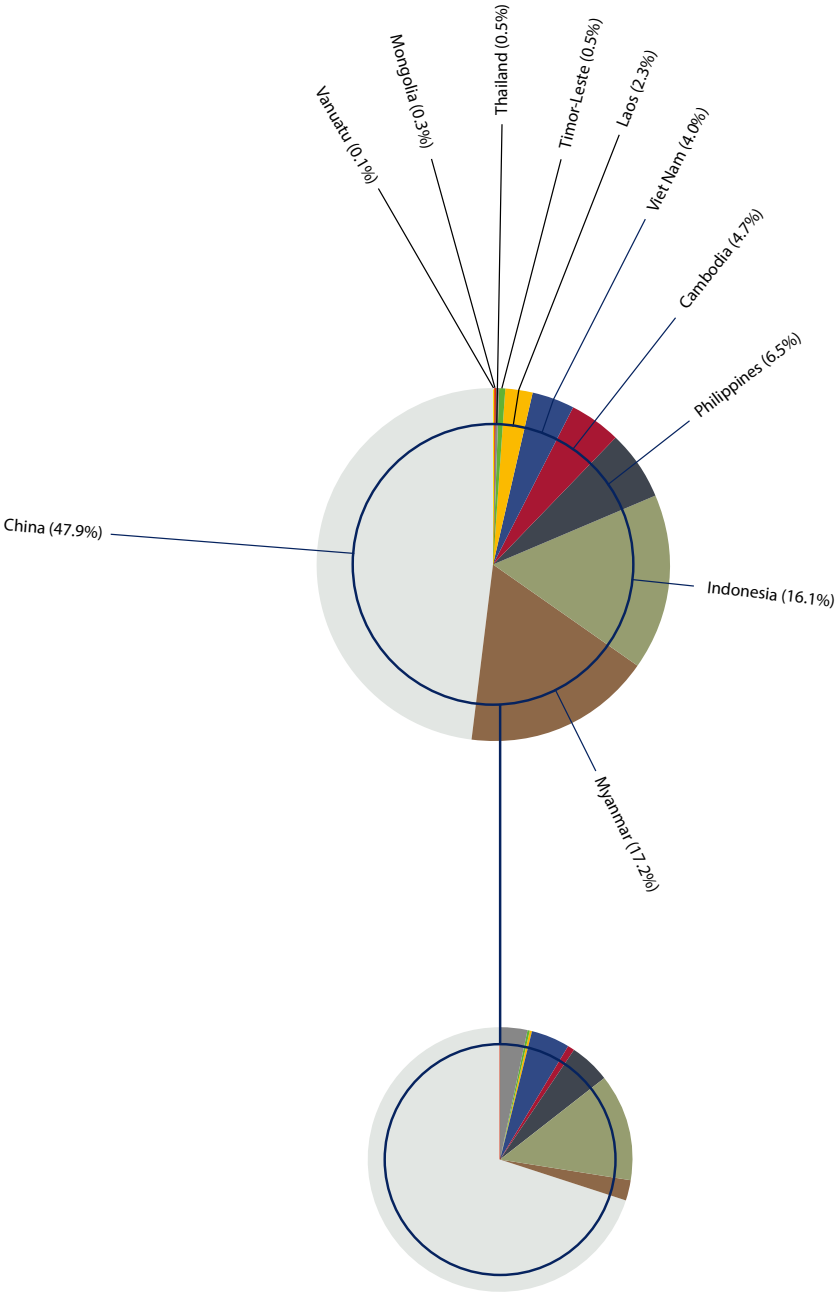
FIGURE IV.15   Population Coverage in East Asia and the Pacific

Examining the different components of the MPI suggests some interesting patterns. The Philippines and the Lao People's Democratic Republic both have a similarly high intensity of poverty at 52%, but in the Lao People's Democratic Republic 40% of people are multidimensionally poor, while in the Philippines it is only 7%.

Across the region, more than 24 million people live in severe poverty, meaning that they experience at least one-half of the weighted deprivations. Myanmar has the greatest number of severely poor people with 7.3 million. Although Timor-Leste has the highest MPI poverty rate, the Lao People's Democratic Republic has the highest rate of severe poverty, at 22%.

The greatest contributor to poverty in East Asia and the Pacific is nutrition (accounting for 26% of the overall MPI), followed closely by years of schooling (22%) – even though three countries in East Asia and the Pacific (Viet Nam, Indonesia, and the Philippines) did not have nutrition information in the data. Electricity (1%) and assets (4%) contribute relatively little to poverty in the region. Vanuatu is a bit of an outlier in these regional trends: deprivation in years of schooling is not as prominent (7%), while electricity and assets each contribute more than 11% to its MPI.

FIGURE IV.16   East Asia and the Pacific: Value of the MPI and its Composition
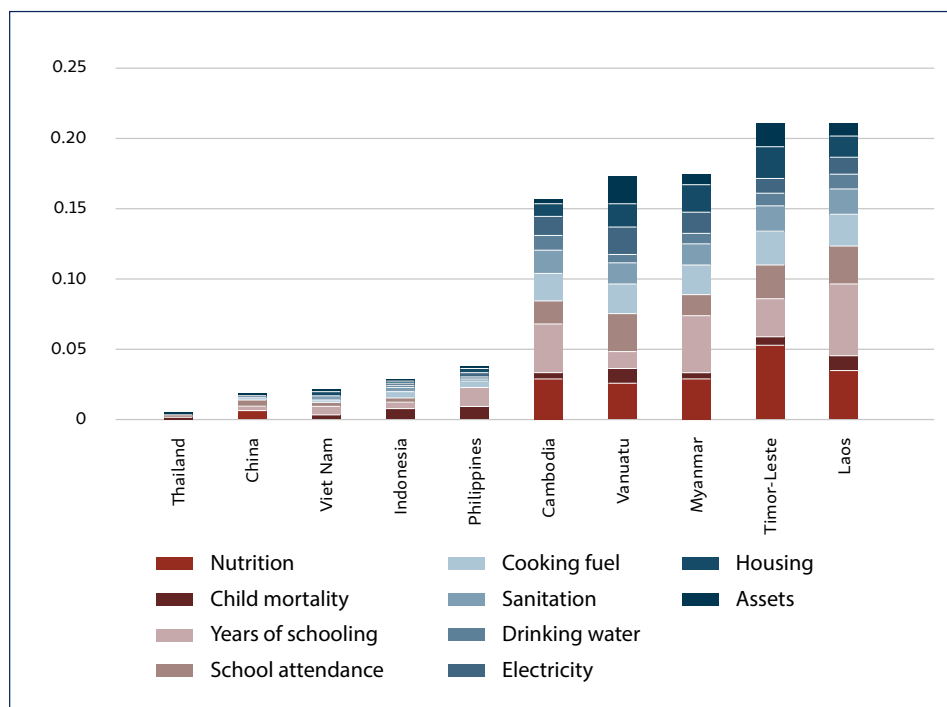
TABLE IV.5   Global MPI for East Asia and the Pacific

Country	Survey	Year	MPI (MPI = H×A)	Headcount ratio (H)	Intensity (A)	Number of poor people	Vulnerable to poverty	In severe poverty	Missing indicators
Thailand	MICS	2015/16	0.003	0.8	39.1	543,261	7.2	0.1	0
China	CFPS	2014	0.017	4.0	41.4	56,363,102	17.9	0.3	Housing
Viet Nam	MICS	2014	0.020	5.0	39.5	4,723,947	18.0	0.7	Nutrition
Indonesia	DHS	2012	0.029	7.2	40.5	18,922,031	9.1	1.2	Nutrition
Philippines	DHS	2013	0.038	7.4	51.8	7,652,520	9.3	4.7	Nutrition, School attendance
Mongolia	MICS	2013	0.043	10.2	41.6	310,114	19.1	1.6	0
Cambodia	DHS	2014/15	0.158	34.9	45.3	5,499,199	21.1	12.0	0
Vanuatu	MICS	2007	0.174	38.8	44.9	104,815	32.3	10.2	0
Myanmar	DHS	2015/16	0.176	38.3	45.9	20,279,852	21.9	13.9	0
Timor-Leste	DHS	2016	0.211	46.0	45.8	584,178	26.0	16.5	0
Lao People's Democratic Republic	MICS/DHS	2011/12	0.211	40.5	52.2	2,736,632	18.7	22.0	0

1. The *Multidimensional Poverty Index (MPI)* ranges from 0 to 1.
2. The *headcount ratio* is the percentage of the population with deprivation score of 1/3 or above.
3. The *intensity* is the average percentage of weighted deprivations among the poor.
4. The *number of poor people* uses 2016 population figures.
5. *Vulnerable to poverty* shows the percentage of the population that experiences 20%–33.32% of weighted deprivations.
6. *In severe poverty* shows the percentage of the population with an intensity of 1/2 or above.

