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How are people poor?

measuring global progress toward zero poverty

Sabina Alkire, WIDER Annual Lecture

24 October 2017

HOW ARE PEOPLE POOR?
Measuring global progress toward zero poverty

1. Tracking poverty in all its dimensions
2. Principles of global poverty monitoring
3. The Global Multidimensional Poverty Index
   Construction ~ Features ~ Criticisms ~ Changes over time
4. Global MPI in Dialogue
   $1.90/day ~ Composite Indicators ~ MODA ~ National MPIs
5. SDG Reporting: Target 1.2
6. Hard questions

Turning to poverty analysis, identifying a minimal combination of basic capabilities can be a good way of setting up the problem of diagnosing and measuring poverty. It can lead to results quite different from those obtained by concentrating on inadequacy of income as the criterion of identifying the poor. The conversion of income into basic capabilities may vary greatly between individuals and also between different societies, so that the ability to reach minimally acceptable levels of basic capabilities can go with varying levels of minimally adequate incomes. The income-centred view of poverty, based on specifying an interpersonally invariant 'poverty line' income, may be very misleading in the identification and evaluation of poverty.

Sen 1990 Capability & Wellbeing

"A number can awaken consciences; it can mobilize the reluctant, it can ignite action, it can generate debate; it can even, in the best of circumstances, end a pressing problem"

Numbers that Move the World

by Miguel Szekely (2005, 13).

Tracking poverty in all its forms and dimensions

Transforming Our World (SDGs) 2015

Target 1.2: by 2030, reduce at least by half the proportion of men, women and children of all ages **living in poverty in all its dimensions** according to national definitions.

Preamble Sept 2015:
The **interlinkages and integrated nature** of the Sustainable Development Goals are of crucial importance.

Preamble. We recognise that **eradicating poverty in all its forms and dimensions,** including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development.

UNSG Report December 2014:

2.1 Shared ambitions for a shared future:

50. All contributions underlined that we should continue the march of the MDGs. But they have also stressed that Member States will need to fill key **sustainable development gaps left by the MDGs, such as the multi-dimensional aspects of poverty**, decent work for young people, social protection and labour rights for all.

4.1 Financing our future:

100. **Levels of concessionality** should take into account different development stages, circumstances and **multiple dimensions of poverty**, and the particular type of investment made.

5.1 Measuring the new dynamics:

135. Member States have recognized the importance of building on existing initiatives to develop measurements of progress ....These metrics must be squarely focused on measuring social progress, human wellbeing, justice, security, equality, and sustainability. **Poverty measures should reflect the multi-dimensional nature of poverty.**

69th Session of UN General Assembly

A resolution of the UNGA (A/RES/69/238) on 19 December 2014 reasserted the need for multidimensional measures as a necessary conceptual framework for the global community to measure and tackle extreme poverty.

5. [UNGA] *Underlines* **the need to better reflect the multidimensional nature of development and poverty**, as well as the importance of developing a common understanding among Member States and other stakeholders of that **multidimensionality** and reflecting it in the context of the post-2015 development agenda, and in this regard invites Member States, supported by the international community, to consider **developing complementary measurements**, including methodologies and indicators for measuring human development, **that better reflect** that **multidimensionality.**

Financing for Development 2015

May 6 2015 **Addis Ababa Accord:**

119. We further call on the United Nations, in consultation with the IFIs to develop **transparent measurements of progress** on sustainable development that complement GDP, building on existing initiatives. These should **recognize the multi-dimensional nature of poverty** and the social, economic, and environmental dimensions of domestic output. We will also support statistical capacity building in developing countries. We agree to develop and implement tools to monitor sustainable development impacts for different economic activities, including for sustainable tourism.

The Addis Ababa Accord of the Third International Conference on Financing for Development, Revised Draft, 6 May 2015

Resolution adopted by the General Assembly on 6 July 2017

[*without reference to a Main Committee (A/71/L.75)*]

71/313. Work of the Statistical Commission pertaining to the 2030 Agenda for Sustainable Development

The General Assembly,

Reaffirming its resolution 70/1 of 25 September 2015, by which the General Assembly adopted the 2030 Agenda for Sustainable Development,

Reaffirming also the pledge that no one will be left behind in implementing the 2030 Agenda for Sustainable Development, that the 2030 Agenda is people-centred, universal and transformative, that the Sustainable Development Goals and targets are integrated and indivisible and balance the three dimensions of sustainable development – economic, social and environmental – and that it is a plan of action for people, planet and prosperity that also seeks to strengthen universal peace in larger freedom, to be implemented by all countries and stakeholders, acting in collaborative partnership, and reaffirming further all the principles recognized in the Agenda and that eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development,

Africa Agenda 2063

ASPIRATION 1. A prosperous Africa based on inclusive growth and sustainable development

We are determined to eradicate poverty in one generation and build shared prosperity through social and economic transformation of the continent.

ASPIRATION 6: An Africa whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children

All the citizens of Africa will be actively involved in decision making in all aspects. Africa shall be an inclusive continent where no child, woman or man will be left behind or excluded, on the basis of gender, political affiliation, religion, ethnic affiliation, locality, age or other factors.

Potential Value-added

1. Measure poverty in multiple dimensions rigorously
2. Prioritize SDG goals and indicators
3. Make visible interlinkages across SDG indicators
4. Disaggregate by age, disability status, region, urban/rural areas etc to leave no one behind.
5. Use as a tool of governance:
   a. To shape resource allocation
   b. To coordinate policies across sectors and across levels of government
   c. To design multisectoral policies that reflect interlinked deprivations
   d. To monitor and headline progress alongside $1.90/day
   e. To share information with other stakeholders via open data
   f. To target poor households and regions
   g. To provide a concrete multipurpose tool for policy planning & action

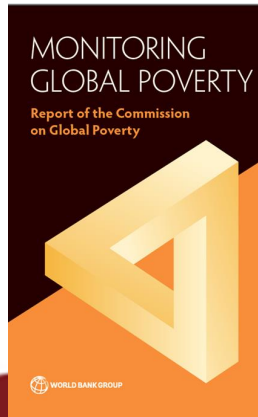
Principles and requirements of global poverty monitoring

Atkinson Commission Report: Opening Lines

"The subject of this Report—measuring global poverty—is highly controversial. There are those who believe that the current exercise is futile. The obstacles to making such a calculation are so great, it is argued, that it makes no sense to even attempt an estimate of the number of people living in extreme poverty. This view is not one that I share and it is not one that underlies this Report. The aim of the Report is to explore—within a context glossed in two key respects—what can be said.

The **first gloss** is that, as the title of the Report indicates, the principal aim is to determine **the extent to which global poverty is changing** over time…

The **second gloss** is that the Report stresses that any estimate—of level or of change—is surrounded by a **margin of error**. This is often lost from sight in public pronouncements, and it is important to convey to policy makers and other users that they are operating with numbers about which there is considerable uncertainty."



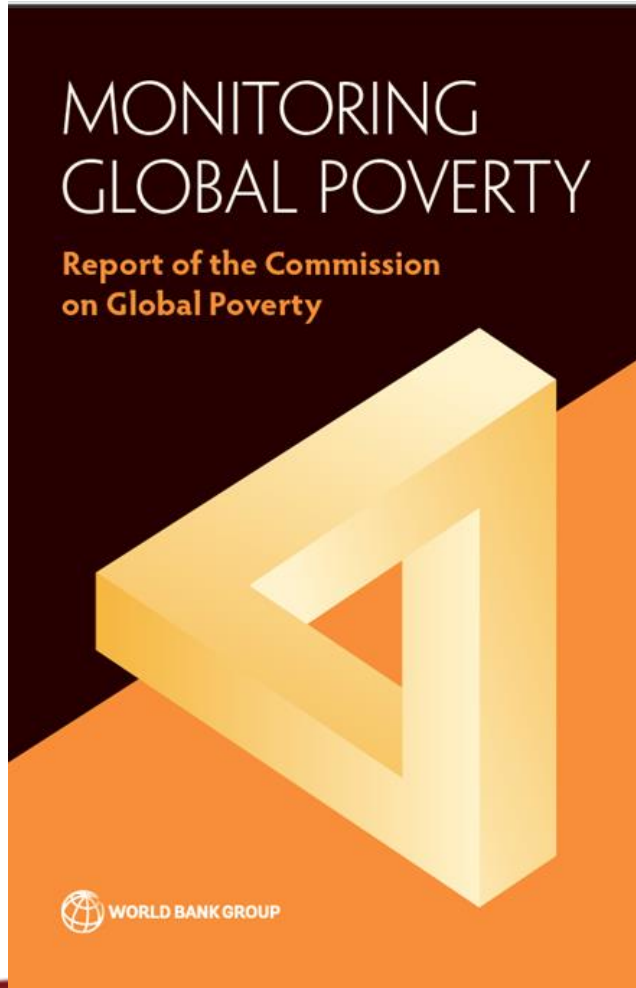
Atkinson Commission

- "the remit of the Commission… is concerned only with the monitoring of the extent of global poverty."
  - Atkinson Preface page x

1. Monitoring Extreme Poverty

2. Beyond Goal 1.1: Complementary Indicators and Multidimensionality

3. Making it Happen



Atkinson Part 2: Principles

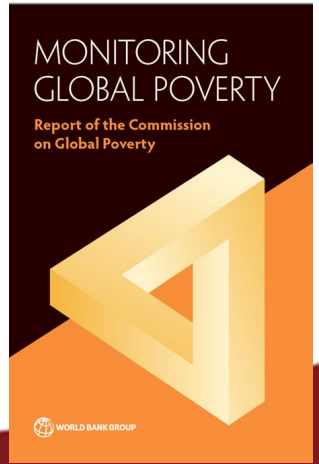
Principle 1: The coverage of the indicator should be truly global, covering the whole of the world population.

Table 2.4: Global MPI and EU Social Inclusion Indicators

Principle 2: The indicator should be transparent and identify the essence of the problem.

Principle 3: The definition of the indicator should be generally accepted as valid and have a clear normative interpretation

Principle 4: The indicator should be sufficiently robust and statistically validated; there should be a clear structure of accountability for its definition and construction.



Atkinson Commission: Principles

Principle 5: Indicators constructed with global coverage of countries should be cross-checked against information available at the level of individual countries.

Principle 6: Where indicators are either combined as in a multi-dimensional measure, or presented in conjunction as in a dashboard, the portfolio of indicators should be balanced across different dimensions. [Six non-monetary dimensions are proposed]

Principle 7: The design of social indicators should, wherever possible, make use of information already available. Where new information is needed, then it should be obtained, as far as feasible, using existing instruments or by making use of administrative data.

Atkinson Commission: Complementary Indicators

Recommendation 18: The World Bank should establish its own requirements with regard to the measurement of nonmonetary poverty, for inclusion in the **Complementary Indicators (including the overlapping poverty measure)** and in other World Bank uses, and ensure that these are fully represented in the activities of the international statistical system, particularly with regard to the proposed SDG indicators.

Choice of Dimensions for Complementary Indicators and their Overlap

On the basis of these considerations, the starting point for the dashboard proposed here is the following list of six domains (p 158):

1. **Nutrition**
2. **Health status**
3. **Education**
4. **Housing conditions**
5. **Access to work**
6. **Personal security**

Atkinson Commission: Multidimensional Poverty Indices

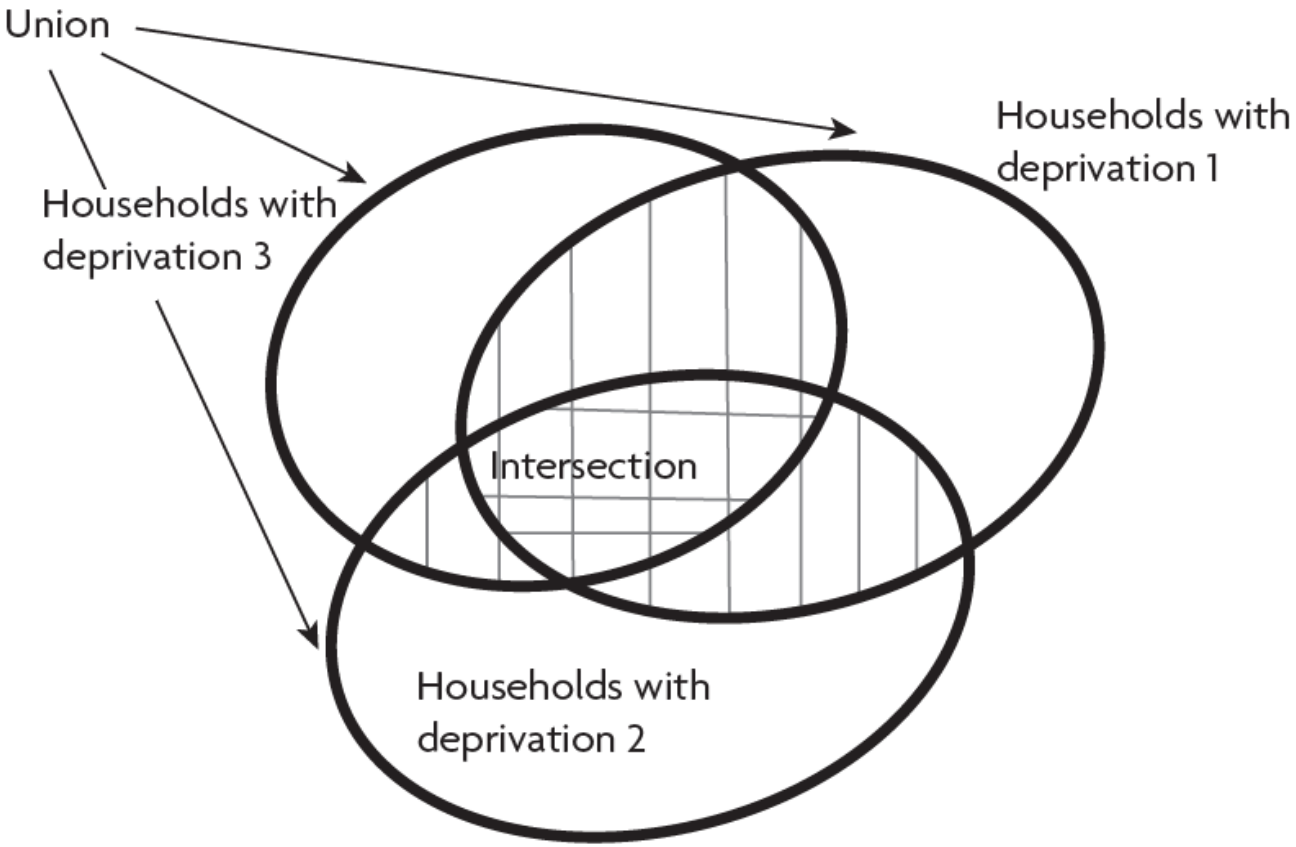
"the move to a multidimensional concept of poverty involves two key elements: the extension of dimensions and the introduction of correlation between these dimensions across the population.

"There is interest both in what is shown by each dial and in the relation between what is happening on different dials.

"It is not just how many people are deprived, but also how many households have a low score on all or several of the dimensions. Do those with low levels of education also suffer from poor health? From the standpoint of evaluating policy, the different dimensions have to be examined in conjunction."

Atkinson Commission: Multidimensional Poverty Indices

Figure 2.8 The Overlapping of Deprivation



Shaded area = multiple deprivation where k = 2

Note: The ovals show households suffering deprivations 1, 2, or 3. The union includes all households suffering one or more deprivations; the intersection shows households suffering all three deprivations. The striped area, which includes the Intersection, shows all households with 2 or more deprivations.

Atkinson Commission: Multidimensional Poverty Indices

"Recommendation 19: the Complementary Indicators should include a multidimensioned poverty indicator based on the counting approach.

"It is not proposed that the indicator should include a monetary poverty dimension. In this respect, the Report is following the examples of Chile, Costa Rica, and other countries listed in table 2.2, but not that of Mexico. The aim of Recommendations 18 and 19 is to provide indicators that complement the monetary indicator, and not to seek to combine the two different approaches." (p 170)

"To sum up, Recommendation 19 envisages the counting approach as being implemented in terms of the **adjusted head count ratio**, and its constituents of the head count and average breadth of deprivation." (p 171)

Box 2.2 Recommendations in Chapter 1 Relevant to Nonmonetary Indicators

- **Recommendation 2:** The National Poverty Statistics Reports (NPSR) for each country should include the dashboard of nonmonetary indicators.
- **Recommendation 3:** Investigate the extent to which people are "missing" from household surveys, and make proposals made for adjustments where appropriate for survey underrepresentation and noncoverage; review the quality of the baseline population data for each country, and the methods used to update from the baseline to the years covered by the estimates.
- **Recommendation 5:** The estimates should be accompanied by an evaluation of the possible sources of error, including nonsampling error.

Box 2.2 Recommendations in Chapter 1 Relevant to Nonmonetary Indicators

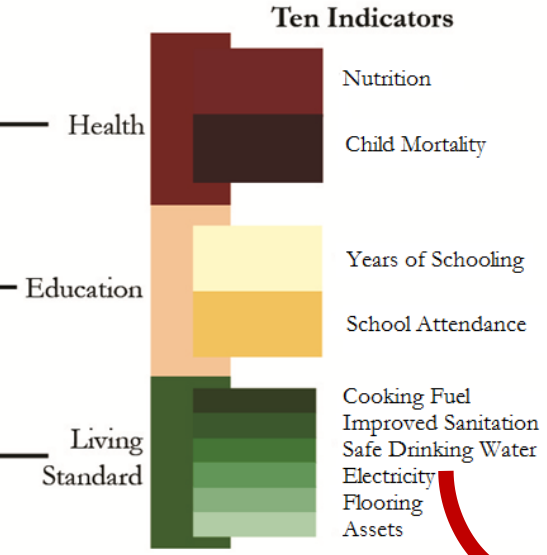
- **Recommendation 6:** There should be explicit criteria for the selection of household survey data, subject to outside scrutiny, and assessment at national level of the availability and quality of the required household survey data, and review of possible alternative sources and methods of ex post harmonization.

- **Recommendation 8:** Investigate for a small number of countries alternative methods of providing current poverty estimates using scaled-down surveys, or the SWIFT or other surveys.