EUROPE AND CENTRAL ASIA

Europe and Central Asia is the least poor region included in this report and also the one with the least complete coverage of its population. Of the 149 million people included from Europe and Central Asia, 3.5 million of them are poor, for a headcount ratio of 2% and an MPI of 0.009. A further 6% of the population is vulnerable to poverty, meaning they experience 20% to 33% of the weighted deprivations.

The poorest country in the region is the low-income country of Tajikistan – 12% of its population is multidimensionally poor and another 25% is vulnerable to multidimensional poverty. All other countries have headcount ratios under 5%. More than 10% of Tajikistan's total population is poor and lacks adequate housing.

Still, Tajikistan has one of the lowest MPI of all low-income countries, showing what is possible. The most encouraging fact is that vanishingly small levels of acute multidimensional poverty (MPI of 0.001 or 0.002 and headcount ratio less than 0.5%) are found in Armenia, Ukraine, Serbia, Turkmenistan, Kazakhstan and Montenegro.

It is difficult to draw too many conclusions from the results of the global MPI for Europe and Central Asia because this internationally comparable measure of acute poverty does not adequately capture the higher aspirations with respect to poverty that are held in the region. A measure of more moderate poverty would be better

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FIGURE IV.17   Where Do the 3.5M Poor People in Europe and Central Asia Live?
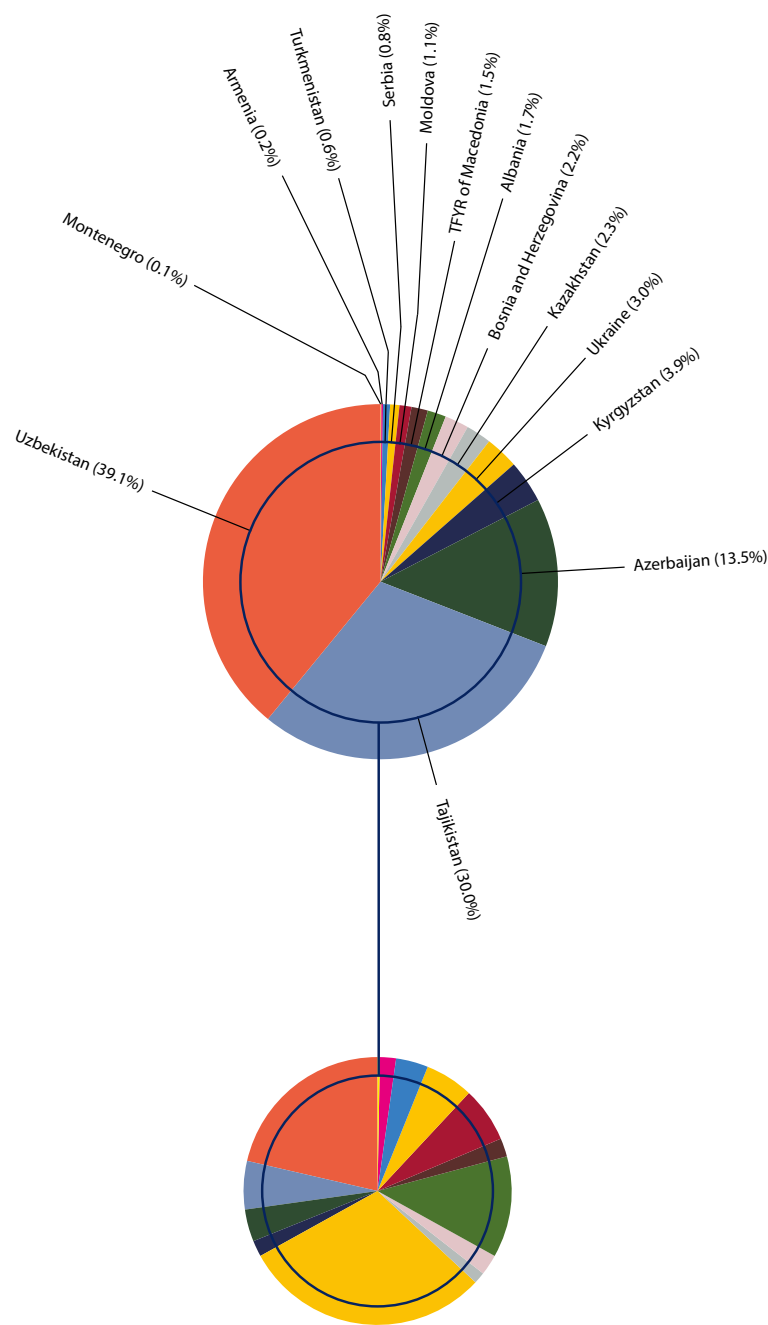
FIGURE IV.18   Population Coverage in Europe and Central Asia

suited to understanding the pockets of poverty that exist within the region, as well as potential areas for improvement more broadly. We continue to calculate the MPI here for two reasons. First, it depicts the variations in poverty across the globe, and, second, it is genuinely encouraging to see that the kind of acute poverty that the MPI covers can actually be eradicated.

FIGURE IV.19   Europe and Central Asia: Value of the MPI and its Composition
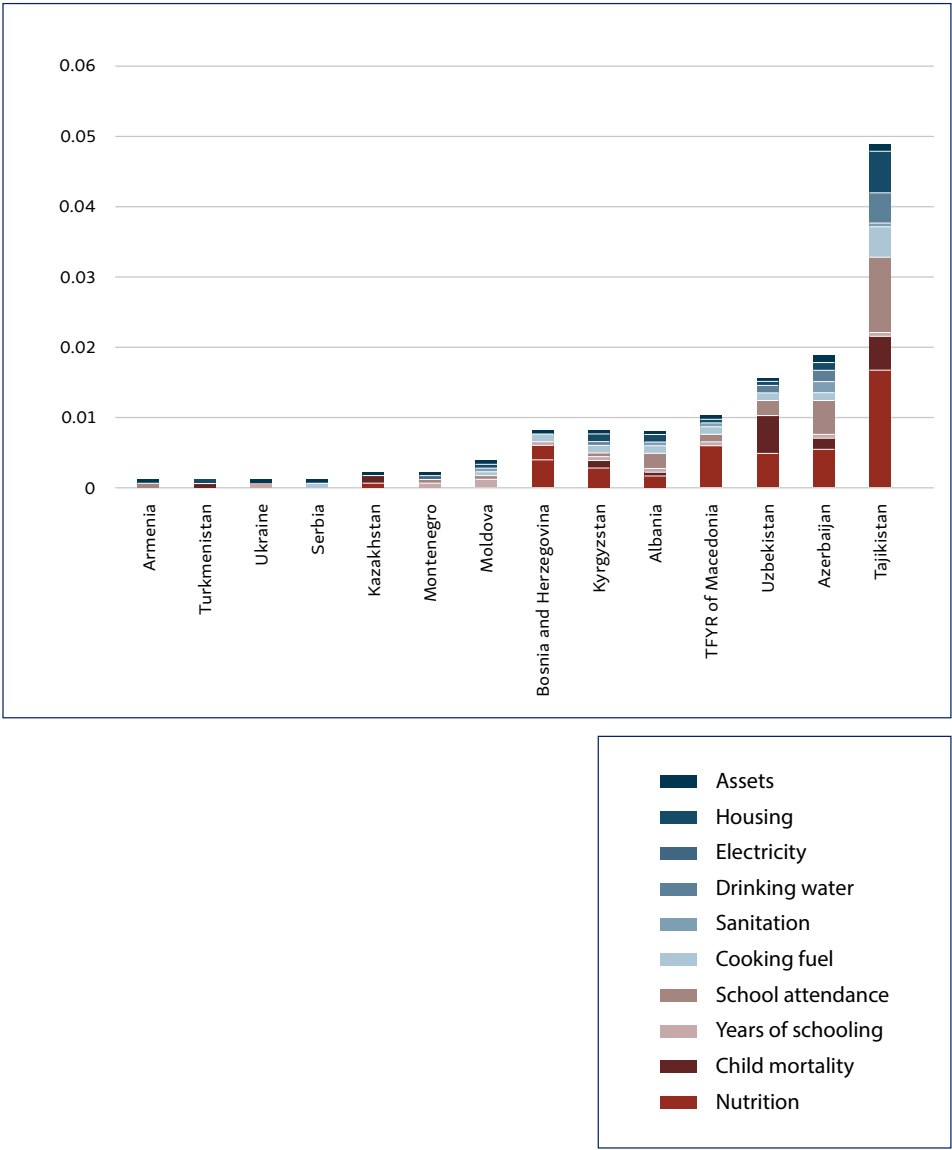
TABLE IV.6   Global MPI for Europe and Central Asia