The Global MPI (Multidimensional Poverty Index)

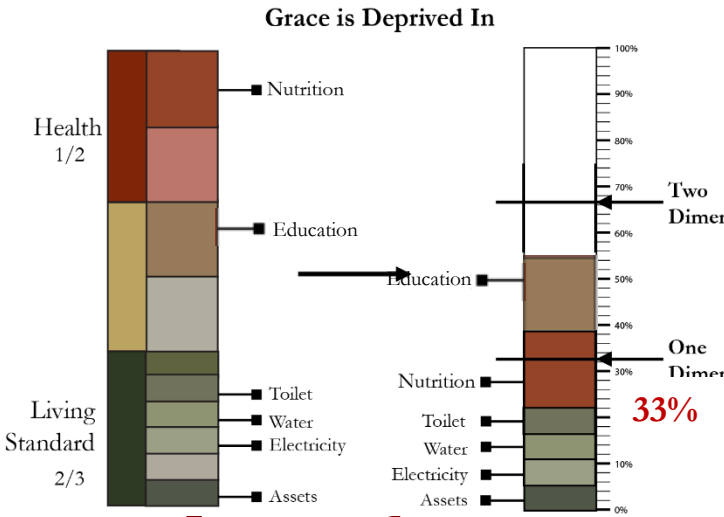
Methodology for the National and Global MPIs

1. Select Indicators, Cutoffs, Values

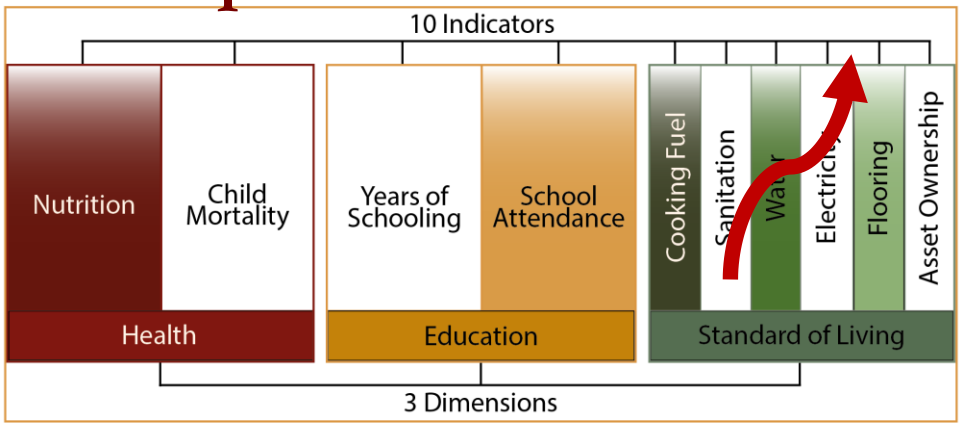


4. Use: MPI, Incidence Intensity & Composition

3. Identify who is poor



2. Build a deprivation score for each person



nt Initiative

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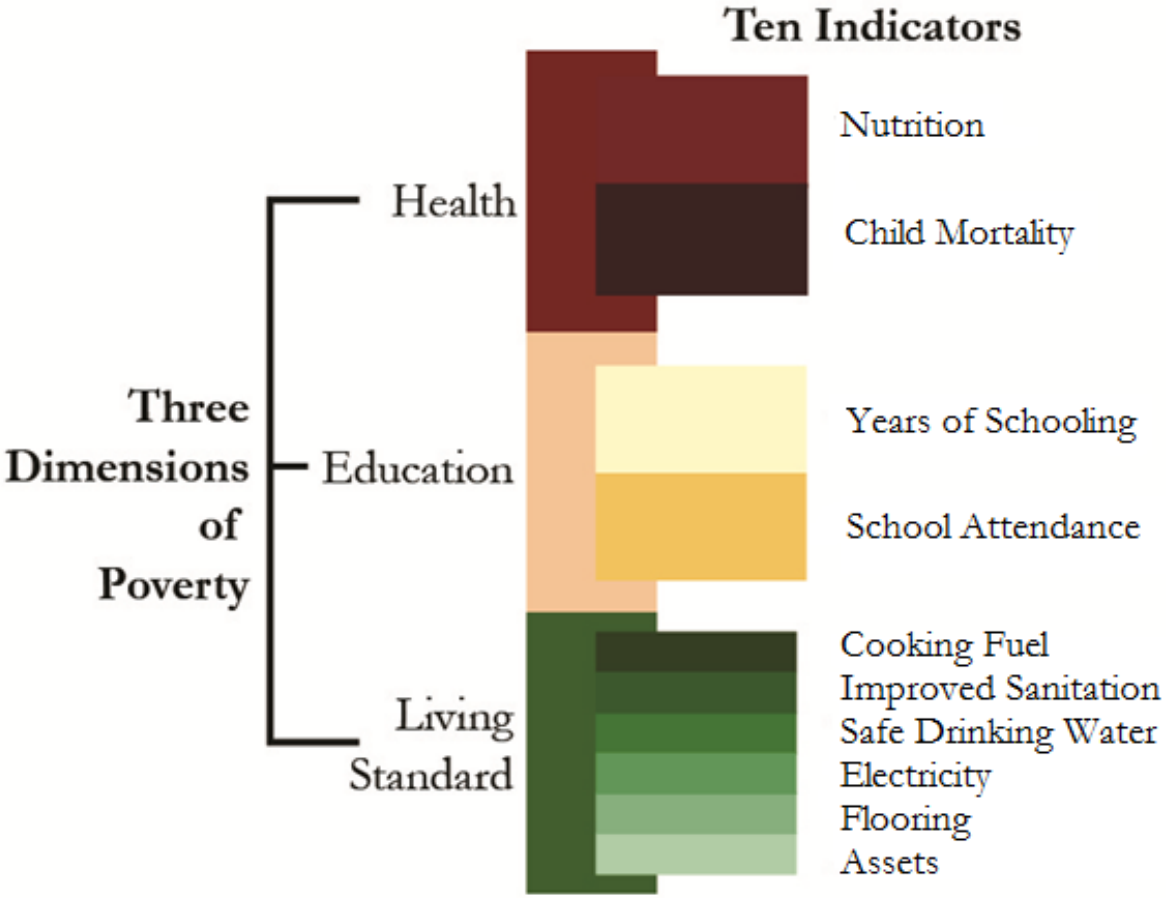
Dimensions, Weights, Indicators, Cutoffs



The global MPI Indicators mapped to the SDGs

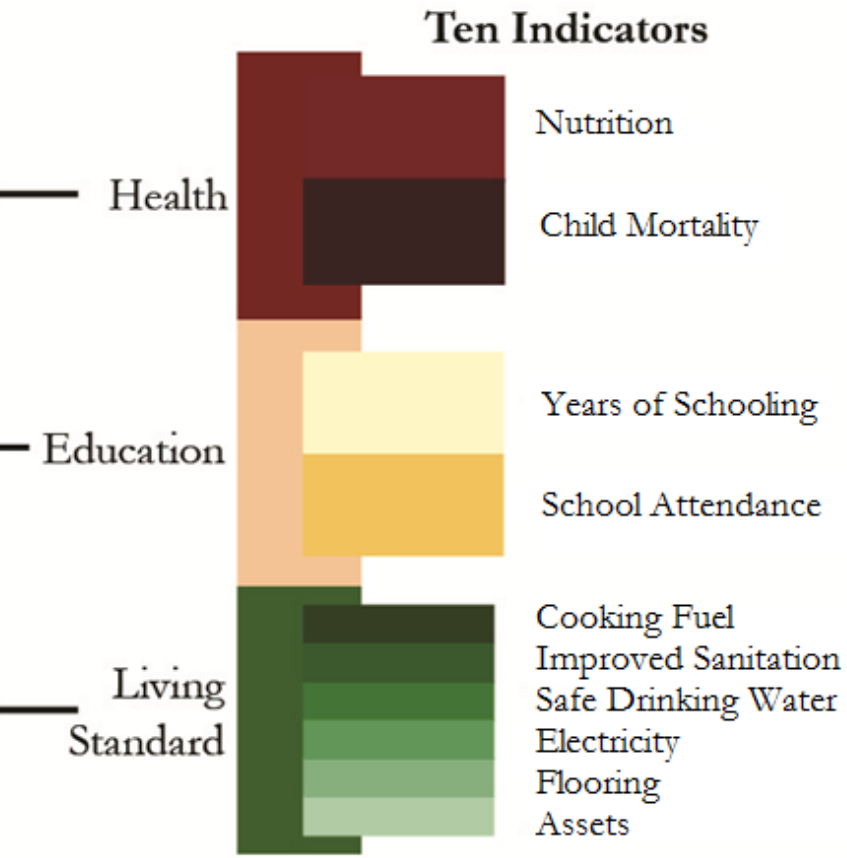
Dimension	Indicator	Related SDG
Health	Nutrition	SDG 2 (Zero Hunger)
	Child Mortality	SDG 3 (Health & Well-being)
Education	Years of Education	SDG 4 (Quality Education)
	School Attendance	SDG 4 (Quality Education)
Living Standard	Cooking Fuel	SDG 7 (Affordable & Clean Energy)
	Sanitation	SDG 6 (Clean Water & Sanitation)
	Drinking Water	SDG 6 (Clean Water & Sanitation)
	Electricity	SDG 7 (Affordable & Clean Energy)
	Floor	SDG 11 (Sustainable Cities & Communities)
	Assets	SDG 1 (No Poverty)

Existing Indicator Incomparabilities

- Assets indicator may lack subcomponents (radio, tv, frig, telephone…)
- Nutritional data from different hh members (children, women, man)
- Child Mortality may be available from women and/or men
- Child Mortality 'in last 5 years' not always available
- Sometimes only 'level' of education was available, not years
- Different response categories of wáter, sanitation 'other'
- *All particular national variations are documented in the methodological notes for the year in which the MPI was released. That year is found also in Table 7.*

Identification: Who is poor?

A person who is deprived in 1/3 or more of the weighted indicators is MPI poor. Consider three-year old Nahato, from Uganda



Nahato's home is made of poles and mud. The only light is a solar lamp that also charges the cell phone.

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Nahato, 3, is one of 10 children of her mother, Nambubi, who is 38 years old. Nahato's elder siblings have dropped out of school as they cannot afford the fees, which are US$2.75 for four months.

Nambubi goes to the field at 7am to work in a neighbour's field with her children. Often the remain their til 7pm. In the evening they chat as a family while waiting for the meal to be ready. Nambubi is ever worried about what they will eat, for it varies.

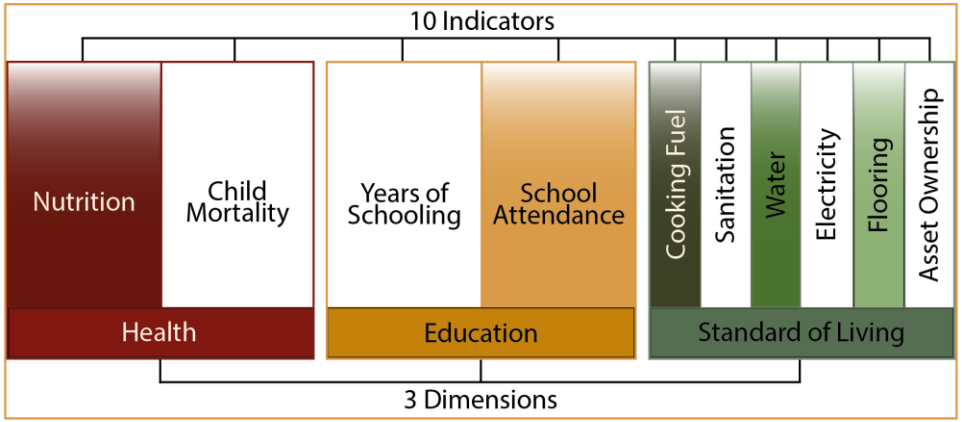
Nahato and her family are MPI poor. Yet she and her siblings are out-going and confident.

At night sometimes they dance together to the music from a radio shared between neighbours.

Identification: Who is poor?

Nahato is poor: she and her family are deprived in half of the MPI weighted indicators.

The MPI doesn't tell her whole story. But it tells an important part of it.



How do you calculate the MPI?

The MPI uses the Alkire & Foster (2011) method:

Formula: MPI = $M_0 = H \times A$

1) Incidence or the headcount ratio **(H)** ~ the percentage of people who are poor.

2) Intensity of people's deprivation (A) ~ the average share of dimensions (proportion of weighted deprivations) people suffer at the same time. It shows the *joint distribution* of their deprivations.

Multidimensional Poverty Measurement & Analysis

(OUP 2015): Alkire Foster Seth Santos Roche Ballon.

Statistical methods include:

Standard errors and confidence intervals for all statistics

Statistical inference for all comparisons (level/trend)

Validation for component indicators, alone and jointly

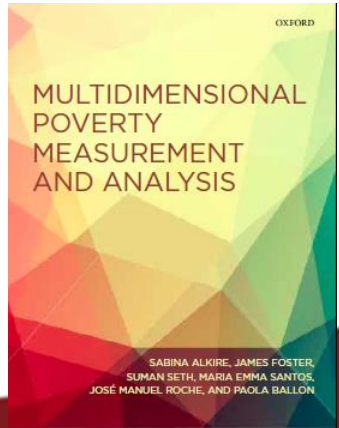
Robustness tests for cutoffs and weights

Axiomatic properties include:

Subgroup decomposability and Subgroup consistency

Dimensional breakdown, Dimensional monotonicity

Ordinality, Symmetry, Scale and replication invariance, Normalization, Poverty and Deprivation Focus, Weak Monotonicity, and Weak Deprivation Re-arrangement



Data: Surveys (MPI 2017)

Details in: Alkire and Robles (2017);
Child Disaggregations with Jindra Vaz (2017)

Demographic & Health Surveys (DHS - 55)
Multiple Indicator Cluster Surveys (MICS - 38)
Pan–Arab Project for Family Health (PAPFAM – 3)

Additionally we used 6 special surveys covering Brazil (PNAD), China (CFPS), Ecuador (ECV), India (IHDS), Jamaica (JSLC) and South Africa (NIDS).

Constraints: Data are 2006-2016. Not all have precisely the same indicators.

Global MPI 2017: Update

- **25 countries**: new or updated MPI estimations.

Afghanistan (DHS 2015-16), **Algeria** (MICS 2012-13), **Chad** (DHS 2014-15), **China** (CFPS 2014) **Dominican Republic** (MICS 2014), **El Salvador** (MICS 2014), **Guatemala** (DHS 2014-15), **Guinea-Bissau** (MICS 2014), **Guyana** (MICS 2014), **India** (IHDS 2011-12), **Kazakhstan** (MICS 2014), **Lesotho** (DHS 2014), **Malawi** (DHS 2015-16), **Myanmar** (DHS 2015-16), **México** (MICS 2015), **Mongolia** (MICS 2013), **Sao Tome and Principe** (MICS 2014), **Senegal** (DHS 2015), **South Africa** (NIDS 2014-15), **Sudan** (MICS 2014), **Swaziland** (MICS 2014), **Tanzania** (DHS 2015-16), **Thailand** (MICS 2012), **Turkmenistan** (MICS 2014), **Zimbabwe** (DHS 2015).

- **Disaggregation by age groups**.

Data: Surveys (MPI 2017)

Details in: Alkire & Robles (2017)

Updated data for 25 countries

MPI 2017: 2006-2016	**25 datasets**	**103 countries**
MPI 2016: 2005-2015	14 datasets	102 countries
MPI 2015: 2004-2014	38 datasets	101 countries
MPI 2014: 2002-2013	33 datasets	108 countries
MPI 2013: 2002-2011	16 datasets	104 countries
MPI 2012: 2001-2010	25 datasets	109 countries
MPI 2010: 2000-2008	104 datasets	104 countries

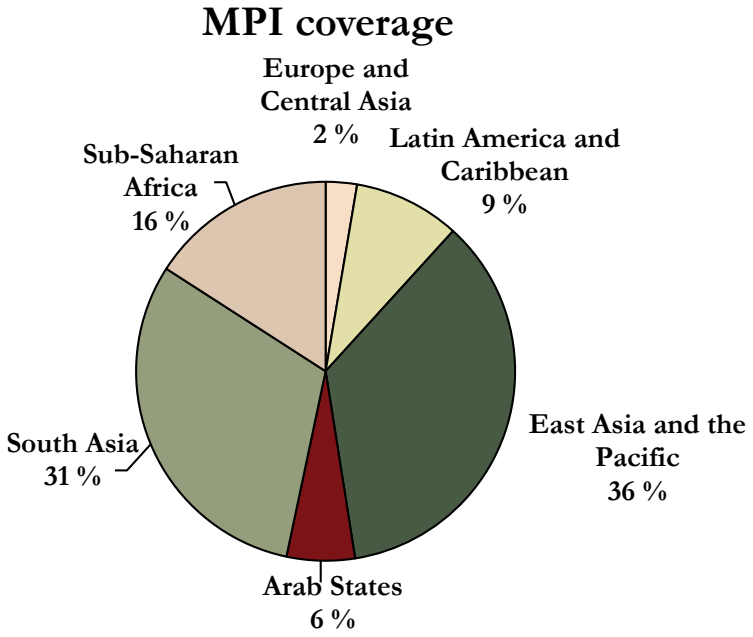
2010: 104 countries survey fieldwork completed 2000-2008.

2017: 103 countries 2006-2016
of which
73 countries 2012-16

Plus: 988 Subnational Regions

Population Coverage by Region

MPI 2017:
Covers 5.4 billion people living in six world regions
Aggregates use 2013 population figures



MPI countries by Region	Total Pop in region (M)	Population in MPI countries	% Pop covered
Europe and Central Asia	494.4	145.3	29%
Latin America and Caribbean	605.2	494.5	82%
Arab States	**372.2**	**316.8**	**85%**
South Asia	**1775.1**	**1677.5**	**94%**
East Asia and the Pacific	**2050.6**	**1949.1**	**95%**
Sub-Saharan Africa	**899.8**	**866.5**	**96%**

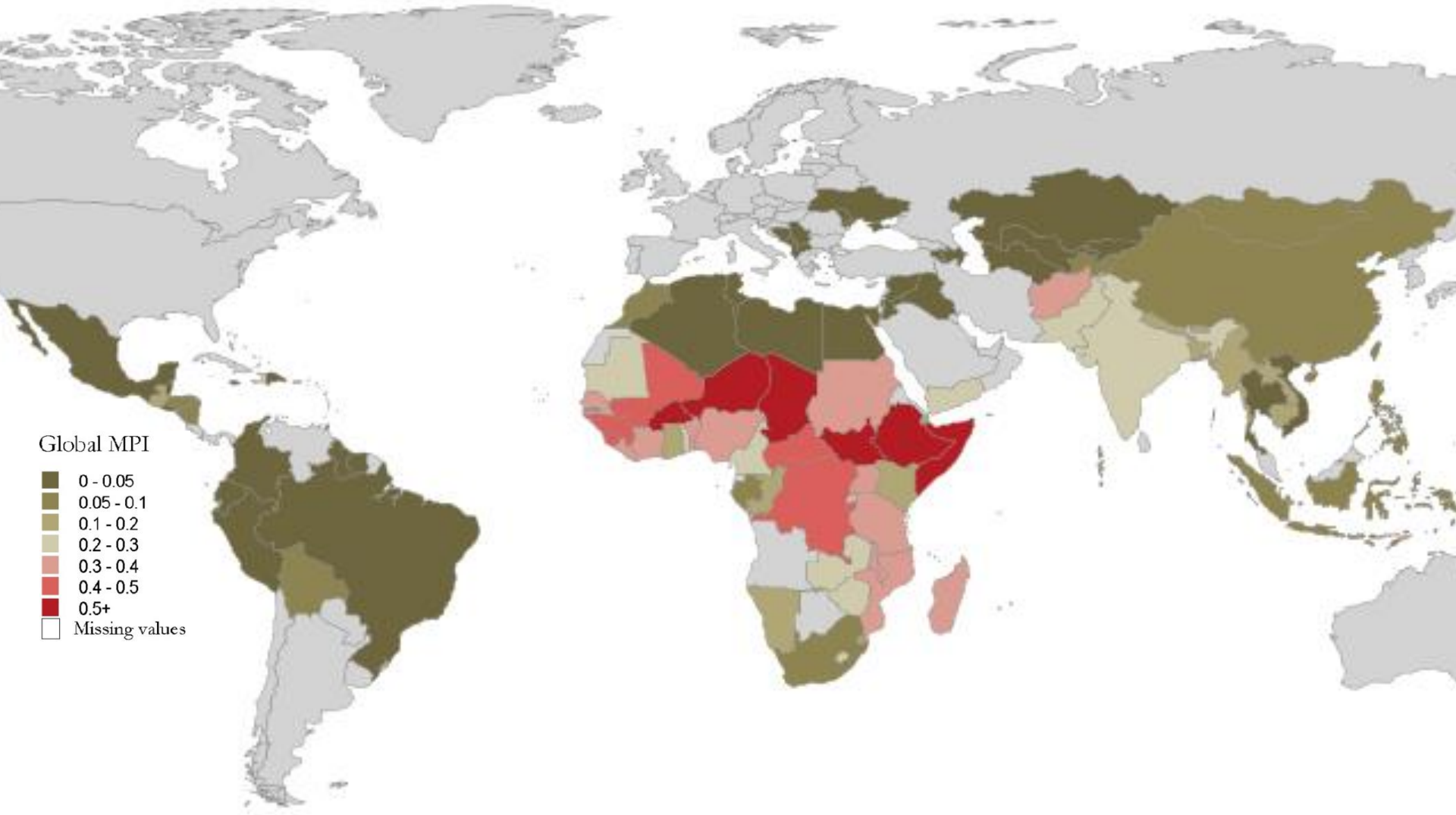
MPI Population Coverage by Income Category

MPI 2017 covers:
99% of people in **Low income countries**
99% of people in **Lower Middle Income Countries**
82% of people in **Upper Middle Income Countries**

92% of the **combined population** in these categories

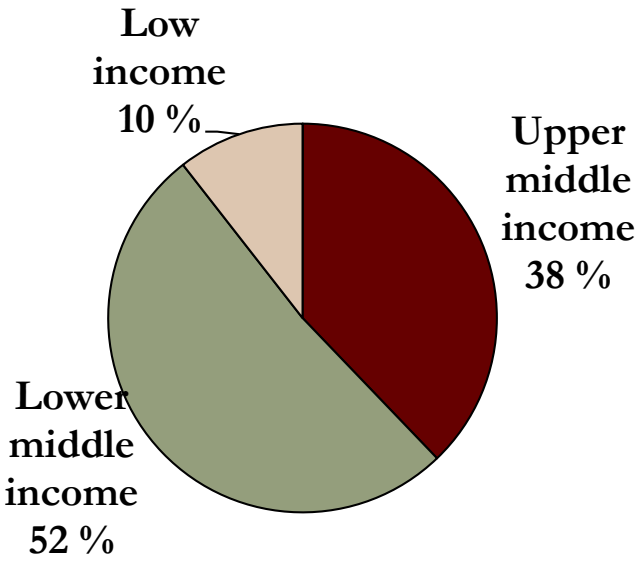
Income Categories	Population in MPI countries (million)	Total Pop in regions	% Pop covered
High income	1.6	1142.0	0%
Low income	574.8	579.8	99%
Lower middle income	2813.1	2842.5	99%
Upper middle income	2060.1	2517.7	82%
Total	5449.6	7081.9	76%

Across 103 countries, 1.45 billion people are MPI poor

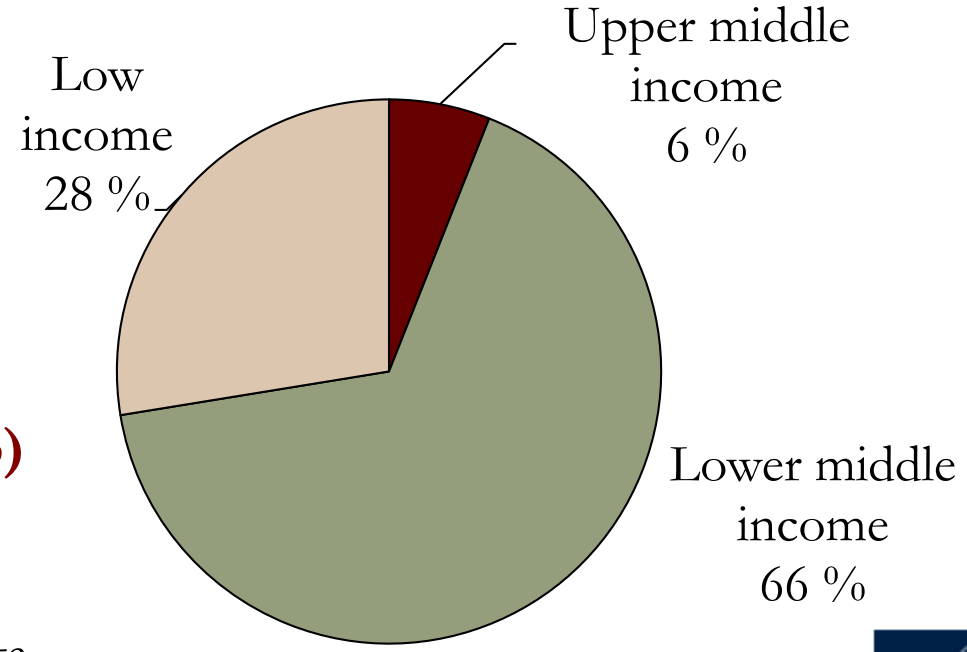


Where MPI poor people live: National Income Category

Total population by income category



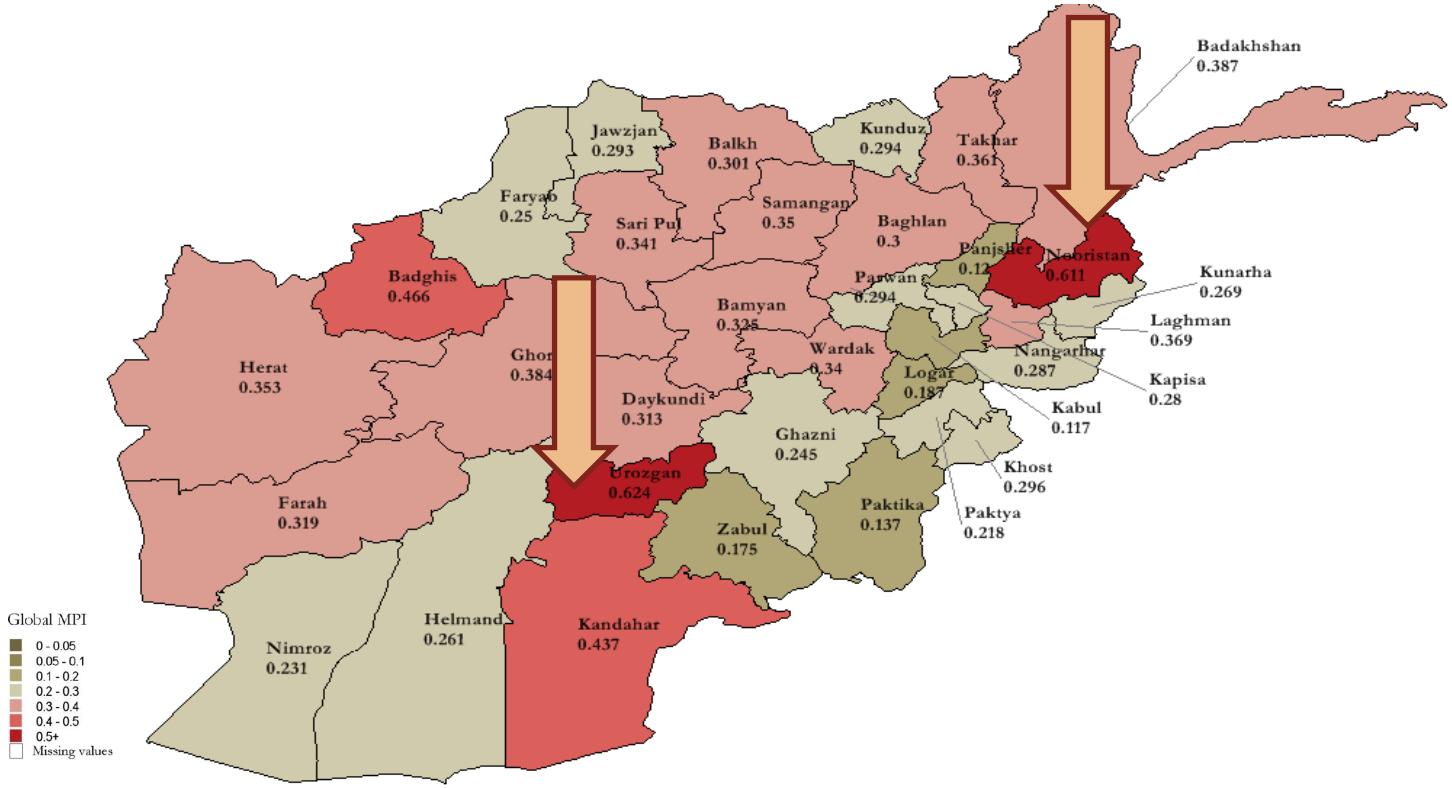
MPI poor people by income category



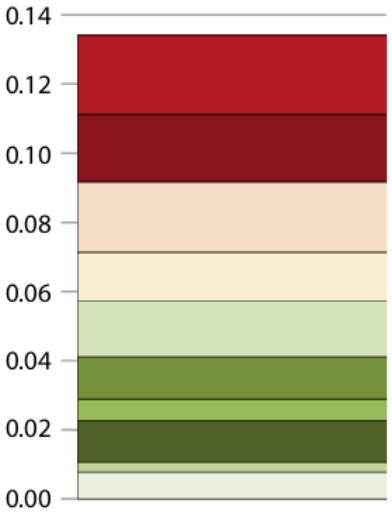
Most poor people (72%) live in middle-income countries (MICS)

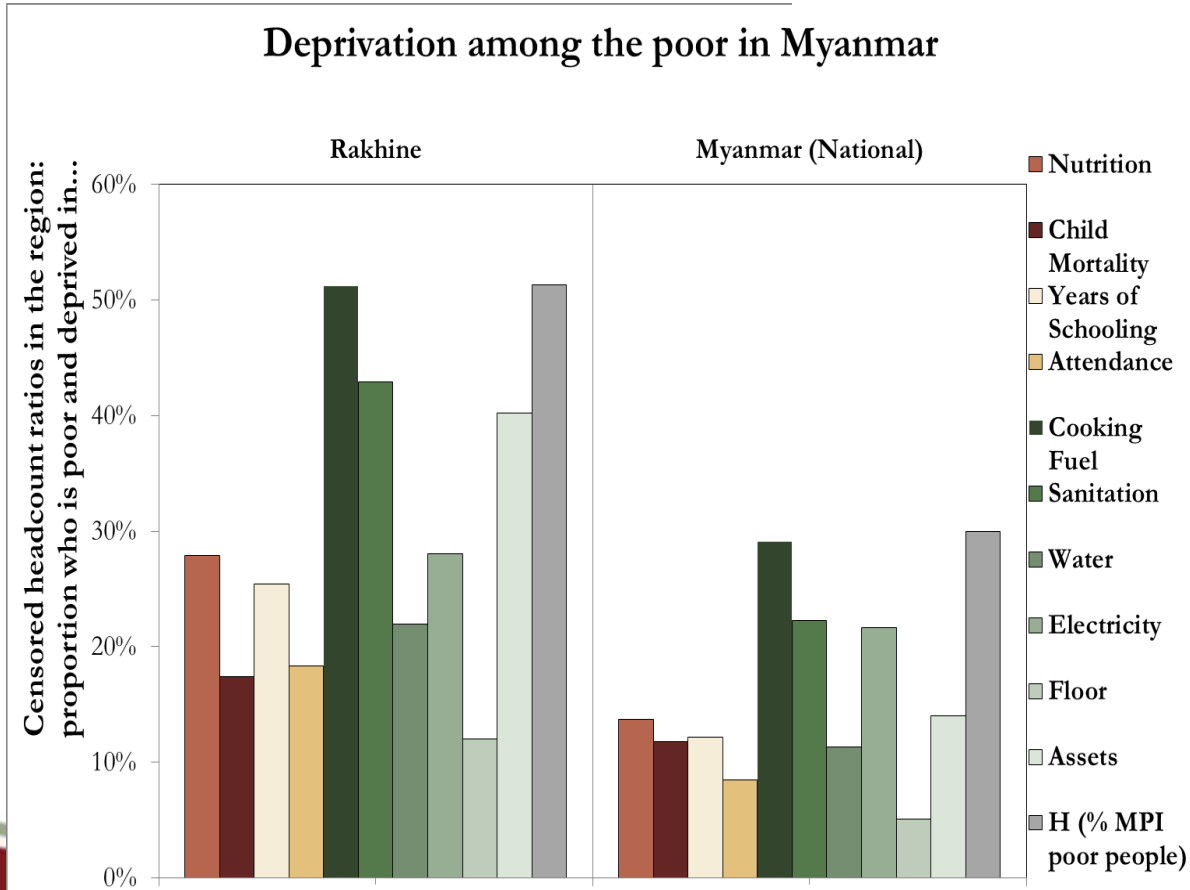
2013 Population Data

Afghanistan (2015/16)



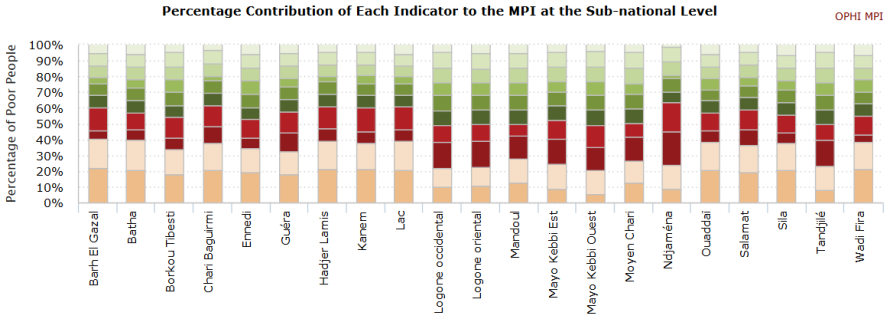
Myanmar (2016)



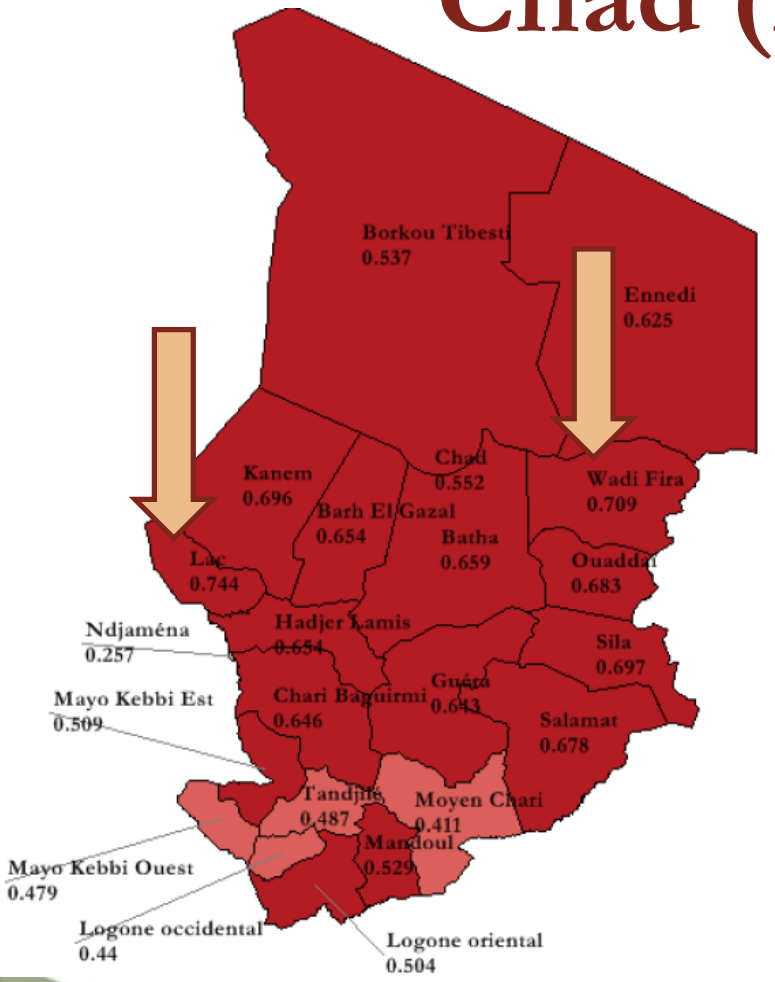


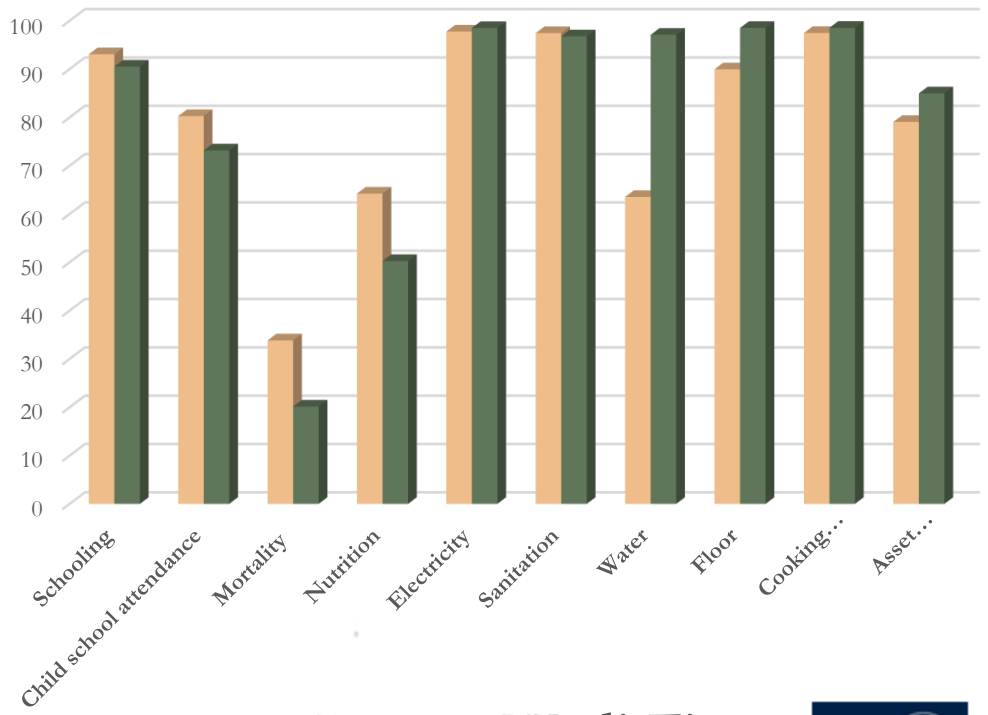
OPHI Oxford Poverty & Human Development Initiative