Country	Survey	Year	MPI (MPI = H×A)[1]	Headcount ratio (H)[2]	Intensity (A)[3]	Number of poor people[4]	Vulnerable to poverty[5]	In severe poverty[6]	Missing indicators
Armenia	DHS	2015/16	0.001	0.2	36.2	5,455	2.7	0.0	0
Ukraine	MICS	2012	0.001	0.2	34.5	106,939	0.4	0.0	Nutrition
Serbia	MICS	2014	0.001	0.3	42.5	29,902	3.4	0.1	0
Turkmenistan	MICS	2015/16	0.001	0.4	36.1	22,831	2.5	0.0	0
Kazakhstan	MICS	2015	0.002	0.5	35.6	81,492	1.8	0.0	0
Montenegro	MICS	2013	0.002	0.4	45.7	2,405	4.3	0.1	0
Moldova	MICS	2012	0.004	0.9	37.4	38,308	3.6	0.1	0
Albania	DHS	2008/09	0.008	2.0	37.8	59,531	7.3	0.2	0
Kyrgyzstan	MICS	2014	0.008	2.3	36.3	136,138	8.3	0.0	0
Bosnia and Herzegovina	MICS	2011/12	0.008	2.2	37.9	77,023	4.1	0.1	Child mortality
TFYR of Macedonia	MICS	2011	0.010	2.5	37.7	52,712	2.9	0.2	Child mortality
Uzbekistan	MICS	2006	0.016	4.4	37.2	1,377,129	10.1	0.3	0
Azerbaijan	DHS	2006	0.019	4.9	38.4	476,967	12.2	0.5	0
Tajikistan	DHS	2012	0.049	12.1	40.4	1,057,958	25.4	2.3	0

1. The *Multidimensional Poverty Index (MPI)* ranges from 0 to 1.
2. The *headcount ratio* is the percentage of the population with deprivation score of 1/3 or above.
3. The *intensity* is the average percentage of weighted deprivations among the poor.
4. The *number of poor people* uses 2016 population figures.
5. *Vulnerable to poverty* shows the percentage of the population that experiences 20%–33.32% of weighted deprivations.
6. *In severe poverty* shows the percentage of the population with an intensity of 1/2 or above.

V. Rural and Urban Areas

EIGHTY-FIVE PERCENT OF MPI POOR PEOPLE LIVE IN RURAL AREAS[10]

Out of all the MPI poor people across 105 countries, 85% live in rural areas according to the definitions used in the survey.[11] Only nine countries, housing 2.8% of the combined population, have a rural share of MPI poverty that is less than 50% (meaning that less than half of that country's poor people live in rural areas). In fully 80 out of the 105 countries covered, the rural share of MPI poverty is 70% or higher, which means that 70% or more of poor people live in rural areas. So the MPI draws attention to pervasive urban-rural disparities.

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10. The 2018 global MPI covered an estimated population of 5,731,716,617. However, in the rural-urban area estimation, the total population covered is 5,731,289,073. Some 427, 470 individuals are excluded from the area estimation. These are individuals who live in camps in the State of Palestine. In the country report, camps are identified as an additional area besides urban and rural areas. We do not present the figures here since this chapter is limited to the dichotomous rural-urban indicator. Despite this limitation, we recognize the abject deprivation experienced by the many displaced communities living around the world.

11. The definitions of "rural" and "urban" are taken directly from the surveys used to construct the MPI. These definitions vary across countries and it is not possible to apply a standard definition. Following the definition from the surveys, we find that 55% of the global population are living in rural areas, while 45% are living in urban areas.

RURAL-URBAN POVERTY VARIES BY GEOGRAPHIC REGIONS

The share of poor people who live in rural areas varies across geographic regions, from 68% in Latin America and the Caribbean to 85% in Sub-Saharan Africa and 88% in South Asia, where the rural population share is substantially greater.

The rural poverty share is particularly high in Sub-Saharan Africa, where 34 countries have a share greater than 70%. Burundi, Malawi, and Madagascar have the most striking rural-urban divides, with around 95% of poor people living in rural areas (and rural population shares of above 85%). The situation in Sao Tome and Principe is significantly different with a rural poverty share of 45%, making it the only country in Sub-Saharan Africa with more poor people in urban areas. However, only 33% of the population in Sao Tome and Principe lives in rural areas.

India's rural-urban divide is reflective of South Asia as a whole, and 89.3% of India's poor live in rural areas (while 67.3% of its population is rural). Among South Asian countries, Nepal has the smallest share of the poor population living in rural areas (55%, at a 41% rural population share). Among East Asian and Pacific countries, Cambodia has the largest share of the poor population living in rural areas (97%, with 84% rural population share).

TABLE V.1   MPI Poverty by Region and Urban/Rural Areas

	Number of countries	Total population (million)[1]	Rural population (million)	Rural population share	Number of MPI poor (million)[2]	Number of rural poor (million)	Number of urban poor (million)	Rural share of MPI poor[3]
Arab States	13	341	173	50.7%	66	52	14	78.9%
East Asia and the Pacific	11	2,011	973	48.4%	118	93	25	78.6%
Eastern Europe and Central Asia	14	149	73	49.3%	4	3	1	84.3%
Latin America and the Caribbean	20	516	128	24.7%	40	27	13	67.9%
South Asia	7	1,745	1,180	67.6%	546	478	68	87.6%
Sub-Saharan Africa	40	969	649	67.0%	559	475	84	84.9%
Global MPI	**105**	**5.73 billion**	**3.18 billion**	**55.4%**	**1.33 billion**	**1.13 billion**	**205**	**84.7%**

Source: Own computations; all aggregates are population-weighted.

1. Source: United Nations, Department of Economics and Social Affairs, Population Division (2017). World Population Prospects: The 2017 Revision, DVD Edition [Accessed on 28 July 2018].
2. The number of poor people uses 2016 population figures.
3. Rural share of MPI poor: the percentage of MPI poor living in rural areas

TABLE V.2   MPI Poverty by Urban and Rural Areas

	URBAN AREAS			RURAL AREAS		
	MPI[1]	Incidence (H)[2]	Intensity (A)[3]	MPI[1]	Incidence (H)[2]	Intensity (A)[3]
Arab States	0.036	8.2%	43.5%	0.158	30.0%	52.8%
East Asia and the Pacific	0.010	2.4%	39.3%	0.042	9.5%	44.1%
Eastern Europe and Central Asia	0.003	0.7%	35.7%	0.016	4.0%	38.7%
Latin America and the Caribbean	0.013	3.3%	40.2%	0.094	21.2%	44.6%
South Asia	0.052	12.0%	43.1%	0.187	40.5%	46.1%
Sub-Saharan Africa	0.124	26.4%	46.8%	0.412	73.1%	56.3%
Global MPI	**0.035**	**8.0%**	**44.0%**	**0.179**	**35.5**	**50.5%**

Source: Own computations; all aggregates are population-weighted.

1. The multidimensional Poverty Index (MPI) ranges 0 to 1.

2. The headcount ratio is the percentage of the population with deprivation score of 1/3 or above.

3. The intensity is the average percentage of weighted deprivations among the poor.

Overall, 30 of the 39 countries with a rural population share of below 50% have a rural poverty share greater than 50%. Most of the countries are in Europe and Central Asia (6 of 14 countries), Latin America and the Caribbean (10 of 20 countries) and Arab States (5 of 13 countries). Only Nepal in South Asia and five Sub-Saharan African countries were part of this group of countries.

The incidence and intensity of poverty are consistently higher in rural areas for all regions. In Sub-Saharan Africa the intensities are substantially higher in rural areas, where they differ by approximately nine percentage points.

COUNTRY EXAMPLES

The starkest differences between rural and urban poverty are in countries of Sub-Saharan Africa. Nineteen of the 20 countries with the greatest differences in rural and urban MPI are located in this region. Burkina Faso, a country characterized by a high rural population share (78%), showed the greatest difference between the rural MPI (0.604) and the urban MPI (0.218). Angola's difference between its rural MPI (0.523) and its urban MPI (0.145) is similarly pronounced, though with a lower rural population share (36%), which makes it the only Sub-Saharan African country covered that has more of its population in urban areas.

Comparing across countries can also elicit some surprises. For example, South Sudan and Niger are the two poorest countries nationally, with MPIs of 0.581 and 0.591, respectively. However, the urban population of Niger shows that 58% of people live in poverty, and in its capital Niamey, the figure is 45%. But in Niger's rural areas it is 97% - higher than all but the

very poorest subnational regions global-ly. In contrast 84% of urban residents in South Sudan are multidimensionally poor and 95% of rural ones. So the difference is stark.