Chad (2015)

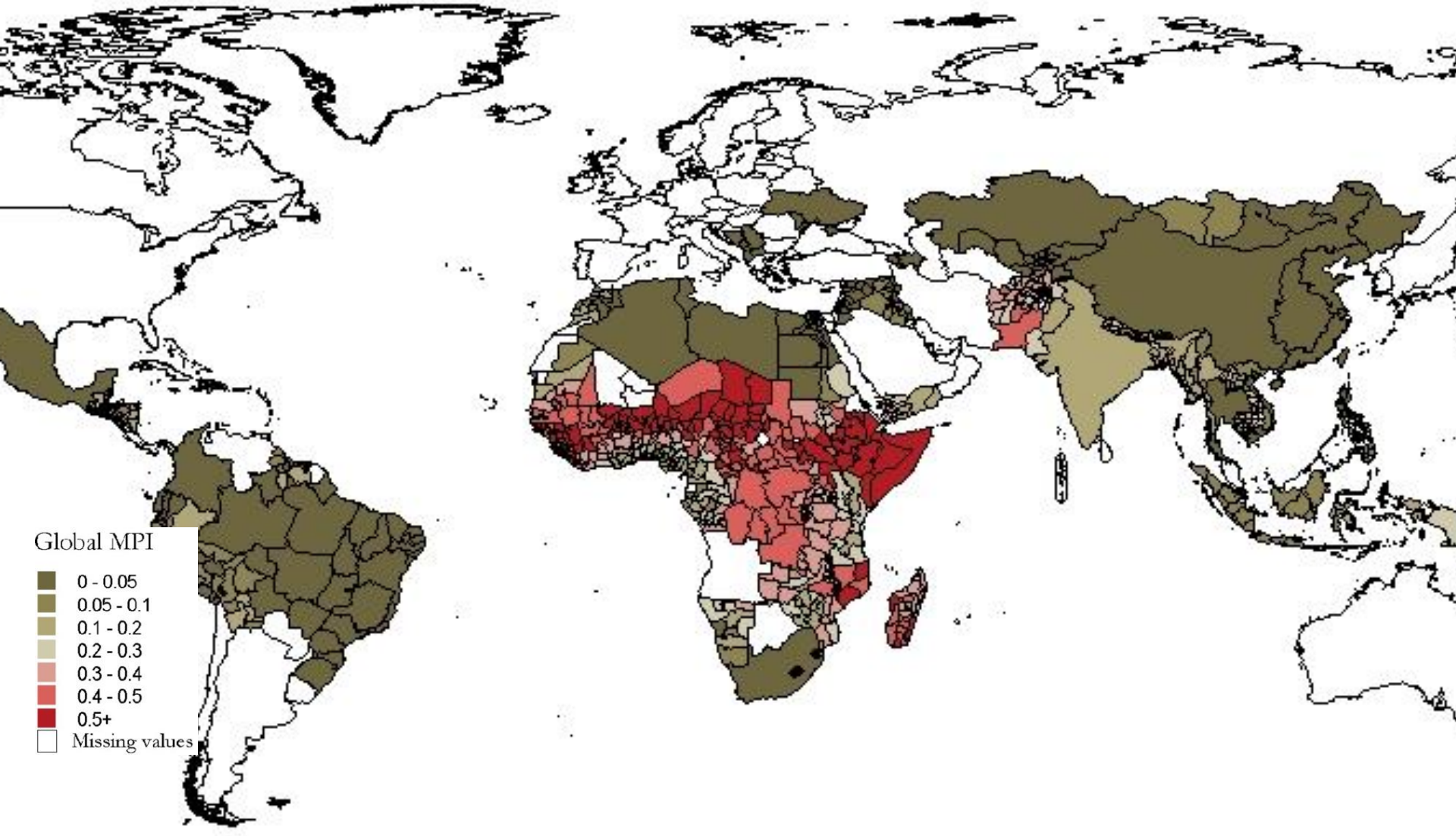


Chad MPI
0.552



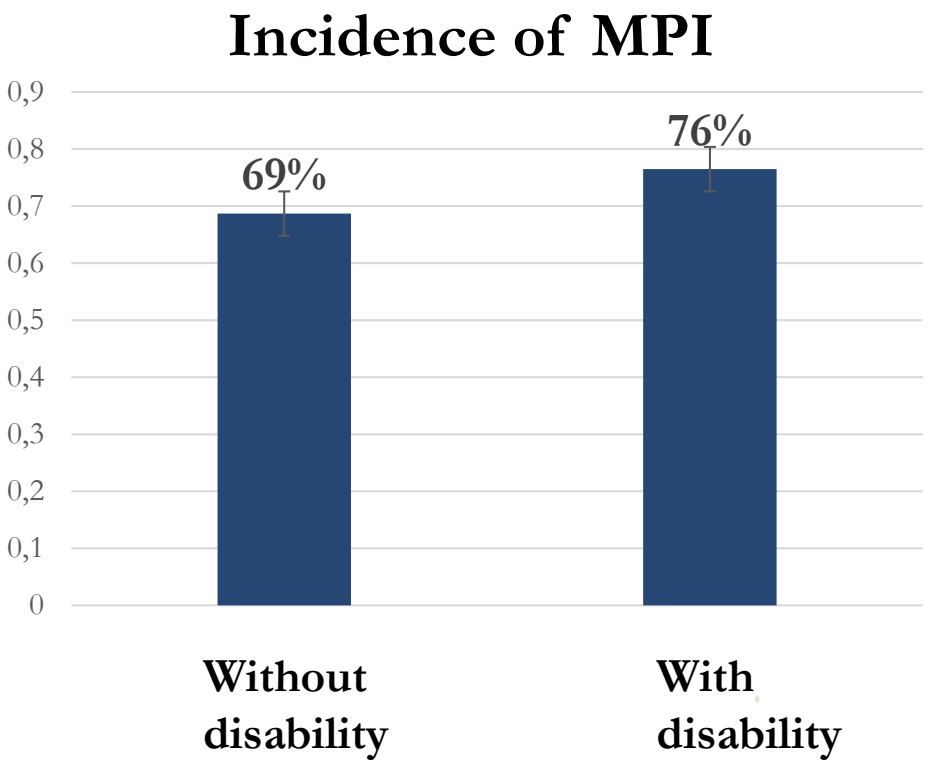


Detailed figures are available for 988 subnational regions as well as for rural and urban areas.



Incidence of multidimensional poverty in Uganda disaggregated by household disability status

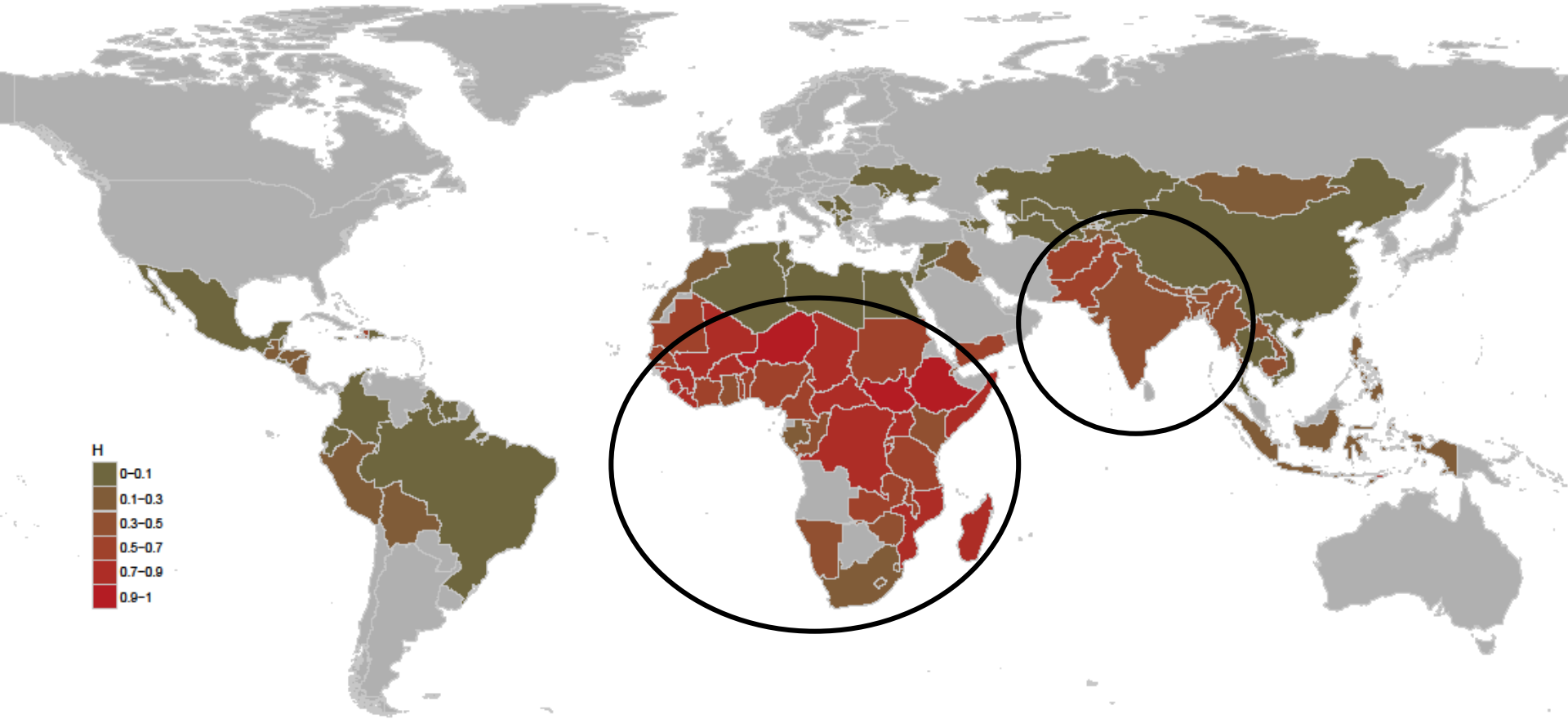
22% of people have a person with disability in their household



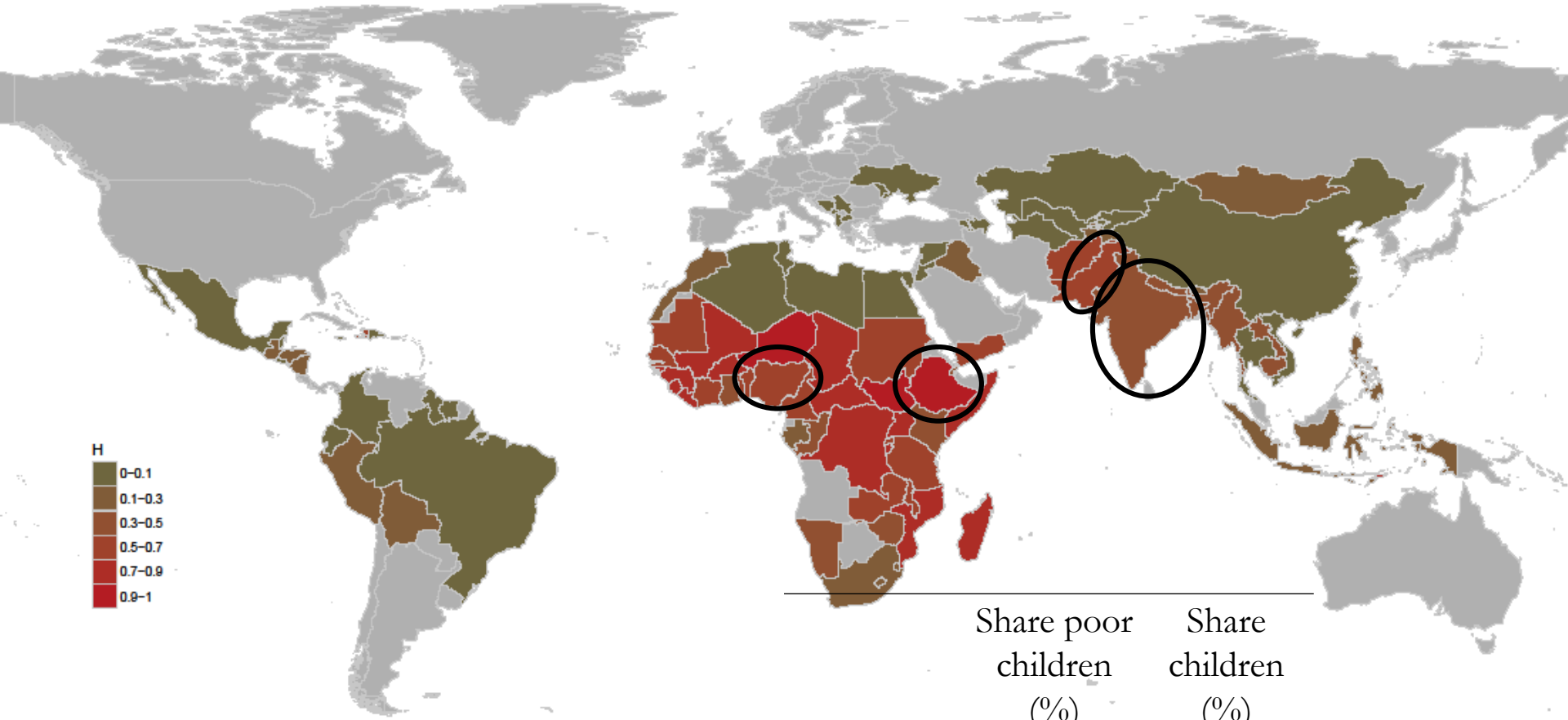
Disaggregating the global MPI

- Across our 103 countries, 37% of the children are MPI poor
- 689 million children are living in multidimensional poverty
- Children are over-represented among MPI poor: they represent approximately one third of the population (34%) but almost half (48%) of the MPI poor

South Asia and Sub-Saharan Africa house 84% of poor children

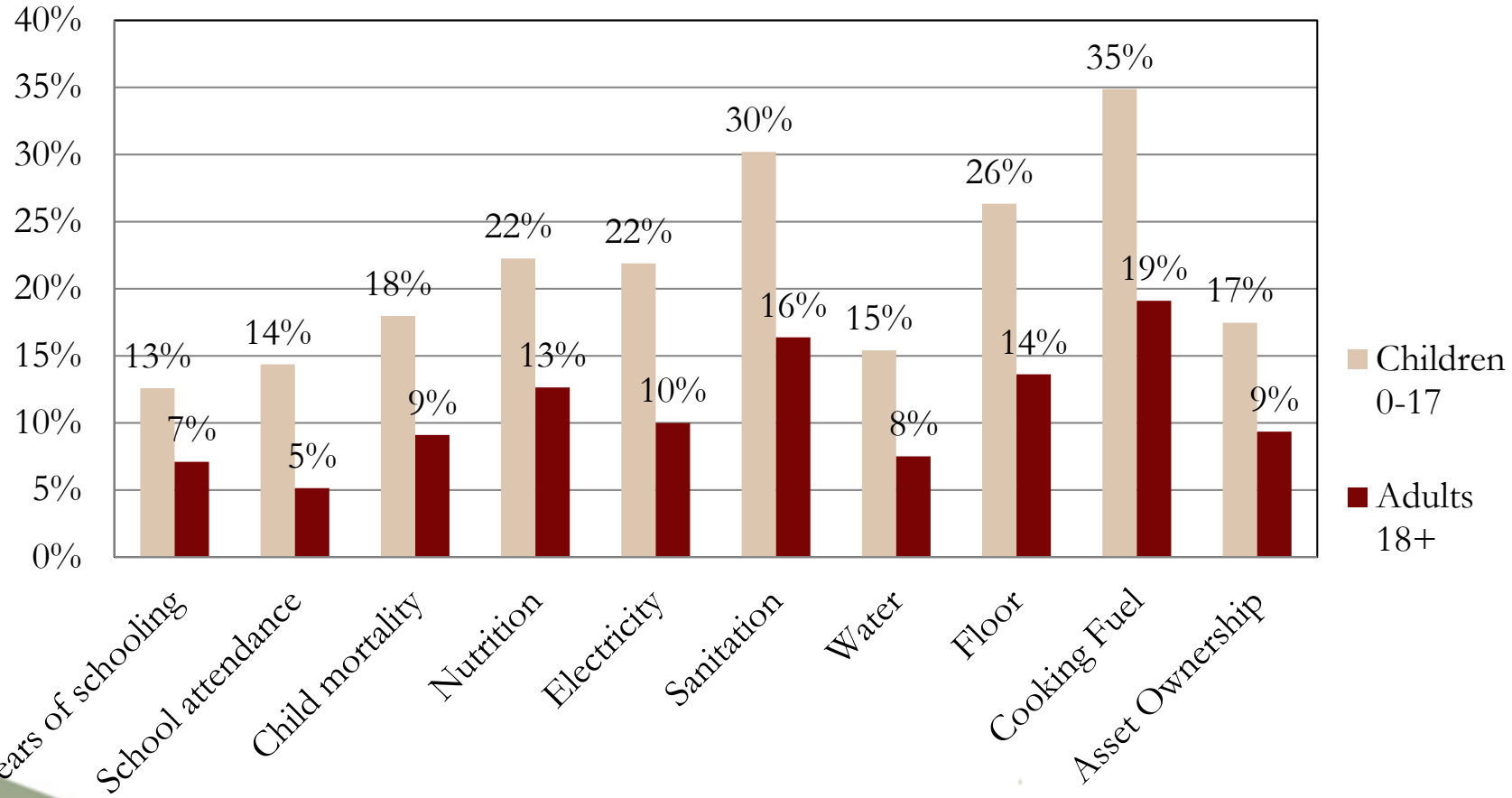


52% of poor children live in 4 countries

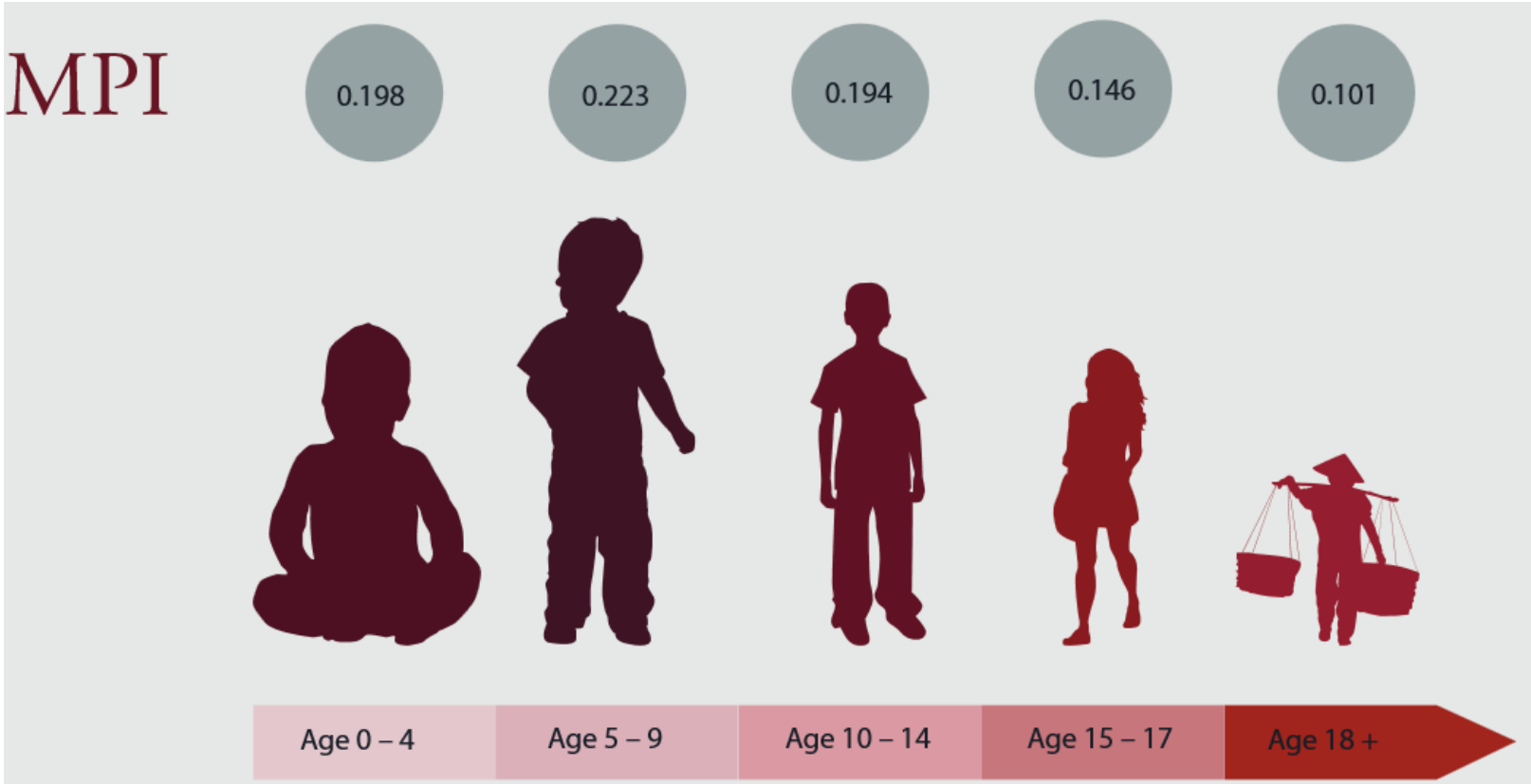


	Share poor children (%)	Share children (%)
India	31	24
Nigeria	8	5
Ethiopia	7	3
Pakistan	6	5

Children are poorer than adults in every indicator



Younger children are the poorest



	Age 0 – 4	Age 5 – 9	Age 10 – 14	Age 15 – 17	Age 18 +
Headcount (*H*)	37.2	41.5	37.5	30.1	21.0
Intensity (*A*)	53.1	53.8	51.7	48.5	48.0
$1.90/day (H)	21.0	21.5	18.7	14.6	9.2

- Size of figures reflects Headcount
- Colour of figures reflects Intensity
- Global MPI 2017 figures found at www.ophi.org.uk
- World Bank 2016 decomposition found at www.unicef.org

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Harmonisation for time comparisons – Cote d'Ivoire

Dimension/indicator	2005	2011/12	For comparison
Health			
Nutrition	✗	✓	✗
Child mortality	✓	✓	✓
Education			
Years of schooling	✓	✓	✓
School attendance	✓	✓	✓
Living standard			
Cooking fuel	✗	✓	✗
Improved sanitation	✓	✓	✓
Safe drinking water	✓	✓	✓
Electricity	✓	✓	✓
Flooring	✓	✓	✓
Assets	✓	✓	✓

Notes: survey in 2005: DHS; survey in 2011/12: DHS

Harmonisation for time comparisons – Sierra Leone

Within indicator adjustments

- Indicators are strictly harmonized across surveys
- Example 1 - Nutrition indicator for Sierra Leone
  - Deprivation cutoff: Any adult or child with nutritional information is undernourished[2]

Nutritional info for	2008	2013	For comparison
Women	✓	✓	✓
Men	✗	✓	✗
Children	✓	✓	✓

Notes: survey in 2008: DHS; survey in 2013: DHS

Harmonisation for time comparisons – Central African Republic

Within indicator adjustments

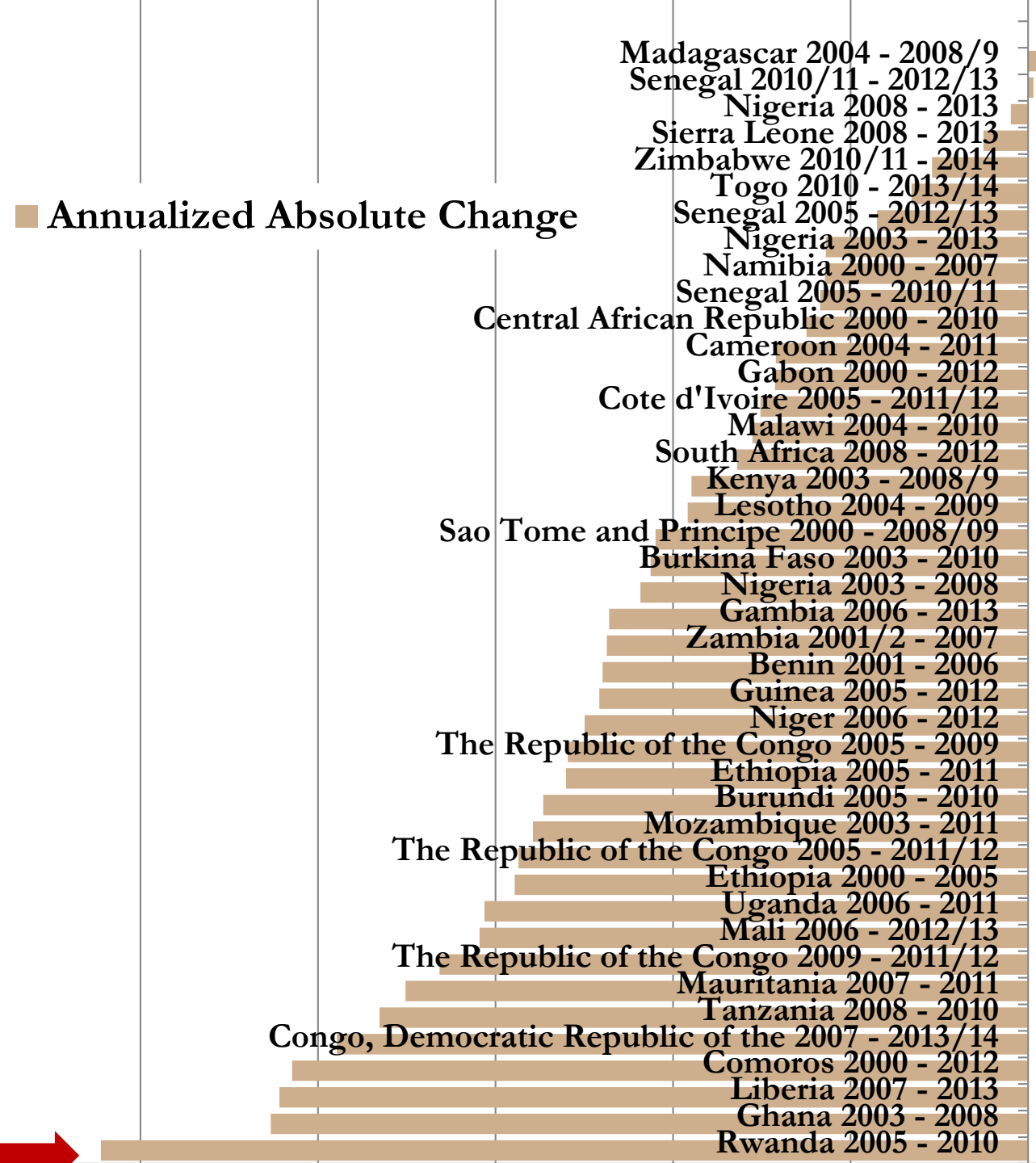
- Example 2 - asset indicator for Central African Republic
  - Deprivation cutoff: The household owns at most one radio, telephone, TV, bike, motorbike, or refrigerator; and does not own a car or truck

Assets	2000	2010	For comparison
Radio	✓	✓	✓
Telephone	✗	✓	✗
Mobile phone	✗	✓	✗
TV	✓	✓	✓
Bike	✓	✓	✓
Motorbike	✓	✓	✓
Refrigerator	✓	✓	✓
Car or truck	✓	✓	✓

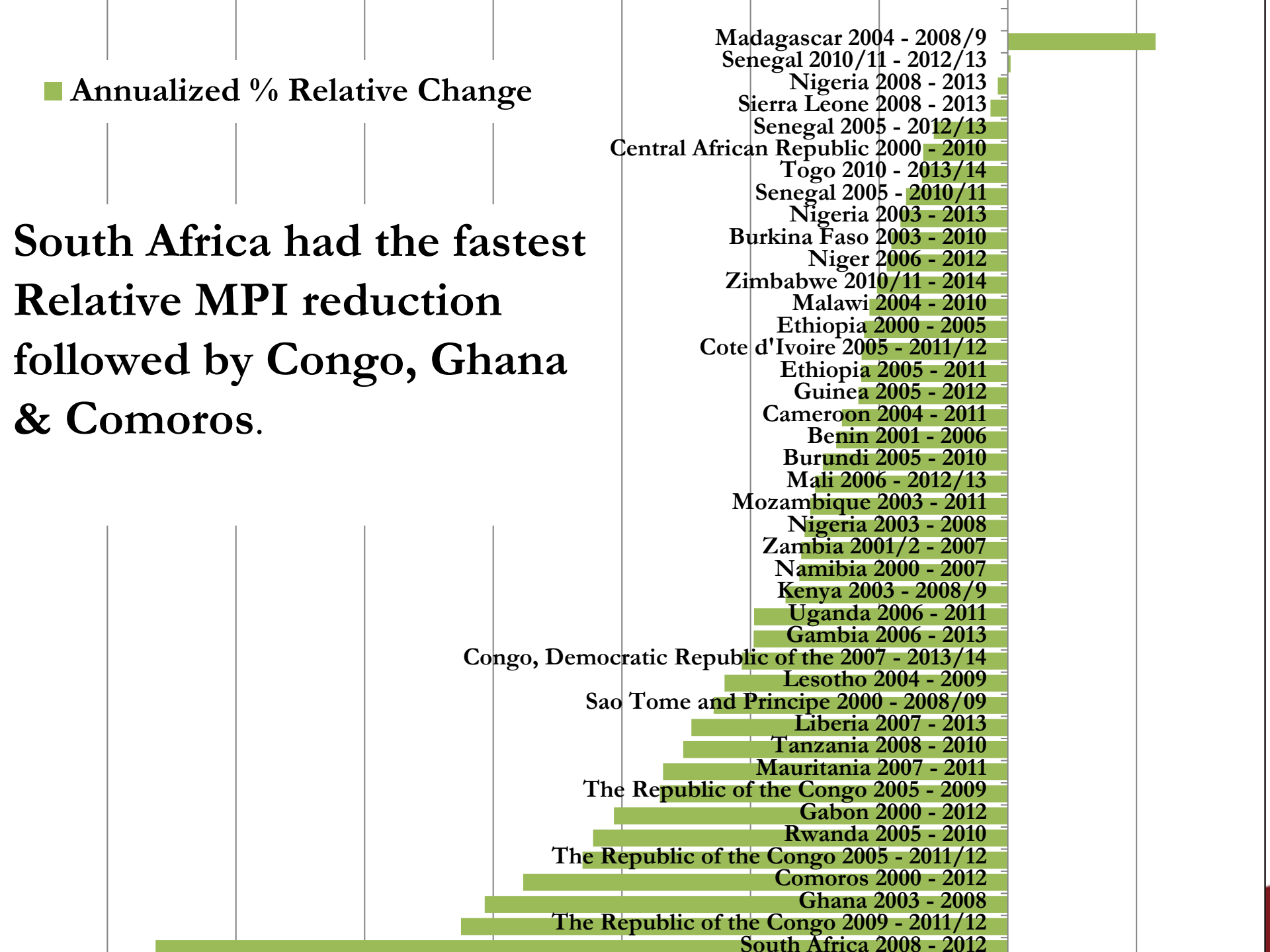
Example: MPI reduction in Africa

- Coverage:
  - 35 Sub-Saharan African countries
  - 234 sub-national regions
  - covering 807 million people

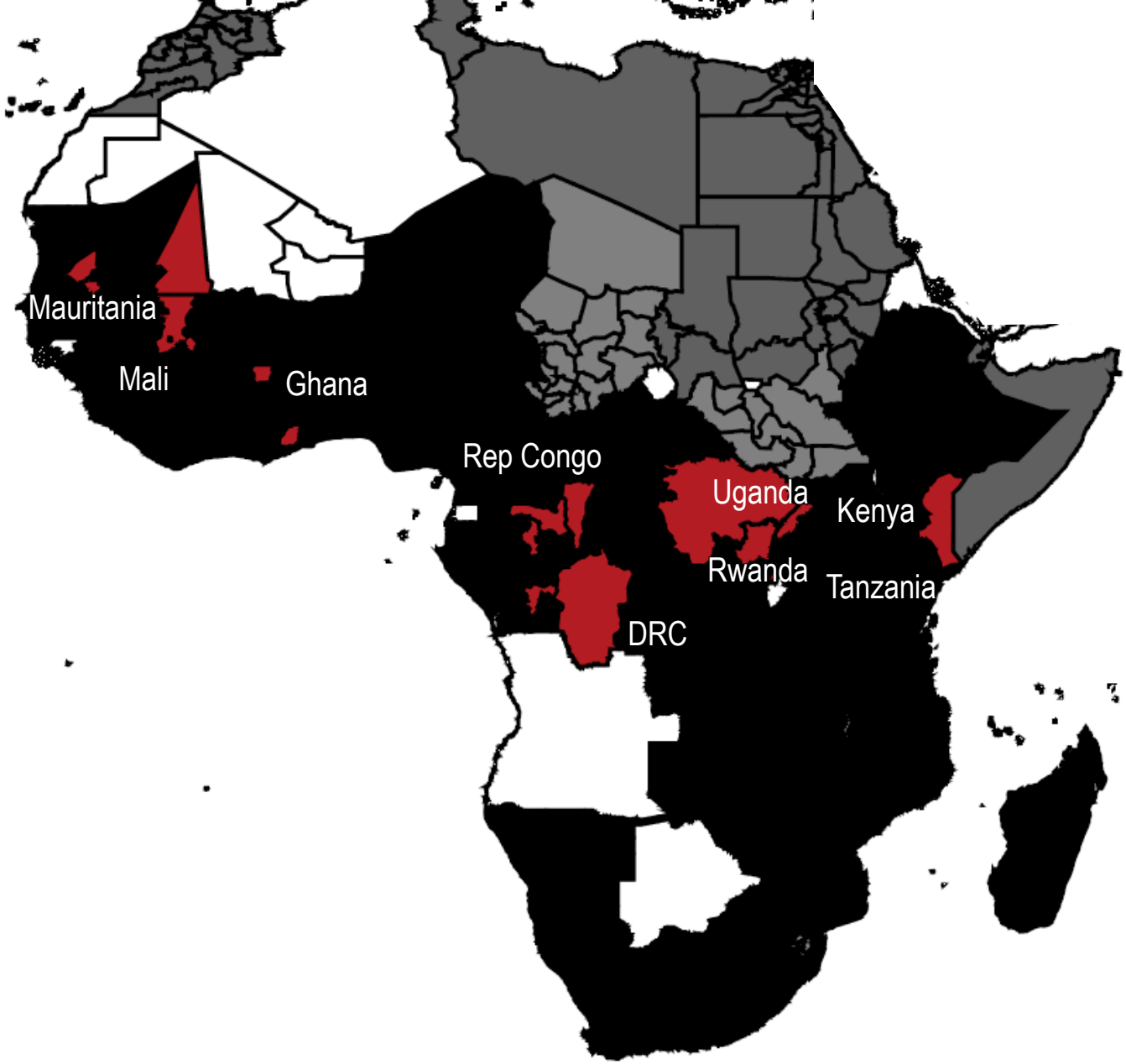
- **Alkire, Sabina, Christoph Jindra, Gisela Robles Aguilar and Ana Vaz. "Multidimensional Poverty Reduction among Countries in Sub-Saharan Africa" *Forum for Social Economics*. 46:2 178-191. 2017**
- Alkire, Sabina, José Manuel Roche and Ana Vaz. "Changes over time in multidimensional poverty: Methodology and results for 34 countries," *World Development*, 94: 232-249, 2017."
- Alkire, Sabina and Suman Seth "Multidimensional Poverty Reduction in India between 1999 and 2006: Where and How?" *World Development.* 72. 93-108. 2015.