HOW IS RURAL POVERTY DIFFERENT FROM URBAN POVERTY?

For each indicator in the MPI, the percentage of poor people globally who are deprived in that indicator is greater in rural areas than in urban areas. Rural-urban differences are particularly pronounced in the indicators for the living standards dimension, with Sub-Saharan Africa, South Asia, and East Asia and the Pacific as the regions with the greatest rural-urban divides.

While measuring the population that is poor and deprived in each indicator is informative, the global MPI can also be decomposed by the *contribution* of each of the ten *weighted* indicators to the overall MPI. The living standards indicators contribute more to the MPI in rural areas throughout all regions, with the exception of electricity in Europe and Central Asia and cooking fuel in Sub-Saharan Africa, where the contributions to the overall MPI in urban areas are marginally greater than in rural areas. Nutrition, child mortality and school attendance on the other hand contribute more to the urban MPI in almost all regions.

Once the contributions are weighted by the respective urban and rural populations in poverty, as can be seen in Figure V.1, we find that the weighted contributions in all indicators are greater in rural than in urban areas. In this figure, the height of the bar indicates the number of poor people experiencing this average composition of

poverty. Only in Latin America and the Caribbean, the region with a substantially lower rural population share, do nutrition and child mortality contribute more to the MPI in urban than in rural areas.

In an information age, an age of big data, of rapid technological change, and one in which the elite dwell in cities, the MPI brings into focus ongoing real deprivations experienced in rural areas. Nonetheless, the global MPI is not a complete measure. Rural assets such as land and livestock could not be incorporated due to problems in data availability. And urban travails including crime and violence, poor waste disposal, congestion, and unemployment are missing from the global MPI. But while these deprivations could and will, when data permit, be used to create a wider-angle view on multidimensional poverty, the deprivations and associated levels of rural poverty reported here are acute, and must be addressed.

FIGURE V.1   Urban-Rural Contributions of Each Weighted Indicator to the Overall MPI by Regions
(Weighted by Number of Poor People)
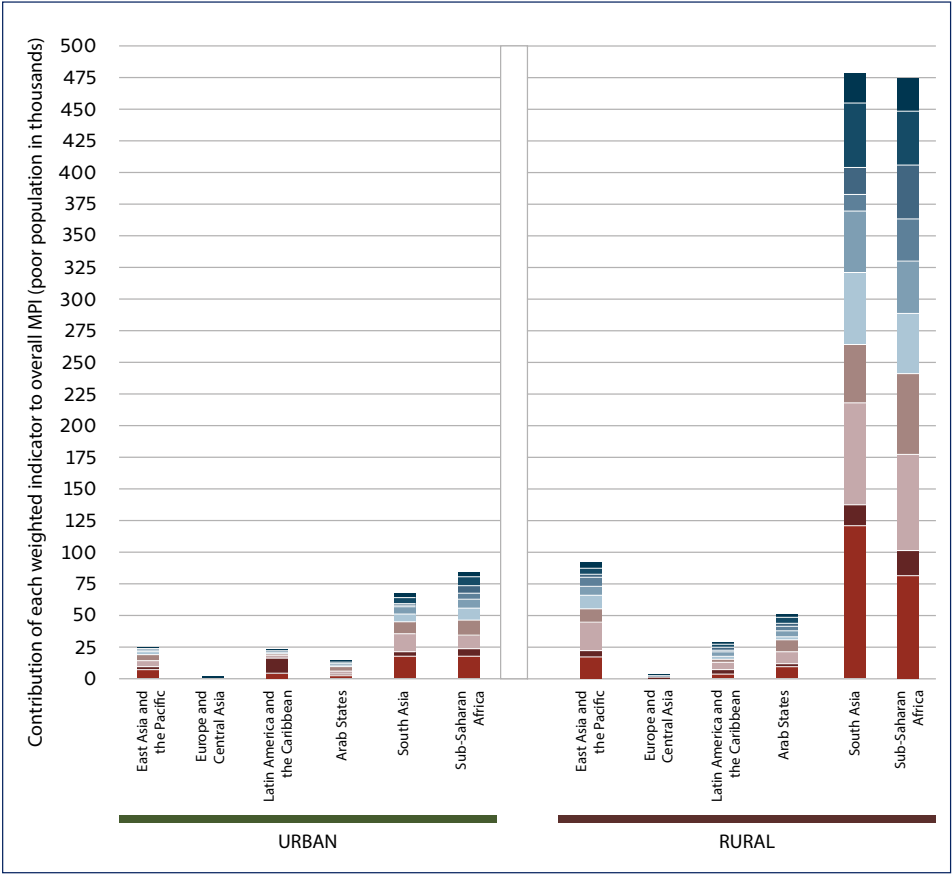
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VI. Subnational Regions

WHY DISAGGREGATE – AND HOW?

The global MPI is disaggregated by different population groups: rural and urban areas, age cohorts, and, as in this chapter, subnational regions. The India case study is disaggregated by caste and religion, and other studies using the global MPI have focused on disparities across ethnic groups (Alkire, Roche and Vaz 2017) or persons who experience a disability (Pinilla-Roncancio and Alkire 2017). The subnational disaggregation of the global MPI allows us to identify the poorest regions in the world and see to what extent people in these regions are being left behind in the dimensions of health, education, and living standards. This can be useful for improving policy planning to more precisely target areas most in need. It can also yield surprising insights into the complexity and variation of geographical poverty traps not just across the globe, but also within countries.

Disaggregation is only useful if it can make inferences beyond the survey sample, so it needs to be done with an understanding of the constraints and limitations of the data. In all disaggregated analyses, we follow the survey report guidelines for disaggregation in each country to ensure that the survey was designed to allow for this type of analysis. We also check that the disaggregation is valid for our own precise calculations, given how we have treated the data. This means that there are some countries for which we can estimate a national-level MPI but cannot further disaggregate at the subnational level.

This chapter presents the 2018 global MPI subnational estimation of poverty and its composition for 88 countries and 1,127 subnational regions; Chapter 2 already presented insights across the 640 districts of India. Of the 105 countries covered in the global MPI 2018, subnational disaggregation was not possible for 17 countries.[12]

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12. Three countries – Armenia, Bosnia and Herzegovina, and Saint Lucia – have sample sizes that are representative at the national level but not at the subnational level. In 10 countries (Jordan, Kazakhstan, Republic of Moldova, Montenegro, the State of Palestine, Serbia, Trinidad and Tobago, Tunisia, Turkmenistan and Ukraine) the national MPI value is very low (MPI<=0.005). This renders impossible any meaningful subnational analysis for these ten countries. Furthermore, in four of the countries – Maldives, South Africa, South Sudan and Vanuatu – the final number of observations used to estimate the MPI was below 85% of the total observations in the datasets. In Maldives, close to one-third of the eligible women and children did not provide information on their weight and height. This results in high missing observations for the final nutrition indicator. In South Africa, some 16% of the individuals were identified as living in households where there is lack of information on school attendance despite having a school aged child or children living in those households. In South Sudan, close to 24% of the individuals were identified as living in households where there is a child or children under 5 years, but those children lack nutrition data. Furthermore, close to 8% of the individuals live in households where eligible women did not provide information on child mortality. In Vanuatu, the high non-response rate is associated with the lack of under-5 nutrition information. A bias analysis was carried out across the subnational regions for these four countries. The results indicate a subnational bias, hence ruling out these countries for subnational disaggregation.

DISAGGREGATION IN GLOBAL MPI 2018

A total of 1,127 subnational regions can be assessed through the lens of the global MPI. Many of these subnational regions – 41% – are in Sub-Saharan Africa (458 regions). Europe and Central Asia is the region with the fewest subnational units, with a total of 41 regions or 4% of the total subnational units in our analyses. In addition, the analysis covered 243 subnational regions in the Latin America and the Caribbean region, 133 in the East Asia and the Pacific region, 143 in the Arab States region and 109 in the South Asia region. In addition to these, India can be further disaggregated by 640 districts, bringing the total number of units to 1,767.

The countries with the highest number of subnational regions are Nigeria (37), India (36 states; 640 districts), Afghanistan (34), and Indonesia (33). Countries with large populations tend to have the highest subnational variations in terms of subnational population size. In China, the Western region is the least populated subnational unit with 381 million habitants, whereas the East/Coastal region, the most populated unit, is home to 179 million more people (560 million). In India, the least populated district is Lakshadweep with 80 thousand people, whereas the population in Uttar Pradesh is more than 2,500 times greater (207.1 million people). At a global scale, the population size of the subnational units ranged from 560 million people in the East/Coastal region in China to 3.5 thousand people in Coronie, Suriname.

INTRICATE VARIETY

National averages obscure subnational variation.