Rwanda, Ghana, Liberia, Comoros, DRC and Tanzania had the fastest reduction of MPI in certain periods.



South Africa had the fastest Relative MPI reduction followed by Congo, Ghana & Comoros.


Mauritania
Mali
Ghana
Rep Congo
Uganda
Kenya
Rwanda
Tanzania
DRC

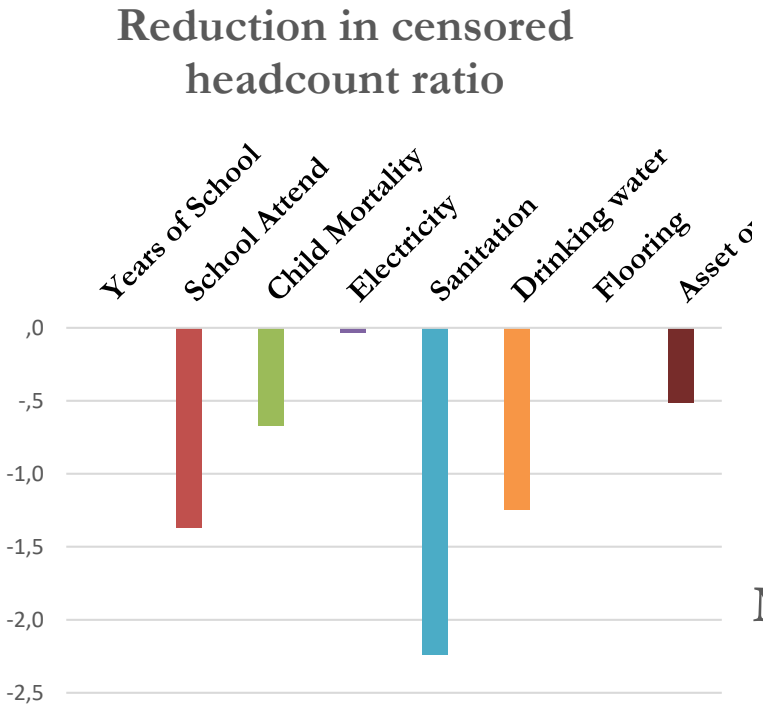
Annualized Changes in MPI vs. $1.90 (H) for Africa

Cote d'Ivoire's Reduction in MPI

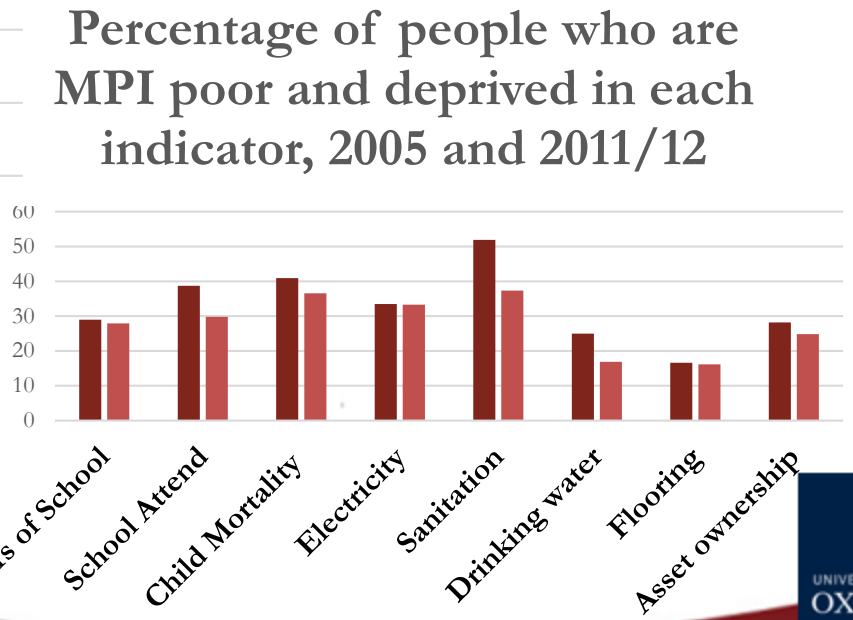
	2005		2011/12		
MPI - Poverty	0.420	(.007)	0.343	(.009)	***
H - Incidence	61.5%	(1.4)	55.2%	(1.1)	***
A - Intensity	57.4%	(.7)	55.1%	(.4)	***
Number of Poor	10.7M		10.9M		

MPI, H and A reduced, but population growth led to an increase in the number of poor people

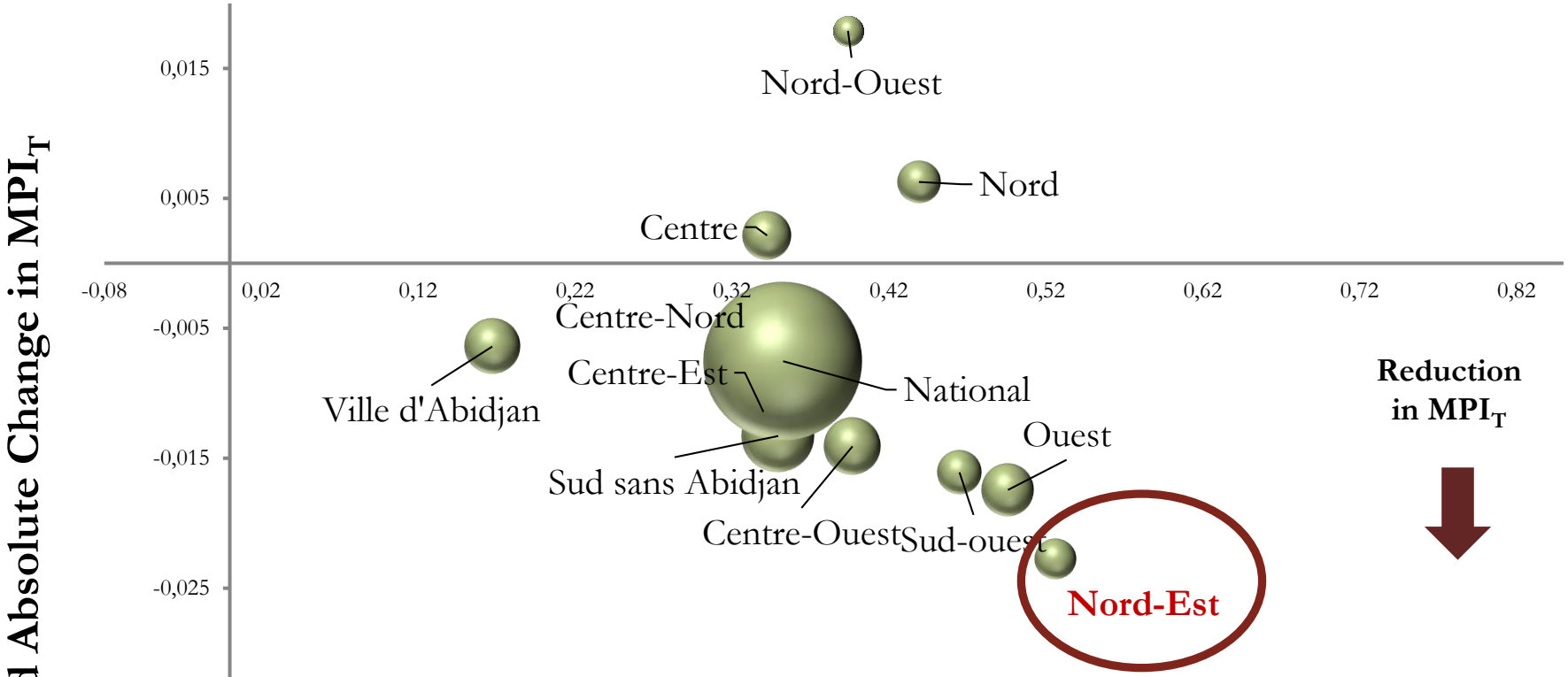
How did multidimensional poverty go down?



Cote d'Ivoire reduced MPI by putting children in school, improving sanitation and water, reducing child mortality and increasing assets.



Where did poverty go down?
Level of MPI and Speed of MPI Reduction Côte d'Ivoire



In Côte d'Ivoire, Nord Est, the poorest region, reduced MPI fastest. Faster than any African country except Rwanda. Number of poor went down also.

Size of bubble is proportional to the number of poor in first year of comparison

Multidimensional Poverty Index (MPI$_T$) at initial year

Countries with highest reduction for poorest region

- Eight countries have highest reduction in poorest region of country

Country	Region	Pop. share t_1	Pop. share t_2	M_0 in t_1	ΔM_0	$\bar{\Delta} M_0$	$\bar{\Delta} H$	$\bar{\Delta} A$
Cote d'Ivoire (2005 - 2011/12)	Nord-Est	0.053	0.044	0.526	-0.148***	-0.023	-0.020	-0.014
Kenya (2003 - 2008/09)	North Eastern	0.027	0.027	0.681	-0.146***	-0.026	-0.017	-0.016
Kenya (2003 - 2014)	North Eastern	0.027	0.028	0.681	-0.150***	-0.014	-0.010	-0.008
Liberia (2007 - 2013)	North Central	0.357	0.298	0.558	-0.131***	-0.022	-0.024	-0.009
Mozambique (2003 - 2011)	Nampula	0.200	0.155	0.594	-0.192***	-0.024	-0.020	-0.014
Malawi (2004 - 2010)	Southern	0.454	0.450	0.393	-0.057***	-0.009	-0.011	-0.005
Namibia (2000 - 2006/7)	Omaheke	0.029	0.043	0.343	-0.148***	-0.023	-0.035	-0.010
Namibia (2000 - 2013)	Omaheke	0.029	0.029	0.343	-0.134**	-0.010	-0.017	-0.003
Niger (2006 - 2012)	Tillabéri	0.142	0.128	0.757	-0.133***	-0.022	-0.009	-0.017
Nigeria (2008 - 2013)	North East	0.135	0.149	0.563	-0.074***	-0.015	-0.017	-0.005

Notes: $*p < 0.10$ $**p < 0.05$,$***p < 0.01$ (two-tailed tests).

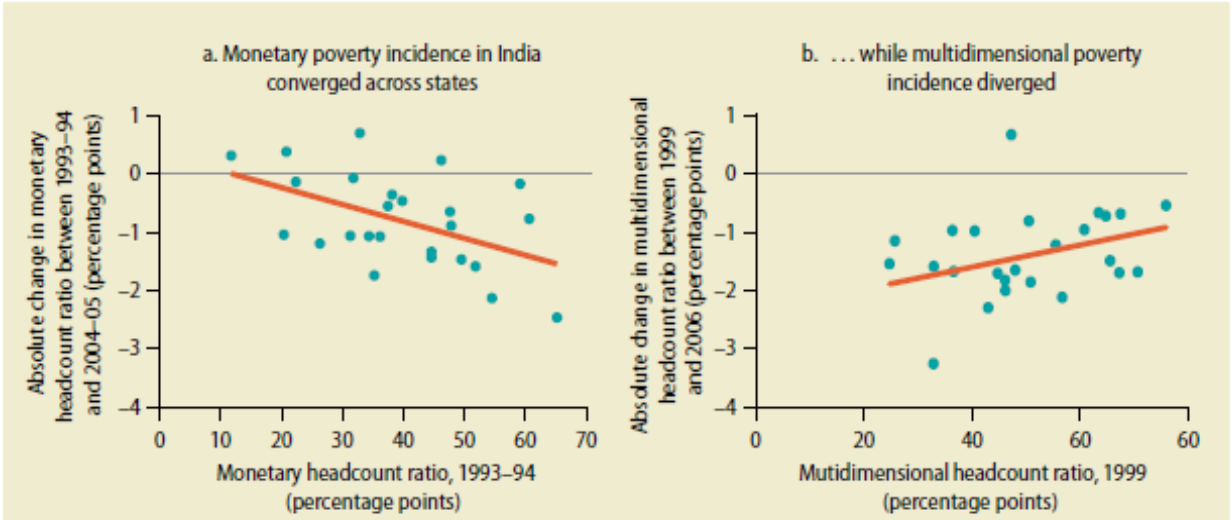
The Global Monitoring Report 2015:

Released 8 October 2015 by the World Bank

To sustainably end extreme poverty and promote shared prosperity, more attention is needed to the non-income dimensions of development. First, to "end poverty in all of its forms everywhere," it must be recognized that poverty is multidimensional. Income poverty is typically accompanied by inadequate access to education, health, housing, employment, and personal security

Trends in income poverty and MPI poverty may not match (as in Indian states 1999-2006).

FIGURE 1.5 **A multidimensional lens suggests slower poverty reduction progress in India**



At-A-Glance

9 countries significantly reduced each MPI indicator: Burkina Faso, Comoros, Gabon, Ghana, (2003-14), Mozambique, Rwanda(2005-10 & 2005-14/15), Zambia, and Ethiopia (2000-05 & 2005-11)

Each indicator was significantly reduced by at least one country, but no indicator reduced across all countries

10 countries significantly reduced poverty in **all sub-national regions** for at least one comparison

The two countries with 12 years of data – Gabon and Comoros –both **more than halved their MPI incidence**

8 data tables are updated twice a year.

Global MPI Data Tables for 2017

Brief methodological note on the Summer 2017 updates (pdf).

Table	Contents	Downloa
Tables 1.1-2.3	Main MPI results, headcount ratio by dimensions, contribution of deprivations and other measures of poverty and wellbeing at the national level (103 countries)	
Tables 3.1-4.3	Multidimensional poverty, headcount ratio by dimension and contribution of deprivations in rural and urban areas (102 countries)	
Tables 5.1-5.4	Multidimensional poverty, headcount ratio by dimension and contribution of deprivations at the sub-national level (988 regions of 78 countries)	
Tables 6.1-6.6	Changes to MPI poverty over time, including annualised changes in headcount ratio and intensity, changes in each indicator at the national level and changes in destitution where available (50 countries)	
Table 7	The table presents an archive of all MPI estimations published since 2010. These are not harmonized for comparisons over time (for harmonized estimations see Table 6). Table 7 covers 256 estimations for 120 countries in 2017.	
Table 8	Multidimensional poverty, headcount ratio by dimensions and contribution of deprivations for different age groups at the national level (103 countries)	

What is Currently Computed & Reported

- **Three Poverty Lines:**
  - 20% (Vulnerable), 33% (MPI), 50% (Severe)
- **Two Vectors of 'Deprivation Cutoffs' for each indicator**
  - Poverty & Destitution, for k=33%
- **Dimensional and Indicator Breakdown; % Contributions**:
  - For 20%, 33%, plus uncensored levels of deprivation in each indicator
- **Disaggregated Detail:**
  - Rural-Urban; Age Cohort; Sub-national Regions
- **MPI-specific Dataset Information:**
  - Indicators missing, SE/CI, Retained simple, Non-response by indicator
- **Strictly Harmonized, Comparable MPI over time (Table 6)**
- **All MPIs ever reported (240 datasets, 120 countries)**
- **Inequality among the poor.**

http://www.dataforall.org/dashboard/ophi/index.php/mpi/country_briefings

OPHI Oxford Poverty & Human Development Initiative

Country Briefings (10 Pages): Contents

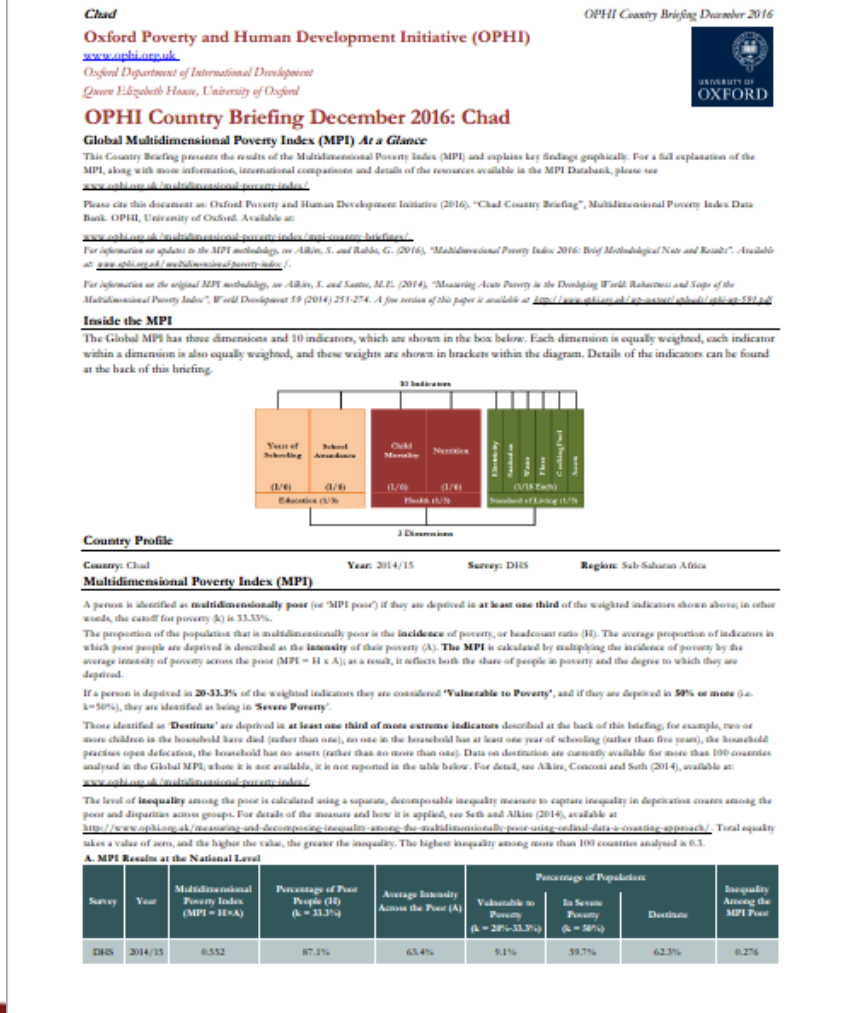
- Gives links to resources. Explains structure of MPI. Each section has explanatory text.

A. Headline: Provides MPI, H, A, inequality, Severe, Vulnerability, Destitution at-a-glance
B. Bar Graphs: MPI (H), $1.90/day, $3.10/day, National poverty line (with year of data)
C. Summary Table (MPI, H, A), $1.90, $3.10, National, Gini
D. Bar Graphic with dots of MPI(H), $1.90, and Destitution(H)
E. Censored Headcount ratios in each of 10 indicators - Bar
F. Censored Headcount ratios in each of 10 indicators - Spider Graph
G. Absolute & Relative Contribution of each indicator to MPI by Rural-Urban Areas
H. Intensity - Pie chart showing deprivation score 'bands' from 33% to 100% by decile.
I. Provides Headcount Ratio for k=33.3%, 40%, 50%, 60%, 70%, 80%, 90%
J. Table - Subnational: MPI, H, A, Vulnerable, Severe, Destitute, Inequality among Poor, Population Share for Rural/urban and Subnational Regions.
K. Map showing Subnational Poverty (fixed scale)
L. H of MPI poor & Destitute by Subnational (bar chart)
M. Composition of MPI by Subnational Regions
N. Changes over time (if Harmonized Data)

A. MPI Results at the National Level

Survey	Year	Multidimensional Poverty Index (MPI = H×A)	Percentage of Poor People (H) (k = 33.3%)	Average Intensity Across the Poor (A)	Percentage of Population:			Inequality Among the MPI Poor
					Vulnerable to Poverty (k = 20%-33.3%)	In Severe Poverty (k = 50%)	Destitute	
DHS	2014/15	0.552	87.1%	63.4%	9.1%	59.7%	62.3%	0.276

Chad:



Chad *OPHI Country Briefing December 2016*

Oxford Poverty and Human Development Initiative (OPHI)
www.ophi.org.uk
Oxford Department of International Development
Queen Elizabeth House, University of Oxford

OPHI Country Briefing December 2016: Chad

Global Multidimensional Poverty Index (MPI) *At a Glance*

This Country Briefing presents the results of the Multidimensional Poverty Index (MPI) and explains key findings graphically. For a full explanation of the MPI, along with more information, international comparisons and details of the resources available in the MPI Databank, please see www.ophi.org.uk/multidimensional-poverty-index/.

Please cite this document as: Oxford Poverty and Human Development Initiative (2016). "Chad Country Briefing", Multidimensional Poverty Index Data Bank. OPHI, University of Oxford. Available at: www.ophi.org.uk/multidimensional-poverty-index/mpi-country-briefings/.

For information on updates to the MPI methodology, see Alkire, S. and Robles, G. (2016), "Multidimensional Poverty Index 2016: Brief Methodological Note and Results". Available at: www.ophi.org.uk/multidimensional-poverty-index/.

For information on the original MPI methodology, see Alkire, S. and Santos, M.E. (2014), "Measuring Acute Poverty in the Developing World: Robustness and Scope of the Multidimensional Poverty Index", World Development 59 (2014) 251-274. A free version of this paper is available at: http://www.ophi.org.uk/wp-content/uploads/ophi-wp-59.pdf

Inside the MPI

The Global MPI has three dimensions and 10 indicators, which are shown in the box below. Each dimension is equally weighted, each indicator within a dimension is also equally weighted, and these weights are shown in brackets within the diagram. Details of the indicators can be found at the back of this briefing.

Country Profile

Country: Chad **Year:** 2014/15 **Survey:** DHS **Region:** Sub-Saharan Africa

Multidimensional Poverty Index (MPI)

A person is identified as **multidimensionally poor** (or 'MPI poor') if they are deprived in **at least one third** of the weighted indicators shown above; in other words, the cutoff for poverty (k) is 33.33%.

The proportion of the population that is multidimensionally poor is the **incidence** of poverty, or headcount ratio (H). The average proportion of indicators in which poor people are deprived is described as the **intensity** of their poverty (A). **The MPI** is calculated by multiplying the incidence of poverty by the average intensity of poverty across the poor (MPI = H x A); as a result, it reflects both the share of people in poverty and the degree to which they are deprived.

If a person is deprived in **20-33.3%** of the weighted indicators they are considered **'Vulnerable to Poverty'**, and if they are deprived in **50% or more** (i.e. k=50%), they are identified as being in **'Severe Poverty'**.

Those identified as **'Destitute'** are deprived in **at least one third of more extreme indicators** described at the back of this briefing; for example, two or more children in the household have died (rather than one), no one in the household has at least one year of schooling (rather than five years), the household practises open defecation, the household has no assets (rather than no more than one). Data on destitution are currently available for more than 100 countries analysed in the Global MPI; where it is not available, it is not reported in the table below. For detail, see Alkire, Conconi and Seth (2014), available at: www.ophi.org.uk/multidimensional-poverty-index/.

The level of **inequality** among the poor is calculated using a separate, decomposable inequality measure to capture inequality in deprivation counts among the poor and disparities across groups. For details of the measure and how it is applied, see Seth and Alkire (2014), available at http://www.ophi.org.uk/measuring-and-decomposing-inequality-among-the-multidimensionally-poor-using-ordinal-data-a-counting-approach/. Total equality takes a value of zero, and the higher the value, the greater the inequality. The highest inequality among more than 100 countries analysed is 0.3.

A. MPI Results at the National Level

Survey	Year	Multidimensional Poverty Index (MPI = H×A)	Percentage of Poor People (H) (k = 33.3%)	Average Intensity Across the Poor (A)	Percentage of Population:			Inequality Among the MPI Poor
					Vulnerable to Poverty (k = 20%-33.3%)	In Severe Poverty (k = 50%)	Destitute	
DHS	2014/15	0.552	87.1%	63.4%	9.1%	59.7%	62.3%	0.276

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C. Summary

Multidimensional Poverty Index	0.552
Percentage of MPI Poor (H)	87.1%
Average Intensity Across the Poor (A)	63.4%
Percentage of Income Poor ($1.90 a day)‡	38.4%
Percentage of Income Poor ($3.10 a day)‡	64.8%
Percentage of Poor (National Poverty Line)‡	46.7%
Income Inequality (Gini index)‡	0.433

‡ The World Bank (2016). "The World DataBank". Washington, DC. [available at http://databank.worldbank.org/data/home.aspx, accessed 24 Apr 2016]

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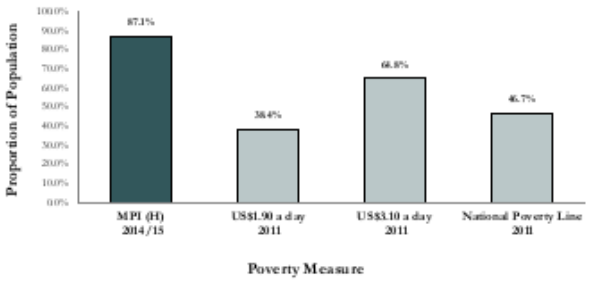
Comparing the MPI with Other Poverty Measures

The year of the survey the statistics are taken from is provided below each column in chart B. The height of the first column denotes the percentage of people who are MPI poor (also called the incidence or headcount ratio). The second and third columns denote the percentages of people who are poor according to the $1.90 a day income poverty line and $3.10 a day line, respectively. The final column denotes the percentage of people who are poor according to the national income or consumption poverty line. The table on the right-hand side reports various descriptive statistics for the country. The monetary poverty statistics are taken from the year closest to the year of the survey used to calculate the MPI. Where a survey was conducted over two calendar years, we take the second one as a reference.

B. Comparative Poverty Measures



C. Summary

Multidimensional Poverty Index	0.552
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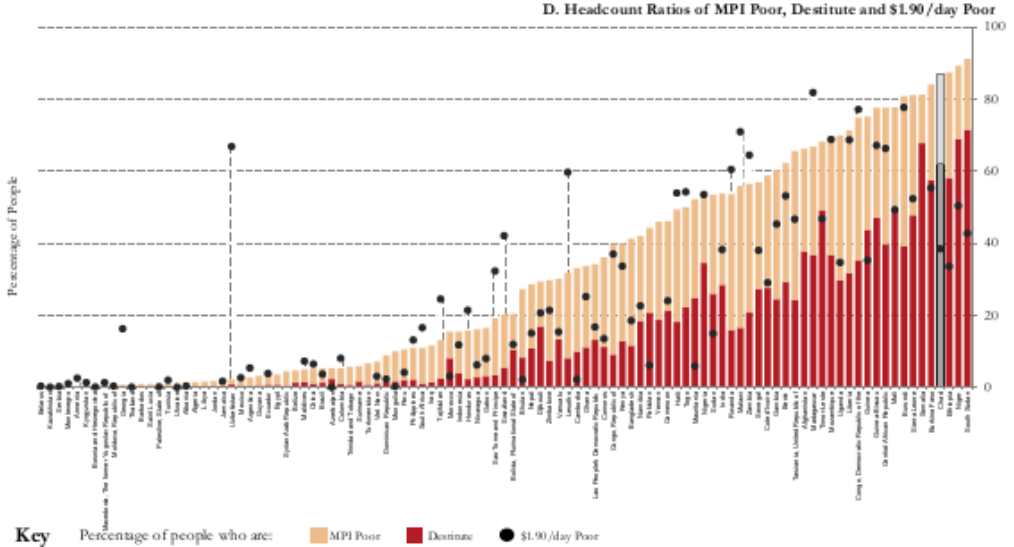
‡ The World Bank (2016). "The World DataBank". Washington, DC. [available at http://databank.worldbank.org/data/home.aspx, accessed 24 Apr 2016]

Comparing the Headcount Ratios of MPI Poor and $1.90/day Poor

Chart D shows the percentage of people who are MPI poor (also called the incidence or headcount ratio) and the percentage of people who are also destitute (deprived in at least one third of more extreme indicators) in the developing countries analysed.

The column denoting this country is in grey, with other countries shown in colour. The percentage of people who are MPI poor is ordinarily shown in orange, and the percentage of people who are also destitute is shown in red. The height at each dot denotes the percentage of people who are income poor according to the $1.90 a day poverty line in each country. Chart B tells you the year this data comes from for this country. Dots are only shown where the income poverty data available are taken from a survey fielded within three years of the MPI survey year.

D. Headcount Ratios of MPI Poor, Destitute and $1.90/day Poor

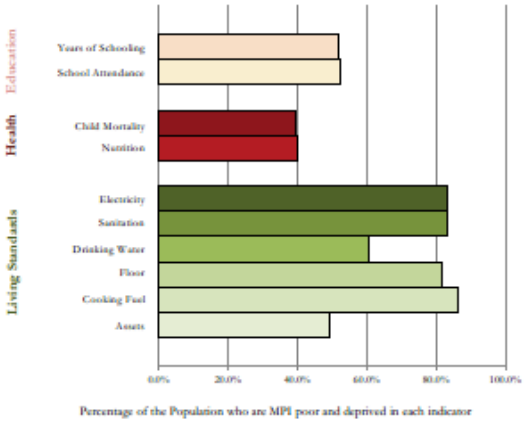


Chad:

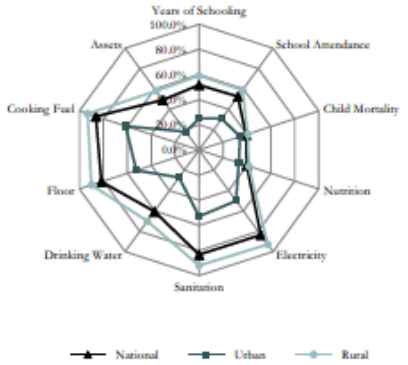
Incidence of Deprivation in Each of the MPI Indicators

The MPI uses 10 indicators to measure poverty in three dimensions: education, health and living standards (see the back of this briefing for details). The bar chart to the left reports the proportion of the population that is poor and deprived in each indicator, also called the censored headcount ratios. We do not include the deprivations of non-poor people. The spider diagram to the right shows the level of these same deprivations in rural and urban areas, together with the national aggregate. Patterns of deprivation may differ in rural and urban areas. The MPI is also the weighted sum of these deprivations, which makes it useful for monitoring change.

E. Censored Deprivations in each Indicator



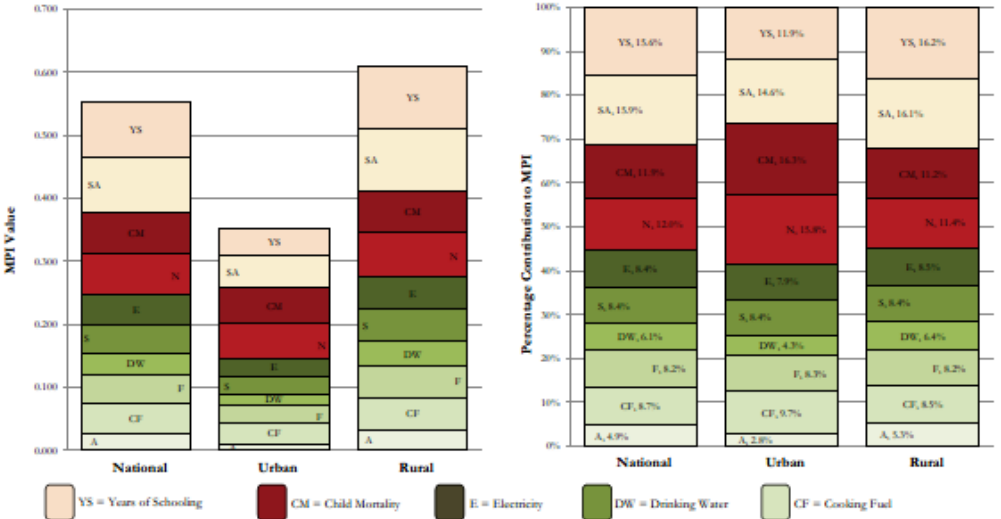
F. Percentage of the Population who are MPI Poor and Deprived



Decomposition of MPI by Region

The MPI can be decomposed by different population subgroups, then broken down by dimension, to show how the composition of poverty differs between different regions or groups. On the left-hand side of column chart G, the height of each of the three bars shows the level of MPI at the national level, for urban areas, and for rural areas, respectively. Inside each bar, different colours represent the contribution of different weighted indicators to the overall MPI. On the right-hand side of chart G, the colours inside each bar denote the percentage contribution of each indicator to the overall MPI, and all bars add up to 100%. This enables an immediate visual comparison of the composition of poverty across regions.

G. Contribution of Each Indicator to Overall Poverty at the National Level, for Urban Areas, and for Rural Areas



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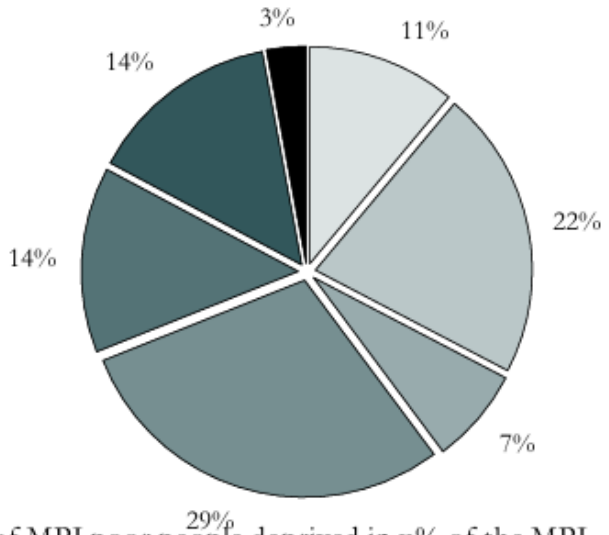
H. Intensity of Deprivation Among MPI Poor



Percentage of MPI poor people deprived in x% of the MPI weighted indicators, where x% is:

33.3%-39.9% 40%-49.9% 50%-59.9% 60%-69.9%
70%-79.9% 80%-89.9% 90%-100%

Intensity of Multidimensional Poverty

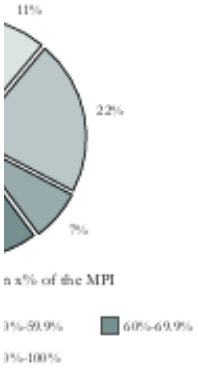
Recall that i) a person is considered poor if they are deprived in at least one third of the weighted indicators and ii) the intensity of poverty denotes the proportion of weighted indicators in which they are deprived. A person who is deprived in 90% of the weighted indicators has a greater intensity of deprivation than someone deprived in 40% of the weighted indicators. The following figures show the percentage of MPI poor people who experience

pulation into groups based on the intensity of their deprivations. For example, the first slice shows deprivation ictly less than 40%. It shows the proportion of poor people whose intensity (the percentage of indicators in which

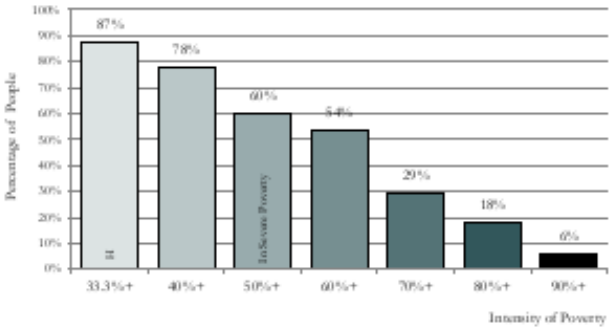
on of the population in a country that is poor in that percentage of indicators or more. For example, the number over of people who are deprived in 40% or more weighted indicators.

eprived in 50% or more of the indicators are identified as in 'Severe Poverty' in Table A (page 1); in other words, first two categories (33.3-39.9% and 40-49.9% in graph H, 33.3%+ and 40%+ in graph I).

ong MPI Poor



I. Percentage of People Deprived in X% or more of the MPI Weighted Indicators



he Sub-national Level

In addition to providing data on multidimensional poverty at the national level, the MPI can also be broken down by sub-national regions to show disparities in poverty within countries. This analysis can be easily performed when the survey used for the MPI is representative at the sub-national level.

The following table shows the MPI value and its two components at the sub-national level: the incidence of poverty (H) and the average intensity of deprivation across the poor (A). The fifth and sixth columns present the percentage of the population Vulnerable to Poverty and living in Severe Poverty, respectively (see page 1). The seventh column presents the percentage of the population identified as Destitute, or deprived according to more extreme indicators (see details at the back of this briefing).