Our subnational analyses reveal that there is substantial variation in poverty within all 88 countries covered in the analysis. This pattern is observed in Chad, a country with the highest number of poorest regions, as well as in Albania – a country with one of the lowest shares of poor people. In Chad, the survey data from 2014 to 2015 indicate that on average some 86% of the population is poor. But by zooming into the 21 administrative regions of the country,[13] we find that poverty ranges between 48% in the capital city of N'Djaména to 99% in Wadi Fira, a region located in the eastern part of the country that shares a border with Sudan. In Albania, on average some 2% of the population is multidimensionally poor. Across the four major subnational regions of the country, the poverty headcount is under 1% in the urban Tirana and coastal regions, but is slightly more than 6% in the mountain region.

Notably, for most countries, a north-south or east-west divide is apparent. In the landlocked country of Mali, average poverty is 78%. Within the country, poverty in the southern capital city of Bamako is 30%, but it is three times higher in the region of Timbuktu up north. In Indonesia, poverty is as low as 2% in the metropolitan city of Jakarta, but as high as 45% in the eastern province of Papua. On average, some 7% of Indonesians are identified as multidimensionally poor. The geographic

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13. It should be noted that there are 23 administrative regions in Chad. However, in the Chad DHS 2014–2015 survey, the regions of Borkou and Tibesti was grouped into one area of study, and the regions of Ennedi West and Ennedi East was grouped into a single region.

trend is also apparent in upper middle-income countries such as Belize. The country with the lowest population density in Central America has subnational poverty rates ranging from under 1% in Belize City to 18% in the southern region of Toledo, despite recording a nation-wide average of 4% poverty.

Disaggregating by subnational region can highlight pockets of poverty in otherwise less poor countries. For instance, Uganda has an MPI of 0.279, much less than that of the poorest countries like Chad (0.535) and Niger (0.591). However, the region of Karamoja in Uganda is poorer than either of these countries, with an MPI of 0.631 and 96% of its population identified as multidimensionally poor. A similar situation is found in Indonesia, where the value of the MPI (0.021) is lower than the Philippines (0.038), but the region of Papua has an MPI of 0.216 and 44% of the population live in multidimensional poverty.

In contrasting fashion, there are some poorer countries that have less poor regions representing pockets of progress. The clearest examples are Lagos in Nigeria and Yaounde in Cameroon. According to the MPI, Nigeria (0.294) and Cameroon (0.244) are among the 30 poorest countries, and they are even poorer than a number of countries categorized as 'least developed' by the United Nations. Lagos, however, has an MPI of 0.010 and 2% of its population lives in multidimensional poverty. Similarly, the MPI in Yaounde is 0.015 and the headcount ratio is 4%. While the MPI in India is 0.121, we observe remarkable progress in Kerala (0.004) and Lakshadweep (0.007) in counterpoint to the scale and intensity of India's

remaining MPI poverty. In both states, less than 2% of the population lives in multidimensional poverty, which is comparable to the situation in Lima (Peru), Grand Casablanca (Morocco), and Suez (Egypt).

These sets of analyses indicate that national averages often obscure the important variation that is found at the subnational level.

Variation in the major regions of the world.

In Chapter 4, we identified that in this decade, a higher share of the multidimensionally poor live in Sub-Saharan Africa than in any other of the major regions of the world. Interestingly, this region also has the greatest variation in its subnational poverty. The region of Lagos in Nigeria has an MPI of just 0.010, and the district of Lac in Chad has an MPI of 0.711.

Similarly, significant variation is also observed in the Europe and Central Asia region, which on average has a very low share of multidimensionally poor people. In this region, MPI ranges between 0.077 in the region of Khatlon in Tajikistan to zero in Bishkek City in Kyrgyzstan.

In East Asia and the Pacific, home to the fastest growing economies, the poorest region located in the Lao People's Democratic Republic has an MPI of 0.391, while it is zero in Bangkok. Of the poorest 20 subnational regions within East Asia, 16 are located in the fertile region of the Mekong Delta. The other four are located in Timor-Leste, a country that gained its independence in 2002, making it the first sovereign state born in the 21st century.

The poorest and most prosperous regions.

The poorest subnational region out of all 1,127 regions is Lac, located in Chad (MPI = 0.711). Ninety-eight percent of the 763,000 inhabitants of Lac are identified as multidimensionally poor. On average, each poor person in Lac is deprived in nearly 73% of the MPI indicators, which also makes it the region with the highest intensity of poverty. Furthermore, eight of the ten poorest MPI regions of the world are in Chad and two are in Burkina Faso.

The least-poor regions are the city of Kingston in Jamaica, Bishkek City in Kyrgyzstan, and Bangkok in Thailand. A common factor between the ten least-poor regions of the world is that these are all either the capital or major cities of their country. Furthermore, four of the ten multidimensionally prosperous regions are located in the Latin America and the Caribbean region.

Interestingly, pockets of progress and pockets of poverty may be closer than one would imagine. While Karamoja in Uganda is a conspicuous poverty pocket, 6% of the population in Kampala lives in multidimensional poverty, and the value of the MPI in this region (0.026) is similar to that of Mexico (0.025) and Colombia (0.021) at the country level.
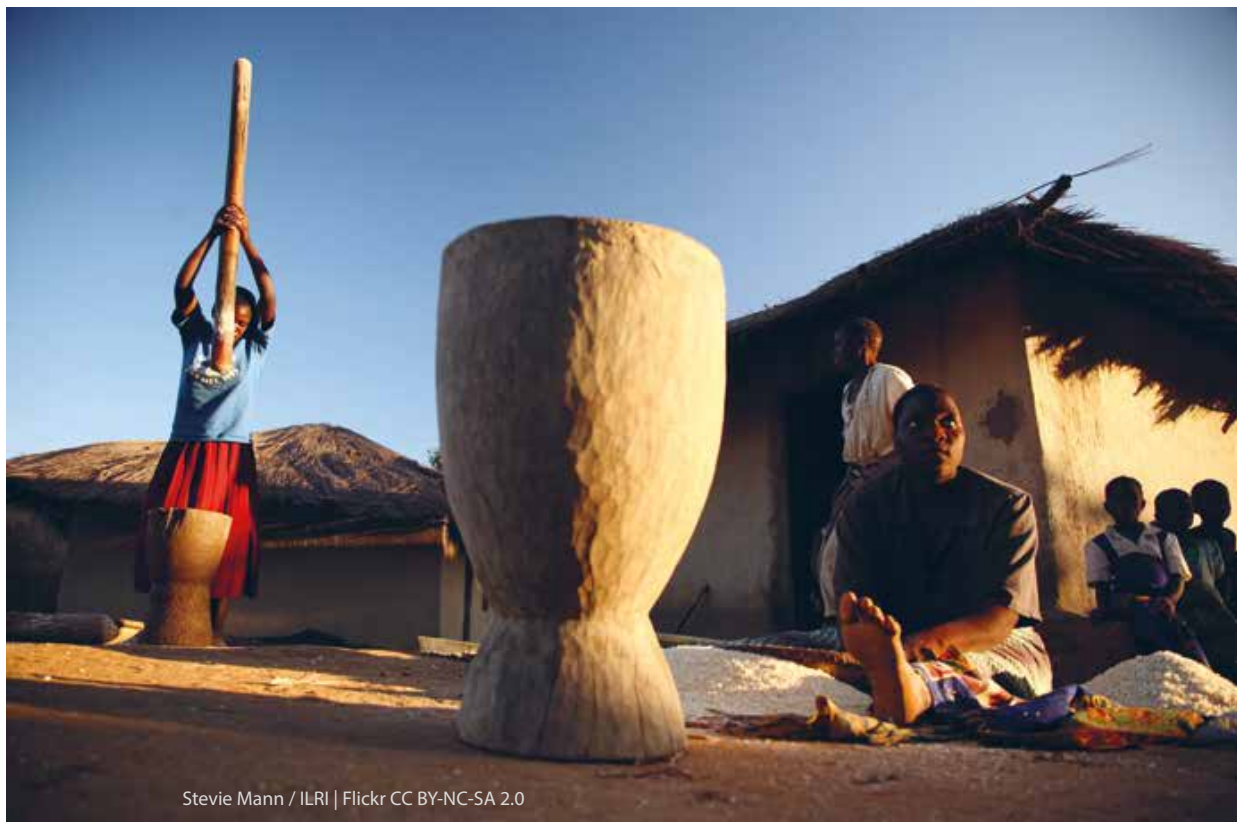
Stevie Mann / ILRI | Flickr CC BY-NC-SA 2.0

GLOBAL MPI AND MONETARY POVERTY: COMPLEMENTS, NOT SUBSTITUTES

Are people who experience multidimensional poverty also identified as poor by monetary measures? Not necessarily. The case of Sylhet, a subnational region in Bangladesh, provides a useful example.

Sylhet is the poorest region in Bangladesh according to the MPI, with more than 62% of its population suffering from multidimensional poverty in 2014. However, in the 2010 Bangladesh Household Income and Expenditure Survey, Sylhet already was one of the least poor regions according to the cost of basic needs (CBN) method (upper line), with only 28% reported as poor[1], and by 2016 Sylhet was second least poor with a headcount ratio of 16.2%. Furthermore, in 2016 Sylhet has the lowest poverty gap (2.6%) and squared poverty gap (0.7%) in the country. Thus taking a purely monetary approach to poverty would not suggest the high levels of non-monetary poverty.

What explains this difference? Sylhet has large numbers of emigrants, primarily to the United Kingdom and other developed countries. They send remittances to their families in Bangladesh. According to the Survey on Investment from Remittance 2016, the average amount of annual remittances per household in Sylhet (US$4282) is the second highest after Dhaka ($4625). Furthermore, from 2013 to 2015, Sylhet's remittance income grew at the fastest rate (76%) among all the regions of Bangladesh. So far, however, these remittances do not seem to have lessened the other deprivations experienced in Sylhet, which require more structural improvements and coordinated policy action.

Multidimensional and monetary measures capture different experiences. By using them together as complements, we can obtain a more complete picture of the lives of the poor and better recommendations for policymaking.

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1. See here. Note that the World Bank's $1.90/day measure cannot be disaggregated subnationally, and this is the most recent available official monetary measure of poverty.

FIGURE VI.1   MPI and Monetary Poverty in Bangladesh

Multidimensional poverty headcount ratio, 2014

Headcount ratio by the CBN method, 2016*

* For comparability with MPI (2014), the monetary headcount ratio by CBN for Dhaka corresponds to the population-weighted average of Dhaka and Mymensingh, based on the 2011 Population Census.
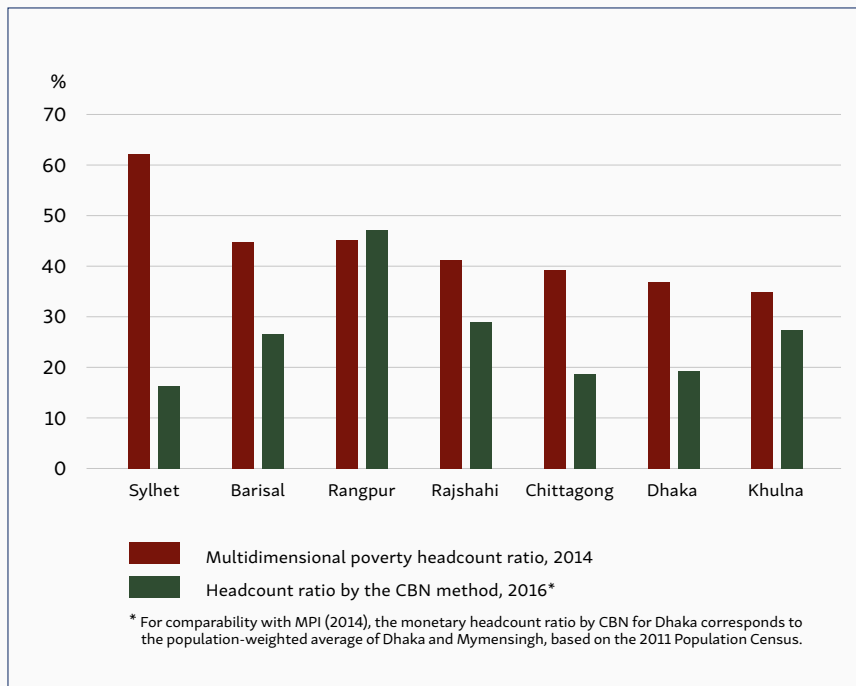
COMPOSITION OF POVERTY:
A SUBNATIONAL ANALYSIS

Subnational data can also show how the ways in which people are poor differ within countries. These differences in composition of poverty imply different policy responses by national governments are needed for different districts. Even subnational regions with relatively similar levels of poverty can have different compositions of poverty. In Malawi, the Mzimba region has an MPI of 0.164 and the Thyolo region has an MPI of 0.239. Both are in the middle range of subnational regions. However, the contribution from malnutrition in Mzimba is more than a quarter – double that of Thyolo, while the years of schooling indicator contributes 19% in Thyolo and only 5% in Mzimba. In general, the living standards indicators tend to be more similar across subnational regions, while health and education indicators tend to show more variation.

In Egypt and Viet Nam, the average proportion of people who experience multidimensional poverty is close to 5% for each country. In addition, the average national MPI and intensity value is also very similar. Subnationally, there is substantial poverty variation within both countries. In Egypt, across its 26 subnational regions, MPI ranges between 0.043 in Matroh and 0.001 in Port Said. In Viet Nam, MPI ranges between 0.041 in the Central Highlands and 0.004 in the Red River Delta

region. Despite the similarities in the national average and subnational poverty figures, the geographic poverty trap is different between both nations. In the poorest region of Egypt, the weighted deprivation in school attendance contributes 36% to overall MPI poverty. In the poorest region of Viet Nam, this is only 17%.

In Timor Leste, the MPI ranges between 0.093 in Dili, the capital city, to 0.322 in Oecussi located in the western part of the island. The highest contribution to MPI for both regions as well as all other regions within the country is from malnutrition. This suggests that a national policy response to mitigate stunting among children and malnourishment among children and adults would be favorable in the poorest and least poor regions of the country.
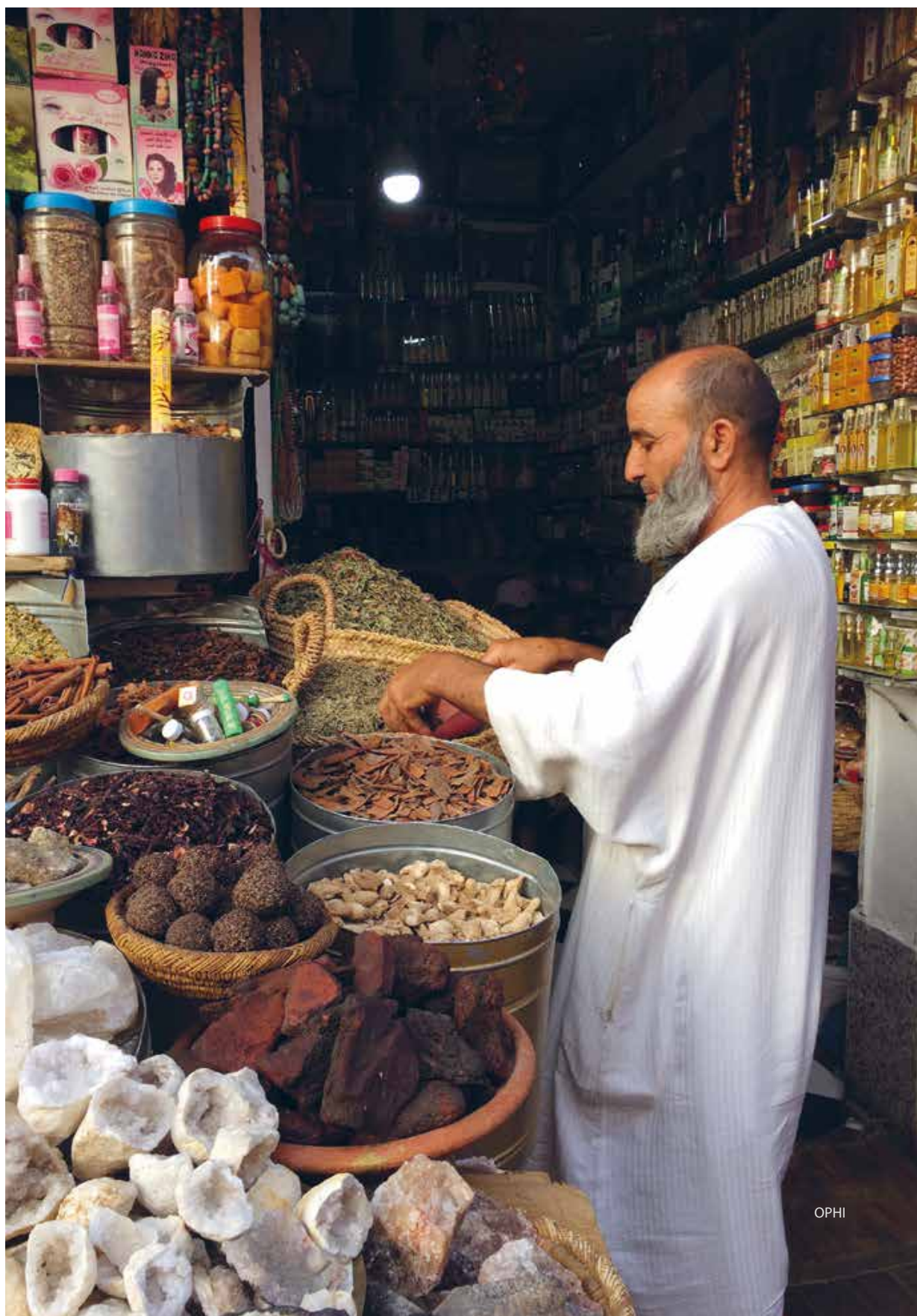
Conclusion and Next Steps

The global MPI 2018, although data constrained, provides a headline figure and an associated information platform, enabling comparisons of multidimensional poverty to a degree no other measure at present permits. A closing example encapsulates how the MPI moves from a national headline to an information platform. Using 2015/16 data, India has an MPI of 0.121, depicting lower levels of multidimensional poverty compared to Bangladesh's MPI of 0.194 (which uses 2014 data). The global MPI permits us to zoom in on adjacent regions. In Rangpur, Bangladesh, the poverty rate according to data collected 28 June to 9 November 2014 amounts to 45.2% and the MPI is 0.201. In neighboring West Bengal, India, where data were collected 25 February to 21 July 2015 the figures are considerably lower: 26% and 0.109. Yet in West Bengal, 26 million people are poor whereas in Rangpur, the figure is 8.2 million. Looking at the composition of poverty by each of the ten indicators, the percentage of the people living in each of these regions who are poor and experienced child mortality is roughly the

same. However, in eight indicators Rangpur shows higher deprivations. Differences are particularly stark in the case of electricity, with 34% of people in Rangpur being MPI poor and lacking electricity and only 4% in West Bengal. In contrast, water deprivations are vanishingly small in Rangpur whereas in West Bengal nearly 5% of people are MPI poor and lack access to safe drinking water. Acute multidimensional poverty affects one-quarter to 45% of people in both regions and must be addressed. But the shape of poverty differs, and the composition of the MPI provides insights – which can be complemented with other information – on how to match policy priorities to pressing deprivations.

Naturally, not all comparisons can be as precise as this: data on neighboring countries may differ by several years, an indicator could be missing, or disaggregation by region may not be permitted. But interpreted with data constraints in view, the detailed picture of the world's poorest people the global MPI provides could spark concerted and informed action.

TABLE C.1   The MPI Information Platform for Subnational Regions

Country	Region	World region	Survey	Year	Population share of the region	MPI of the country	MPI of the region	H of the region	A of the region	Vulnerability (20–33.2%)	Severe poverty (50%)
Bangla-desh	Rangpur	South Asia	DHS	2014	11.2	0.194	0.201	45.2	44.5	23.4	10.6
India	West Bengal	South Asia	DHS	2015/16	7.6	0.121	0.109	26.0	41.9	19.6	3.7

So first and foremost, this report seeks to provide evidence that ignites ongoing interaction, improvement, and engagement among those intending to engage, so we learn together and join efforts to fight poverty in all its dimensions.

SOME NEXT STEPS

In that spirit, it seems apt to communicate to the interested community some other resources that are available now or are under construction. The results in this report reflect only a fraction of the information that might be obtained from the 2018 data tables available on both the UNDP and OPHI websites.

For example, for simplicity, aggregates use point estimates in this document. But the data tables share standard errors and confidence intervals – and these matter. It could be asked, "Do more poor people live in Sub-Saharan Africa than South Asia?" to which the answer is, "We do not know." Hence, this report's observation that similar numbers of poor people live in both regions. To be precise, aggregating across the 95% confidence intervals for each country reveal that in South Asia between 531 and 561 million people are MPI poor, and the total in Sub-Saharan Africa is between 539 and 573 million. The Atkinson Commission on monitoring global poverty recommended that conventions change away

from point estimates to ranges, so all academic work is encouraged to include these.

To take another example of information available in the data tables, global aggregates must select which year of population to use. This report uses 2016, but as conventions and the purposes of analysis vary, the data tables provide the "year of the survey" population, as well as 2015 and 2016 population data; so the authors of academic papers might easily explore findings using alternative years.

In terms of a wider set of findings as well as a fuller analysis of the global MPI 2018 revisions, emerging papers document additional empirical and technical features of the global MPI and its analysis. This includes the conceptual justification of the revised MPI structure with respect to human development, capabilities, and the SDGs, and an elaboration of the new principles governing internationally comparable multidimensional poverty meas-

NU	Nutrition
CM	Child mortality
YS	Years of schooling
SA	School attendance
CF	Cooking fuel
SN	Sanitation
DW	Drinking water
EL	Electricity
HO	Housing
AS	Assets

		Censored Headcount Ratio										
Number of MPI poor (1000s)	Population 2016 (1000s)	NU	CM	YS	SA	CF	SN	DW	EL	HO	AS	Total indicators
8,263	18,271	25.5	1.6	26.1	7.0	45.2	32.6	0.1	34.0	44.4	25.2	10
25,966	99,995	18.3	1.4	12.9	3.1	25.3	21.8	4.8	3.9	23.4	9.5	10

ures (Alkire and Jahan 2018). Self-critical empirical tests of every indicator revision were undertaken, and over 20 additional trial MPIs using alternative indicators were computed and analyzed (Alkire and Kanagaratnam 2018). Another paper outlining the results of the global MPI enables us to answer questions like: How many people would be poor in 2018 according to the original MPI specifications? (1.38 billion). Or, how would global figures change if we used only child stunting in the nutrition indicator? (1.31 billion instead of the 1.33 billion) (Alkire, Kanagaratnam, Mitchell, Nogales and Suppa 2018). A study on India also compares India's state-level monetary and MPI values, considers state-level GDP growth, and analyses changes over time by caste and religious group within each states, to explore

finer degrees of pro-poorness (Alkire, Oldiges and Kanagaratnam 2018). A paper on assests implements nearly 30 asset indices as well as many technical analyses of the chosen asset index specifications (Vollmer and Alkire 2018). Another paper articulates precise data possibilities and limitations for 100 countries, not only for the global MPI revisions but also for generating comparable child MPIs and women's MPIs in the future.

The sheer volume of computational work underlying this report was significant. Every country's MPI was recomputed from the original micro data, in a harmonized form, which was then checked, double- and triple-checked for accuracy. The detailed algorithms (Stata do-files) underlying the global MPI 2018 for each country

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will be posted online later in 2018. And it is our hope that this will lead to more engagement with the MPI by experts and academics in policy analysis.

Other products are in process. Estimations for 15 additional countries whose datasets were fielded in 2003–2005 will be released. The original MPI covered 120 countries and included estimations from these datasets. Those will be completed so that the new MPI will also enjoy that coverage, even as we strongly hope for more recent datasets.

A second avenue of work is to harmonize datasets over time, as was done previously for 34 countries (Alkire, Roche and Vaz 2017), in order to be able to extend the kinds of analysis done here for India to many more countries. The amount of work required to harmonize every indicator definition over time – nationally and for strictly comparable disaggregated units – by indicator as well as MPI, H, and A, is quite considerable. Yet the deeper insights into effective actions to fight poverty that the eventual dataset will permit, in terms of analyses of micro-, macro-, and multi-level determinants of change in multidimensional poverty, may be well worth the effort.

Another new frontier is the individual information that is linked to the global MPI. In that regard, one associated study using the global MPI 2018 focuses on child poverty in South Asia. It analyses individual children's contribution to three indicators: nutrition for people 0–5, school attendance, and years of schooling for children 10–17. It is possible that

studies, for example, of out-of-school children, can be usefully enriched by a) contextualizing these children within their households – for example, seeing whether all children in a given household are out of school or only some and whether others in their household have completed six years of schooling, and b) contextualizing these deprivations among others – what proportion of out-of-school children live in MPI poor households? And are there common patterns of deprivation that households with out-of-school children have? While these questions have been asked in the literature in a myriad of ways, the MPI can vividly share this information as a starting point for analysis, across many countries, at times with disaggregated detail.

CONCLUSION

In 2018, UNDP and OPHI revised and produced the new global MPI. Some of whose results are shared in this report. If we look at the average MPI across all the 105 countries for which the global MPI was computed, it is 0.115. This means that, on average, the 1.3 billion MPI poor people experience 11.5% of the deprivations that would be experienced if all 5.7 billion people were multidimensionally poor and were deprived in all dimensions. Why is this important?

A lead story in this report is India. It is the only country at present with strictly harmonized data on changes in MPI over time (others are forthcoming). After a decade of impressive progress, India's 2015/16 MPI stood at 0.121. This makes India the country whose MPI is closest in value to the population-weighted MPI across all

countries of 0.115. So in some sense, India can be seen as a global representative of the developing regions and the acute multidimensional poverty they yet contain. The pressing question – for India as for all the developing regions covered – is whether rates of progress similar to those India demonstrated 2005/06–2015/16 will be realized in the ensuing years.

If they are, then, when the SDGs close in 2030, the global MPI will show progress on reducing poverty in all its forms, as considered by SDG indicators in Goals 1, 2, 3, 4, 6, 7, and 11. Indeed, considering that the population-weighted average year of global MPI 2018 is part way into 2014,[14] the global MPI 2018 reflects, in a sense, a baseline for those left behind in several of these SDGs, taken on the eve of 2015.

If they are, then when the global MPI is considered at the close of the Third Decade of Poverty, 2018–2027, it is likely to document a success.

If they are, then integrated and multisectoral policies will probably have been effectively deployed. And because the global MPI will continue to profile disaggregated poverty levels for the poorest groups,

it is likely that if progress is leaving these groups behind, this will be observed and could be redressed.

Achieving such a step-change in the landscape of multidimensional poverty requires far more than mere measurement. It requires apt policy analysis. It requires steady and consistent attention by those working in governments, civil society organizations, international agencies, and social movements. And it requires innovative leadership by persons in the private sector, by philanthropists, and, most of all, by poor people and their communities. Our hope is that the global MPI 2018 and the detailed picture of multidimensional poverty it paints will, as it is updated across the coming years, be a useful tool to help end acute poverty in all its forms.

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14. The median year of the 105 included countries is 2014.5; the population-weighted year is 2014.2; the poor-population weighted year is 2014.4.

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Annex

Calculating the Global Multidimensional Poverty Index: 2018 Revision

In 2018, five indicators of the global Multidimensional Poverty Index (MPI) were revised to better align with the Sustainable Development Goals (SDGs). The methodology remains unchanged and is described below. The MPI is calculated using the Alkire-Foster (AF) method, which consists of counting the simultaneous deprivations that negatively affect a person's life – see Alkire and Foster (2011) for a complete explanation. The AF method uses individual deprivation scores to *identify* multidimensionally poor people. The percentage of people living in this condition and the intensity of their average deprivation score are combined in the value of the MPI.

METHODOLOGY

Using the AF method, the MPI reflects simultaneous deprivations in the ten indicators that were chosen based upon principles of international comparability, accuracy, and parsimony. The brief explanation provided here follows the notations and definitions in Alkire and Foster (2011), except that weights are expressed in percentage terms and sum to one.

In order to identify whether or not a person is deprived with respect to each indicator, a *deprivation cutoff* is set for each indicator. This enables the creation of a binary deprivation profile for every person,

in which each indicator takes the value of one if that person is deprived according to the indicator deprivation cutoff and zero otherwise. For instance, any person living in a household where no member aged ten years or older has completed six years of schooling is deprived in the years of schooling indicator, and thus is assigned a value of one in their deprivation profile. Conversely, any person living in a household where a least one person aged ten years or older has completed six years of schooling is not deprived in this indicator, and thus is assigned a value of zero in their deprivation profile for years of schooling.

Once the deprivation profile is created across ten binary variables for each person, it is weighted by the deprivation value (weight) of each indicator. The deprivation value of each indicator reflects

1. the roughly equal importance given to each one of the three dimensions in the MPI (1/3 each), and

2. the roughly equivalent importance of each indicator within each dimension (two in health, two in education, and six for living standards). Each indicator in the education and health dimensions is assigned a deprivation value of 1/6, and each of the six living standards indicators obtains a weight of 1/18.

The weighted deprivations are summed to create each person's deprivation score denoted as c, indicating the proportion of weighted deprivations that person experiences. The deprivation score c is defined to take values ranging between zero (indicating that the person does not experience any weighted deprivation) and one (indicating that they experience weighted deprivations in each of the ten indicators).

In order to identify the people who suffer multidimensional poverty, the deprivation score c is compared to the poverty cutoff k. For the global MPI, the cutoff takes a value of 1/3. Every person with a deprivation score c equal to or greater than 1/3 (or 0.3333) is identified as **multidimensionally poor.**

Once the poor people are identified, the MPI is computed as the product of two measures: the multidimensional headcount ratio and the intensity of multidimensional poverty. The headcount ratio, H, is the proportion of the population who are multidimensionally poor:

$$H = \frac{q}{h}$$

where q is the number of people who are identified as multidimensionally poor and n is the total population.

The intensity of poverty, A, reflects the proportion of the weighted indicators in which, on average, multidimensionally poor people are deprived. To compute A, the weighted deprivation scores c of all poor people (and only poor people) are summed and then divided by the total number of multidimensionally poor people (q):

$$A = \frac{1}{q} \sum_{1}^{q} c$$

To make visible different intensities of deprivation, four additional poverty cutoffs are reported for the global MPI. The **union MPI** – which identifies a person as poor if they experience deprivation in any indicator – is reported, with its associated statistics, as using the poverty cutoff of 1%. Every person with a score c between 1/5 and 1/3 is identified as belonging to a band of people who are still **vulnerable to multidimensional poverty.** And every person with a score c of 1/2 (or 0.5) or greater is identified as (both MPI poor and) living in **severe multidimensional poverty.** The MPI statistics for a final cutoff of 40% is also reported.

TABLE A.1 Sample Deprivation Profiles for Eight Persons

Person	Nutrition	Child mortality	Years of schooling	School attendance	Cooking fuel	Sanitation	Drinking water	Electricity	Housing	Assets
Weight	1/6	1/6	1/6	1/6	1/18	1/18	1/18	1/18	1/18	1/18
1	0	0	0	1	0	0	0	0	1	0
2	1	1	0	1	1	0	1	0	1	1
3	0	0	1	0	1	1	1	0	1	0
4	1	0	0	1	1	0	0	0	1	1
5	1	0	1	0	0	0	0	0	0	0
6	0	0	0	0	1	0	1	0	0	0
7	1	1	1	1	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0

Note: 1 indicates deprivation in the indicator; 0 indicates non-deprivation.

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TABLE A.2 Sample Weighted Deprivation Profiles, Deprivation Score, and Identification of Poor

Person	NU	CM	YS	SA	CF	SN	DW	EL	HO	AS	Deprivation Score, c	MPI Poor (>33.33%)	Vulnerable (20–33.32%)	Severely Poor (>50%)
1	0	0	0	1/6	0	0	0	0	1/18	0	22.22%	No	Yes	No
2	1/6	1/6	0	1/6	1/18	0	1/18	0	1/18	1/18	72.22%	Yes	No	Yes
3	0	0	1/6	0	1/18	1/18	1/18	0	1/18	0	38.89%	Yes	No	No
4	1/6	0	0	1/6	1/18	0	0	0	1/18	1/18	50.00%	Yes	No	Yes
5	1/6	0	1/6	0	0	0	0	0	0	0	33.33%	Yes	No	No
6	0	0	0	0	1/18	0	1/18	0	0	0	11.11%	No	No	No
7	1/6	1/6	1/6	1/6	0	0	0	0	0	0	66.67%	Yes	No	Yes
8	0	0	0	0	0	0	0	0	0	0	0%	No	No	No

NU Nutrition
CM Child mortality
YS Years of schooling
SA School attendance
CF Cooking fuel
SN Sanitation
DW Drinking water
EL Electricity
HO Housing
AS Assets

- Number of weighted deprivations suffered by person 1: $(1 \times \frac{1}{6}) + (1 \times \frac{1}{18}) = 0.222$.

- Number of weighted deprivations suffered by person 6: $(1 \times \frac{1}{18}) + (1 \times \frac{1}{18}) = 0.111$.

- **Headcount ratio** (H): $\frac{5}{8} = 0.625$ (62.5% of the population is multidimensionaly poor).

- **Intensity of poverty** (A): $\frac{0.7222 + 0.3889 + 0.5000 + 0.3333 + 0.6667}{8} = 0.522$ (the average multidimensionally poor person is deprived in 52.22% of the weighted indicators).

- **$MPI = H \times A = 0.326$.**

- **Vulnerability headcount ratio:** $\frac{1}{18} = 0.125$ (12.5% of the population is vulnerable to multidimensional poverty).

- **Severity headcount ratio:** $\frac{3}{8} = 0.375$ (37.5% of the population suffers severe multidimensional poverty).

Notes

Notes

Three
Dimensions
of Poverty

Health
- Nutrition
- Child mortality

Education
- Years of schooling
- School attendance

Living
Standards
- Cooking fuel
- Sanitation
- Drinking water
- Electricity
- Housing
- Assets