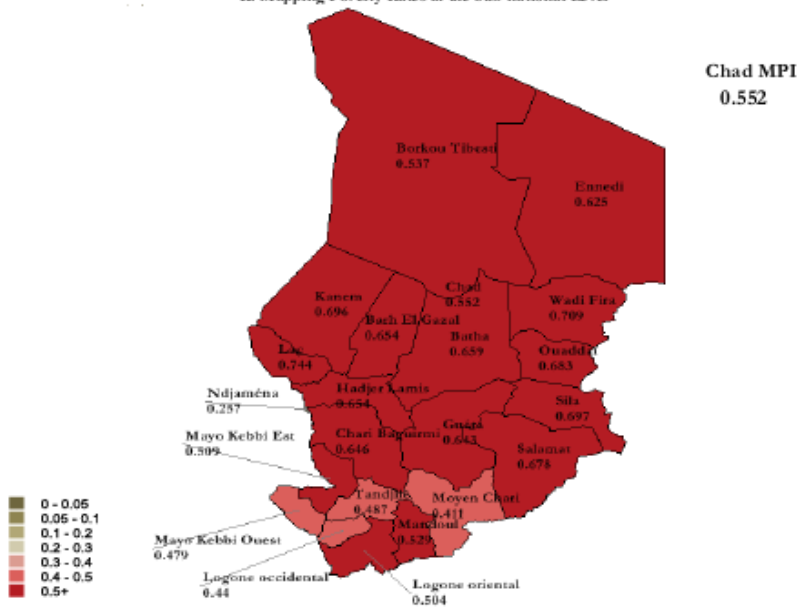
The second-to-last column presents the level of inequality among the poor, calculated using a decomposable inequality measure (see page 10). The last column presents the population share of each region, which has been obtained by using the sampling weight in the respective survey dataset, applied to the final sample used for the computation of the reported poverty statistics in this country profile. The population-weighted regional figures on MPI, headcount ratio (H), and intensity (A), sum to the national figures on MPI, H and A.

J. Multidimensional Poverty across Sub-national Regions

Region	MPI (H x A)	H (Incidence) k ≥ 33.3%	A (Intensity)	Percentage of Population:			Inequality Among the MPI Poor	Population Share
				Vulnerable to Poverty k = 20%-33.3%	In Severe Poverty k ≥ 50%	Destitute		
Chad	**0.552**	**87.1%**	**63.4%**	**9.1%**	**59.7%**	**62.3%**	**0.276**	**100%**
Urban	**0.351**	**64.8%**	**54.1%**	**18.4%**	**34.9%**	**-**	**-**	**22.1%**
Rural	**0.609**	**93.4%**	**65.2%**	**6.4%**	**66.8%**	**-**	**-**	**77.9%**
Ndjaména	0.257	52.7%	48.7%	19.4%	25.7%	18.4%	0.186	7.8%
Moyen Chari	0.411	74.1%	55.5%	18.8%	35.9%	35.6%	0.235	5.4%
Logone occidental	0.440	79.1%	55.6%	14.6%	38.0%	42.5%	0.208	6.3%
Mayo Kebbi Ouest	0.479	85.0%	56.3%	12.5%	44.3%	52.9%	0.210	5.2%
Tandjilé	0.487	84.3%	57.7%	14.1%	43.5%	52.1%	0.231	5.9%
Logone oriental	0.504	86.3%	58.4%	12.5%	46.0%	57.3%	0.269	9.8%
Mayo Kebbi Est	0.509	86.1%	59.2%	13.0%	50.0%	54.2%	0.229	7.5%
Mandoul	0.529	88.1%	60.0%	10.6%	51.7%	57.6%	0.230	7.0%
Borkou Tibesti	0.537	89.0%	60.4%	8.8%	58.8%	64.5%	0.236	0.5%
Ennedi	0.625	96.8%	64.6%	2.5%	69.6%	77.8%	0.237	0.5%
Guéra	0.643	95.4%	67.4%	3.6%	72.6%	67.1%	0.265	5.9%
Chari Baguirmi	0.646	96.9%	66.7%	3.0%	79.7%	83.8%	0.234	4.1%
Hadjer Lamis	0.654	95.4%	68.6%	3.6%	82.2%	78.8%	0.243	6.7%
Barh El Gazal	0.654	95.7%	68.3%	3.9%	83.0%	79.3%	0.211	1.4%
Batha	0.659	95.7%	68.8%	3.6%	81.2%	84.0%	0.206	4.5%
Salamat	0.678	97.8%	69.4%	1.2%	81.2%	80.5%	0.267	2.2%
Ouaddaï	0.683	95.3%	71.7%	2.7%	81.4%	83.1%	0.226	5.7%
Kanem	0.696	98.5%	70.7%	1.4%	85.4%	82.1%	0.233	3.9%
Sila	0.697	98.9%	70.4%	1.0%	84.5%	84.7%	0.206	2.0%
Wadi Fira	0.709	99.0%	71.6%	0.8%	82.1%	91.3%	0.211	2.4%
Lac	0.744	98.1%	75.9%	0.9%	89.8%	91.9%	0.214	5.3%

Chad:

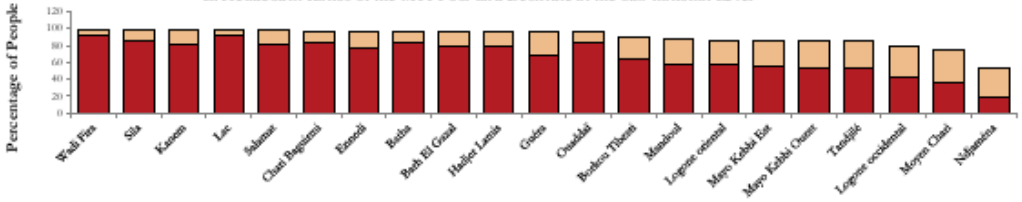
K. Mapping Poverty Rates at the Sub-national Level



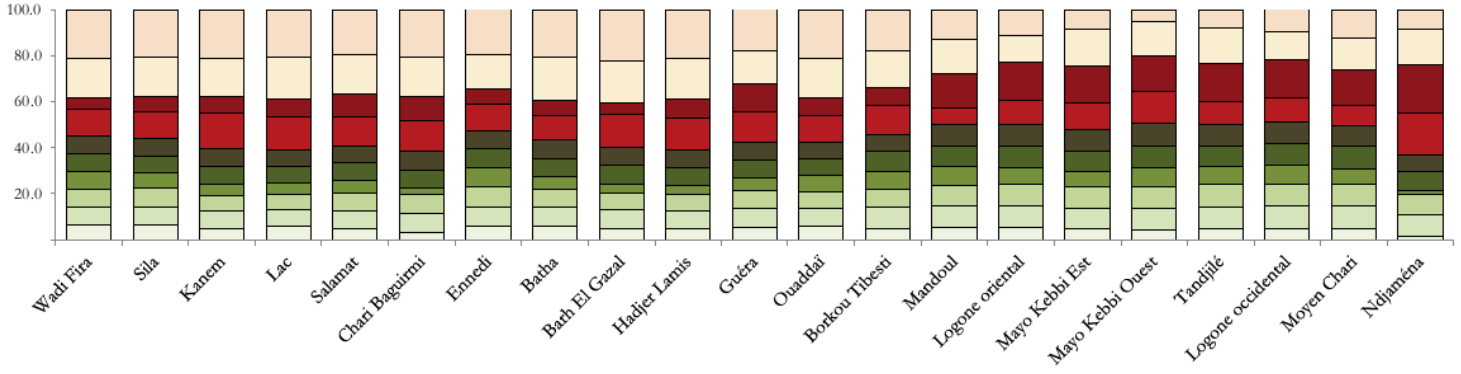
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by OPHI or the University of Oxford. This map is intended for illustrative purposes only.

Graph L, below, shows the percentage of people who are MPI poor and - where available - the percentage of people who are also destitute in each sub-national region, from the regions with the highest levels of poverty on the left to the regions with the lowest levels of poverty on the right.

L. Headcount Ratios of the MPI Poor and Destitute at the Sub-national Level



M. Percentage Contribution of Each Indicator to the MPI at the Sub-national Level



Changes in Multidimensional Poverty over time

For some countries, we have comparable data from more than one time period, enabling us to analyse how multidimensional poverty has changed over time; see Alkire, Roche and Vaz (2014) for details. Table N, below, compares the MPI, Incidence (H), Intensity (A) and incidence of destitution (H^D) in the years shown, at the national level and among urban and rural populations.

Please note that in some cases the MPI reported here (MPI_T) does not coincide with the Global MPI. The global MPI is estimated using the maximum information available for each year. In countries where changes in the survey design affected comparability across time, MPI parameters have been strictly standardised.

N. Changes in Multidimensional Poverty and Destitution over Time

Time Period	Region	MPI_T	H_T (Incidence)	A_T (Intensity)	H_T^D (Destitute)
2005	National	0.461	82.9	55.6	35.0
2010		0.33	66.1	49.9	24.2
2014/15		0.259	53.9	48.1	-
2005	Urban	0.299	58.7	50.9	17.2
2010		0.189	40.5	46.7	10.1
2005	Rural	0.489	87.2	56.1	38.2
2010		0.352	70.2	50.2	26.4

Interactive Databank

Afghanistan (MPI 0.353)

Browse MPI Data

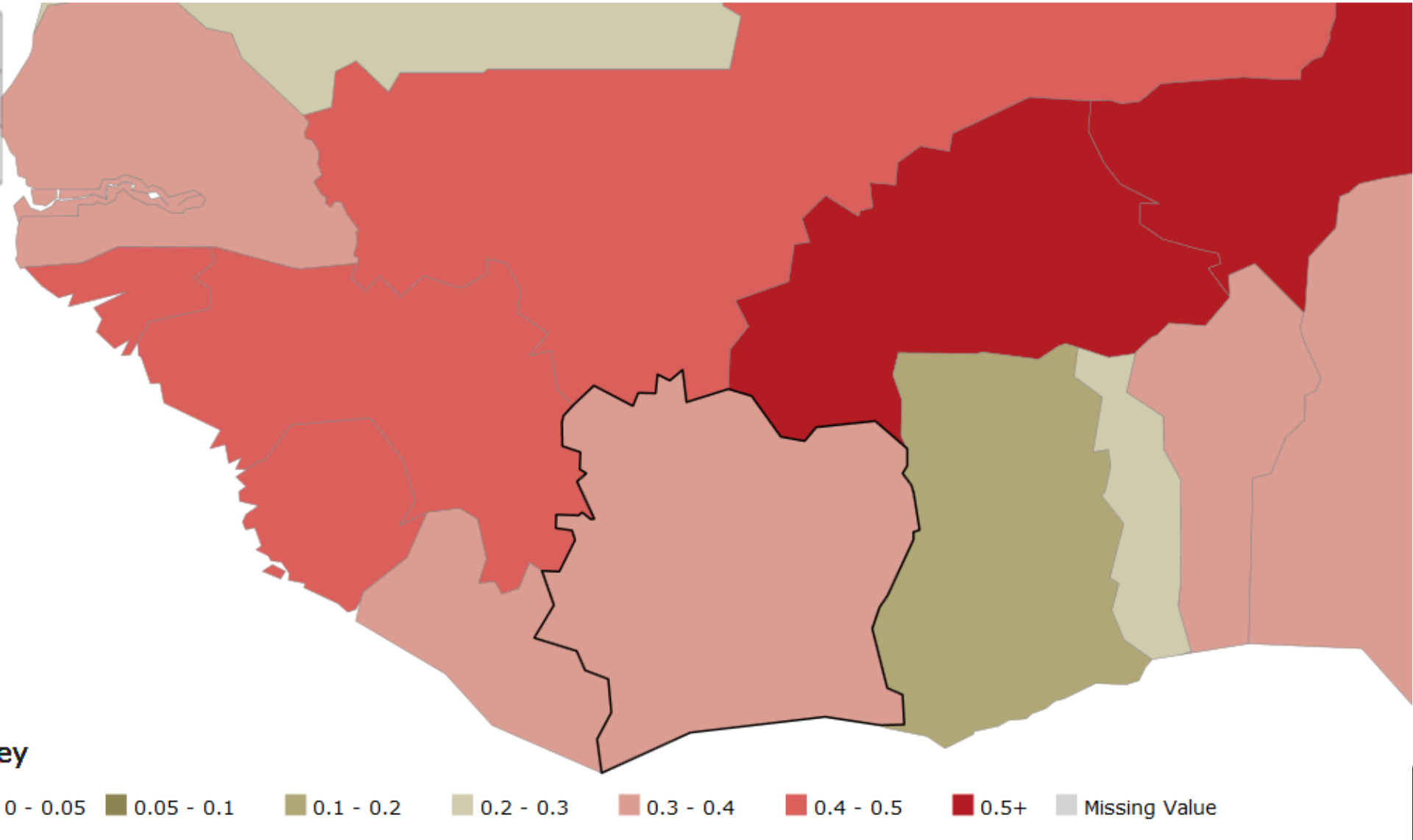
Download Country Data

Map Graph

Population in multidimensional poverty (H) (%) - MP...

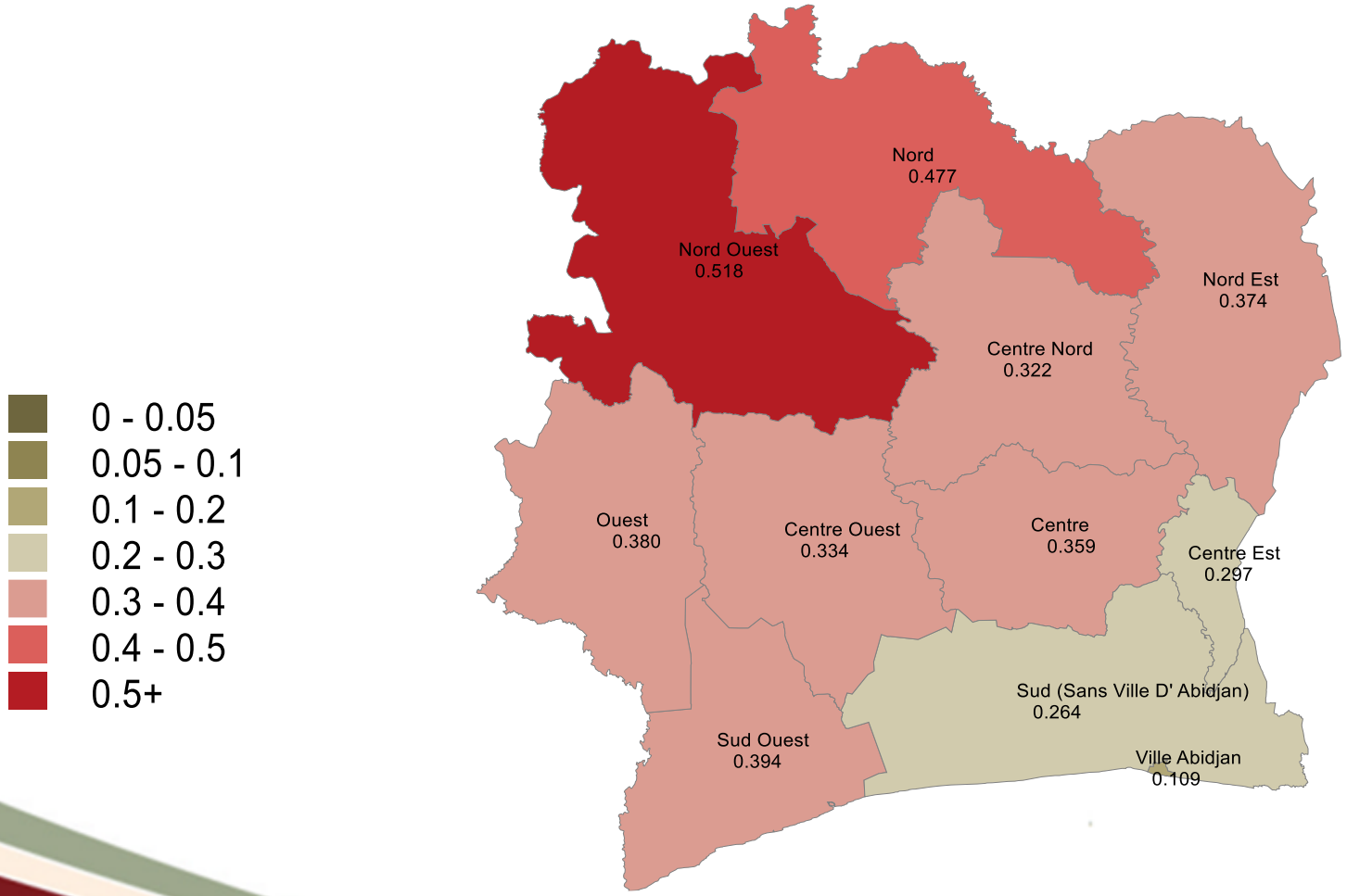
- Population in multidimensional poverty (H)
  - MPI Poor
  - Rural MPI Poor
  - Urban MPI Poor
- Number of MPI poor people (thousand)
  - National
- Average intensity across the poor (A) (%)
  - National
  - Rural
  - Urban
- Population vulnerable to poverty (%)
  - National
  - Rural
  - Urban
- Population in severe poverty (%)
  - National
  - Rural
  - Urban
- Population in destitution (%)
  - National
  - Rural
  - Urban
- Other indicators
  - Human development index (range 0 to 1)
  - Gini Index (coefficient)
  - GNI per capita (PPP 2010 $)
  - Population living on less than $1.90/day (%)
  - Population living on less than $2/day (%)
  - Population living below the national poverty line (
- Contributions of dimensions to overall poverty
  - Contribution of Education indicators to overall poverty (
    - National
    - Rural
    - Urban
  - Contribution of Education indicators to overall poverty (
  - Contribution of Health indicators to overall poverty (%)
  - Contribution of Health indicators to overall poverty (% (k=0.2))
  - Contribution of Living Standard indicators to overall poverty (%)
  - Contribution of Living Standard indicators to overall poverty (% (k=0.2))
- Contributions of indicators to overall poverty
  - Contribution of Asset Ownership to overall poverty (%)
  - Contribution of Asset Ownership to overall poverty (% (k=0.2))
  - Contribution of Asset Ownership to overall poverty (MPI) (range 0 to 1)
- Composition of poverty
  - Years of Schooling (%
    - National
    - Rural
    - Urban
  - School Attendance (%
  - Child Mortality (%)
  - Nutrition (%)
  - Electricity (%)
  - Sanitation (%)
  - Drinking Water (%)
  - Flooring (%)
  - Asset Ownership (%)

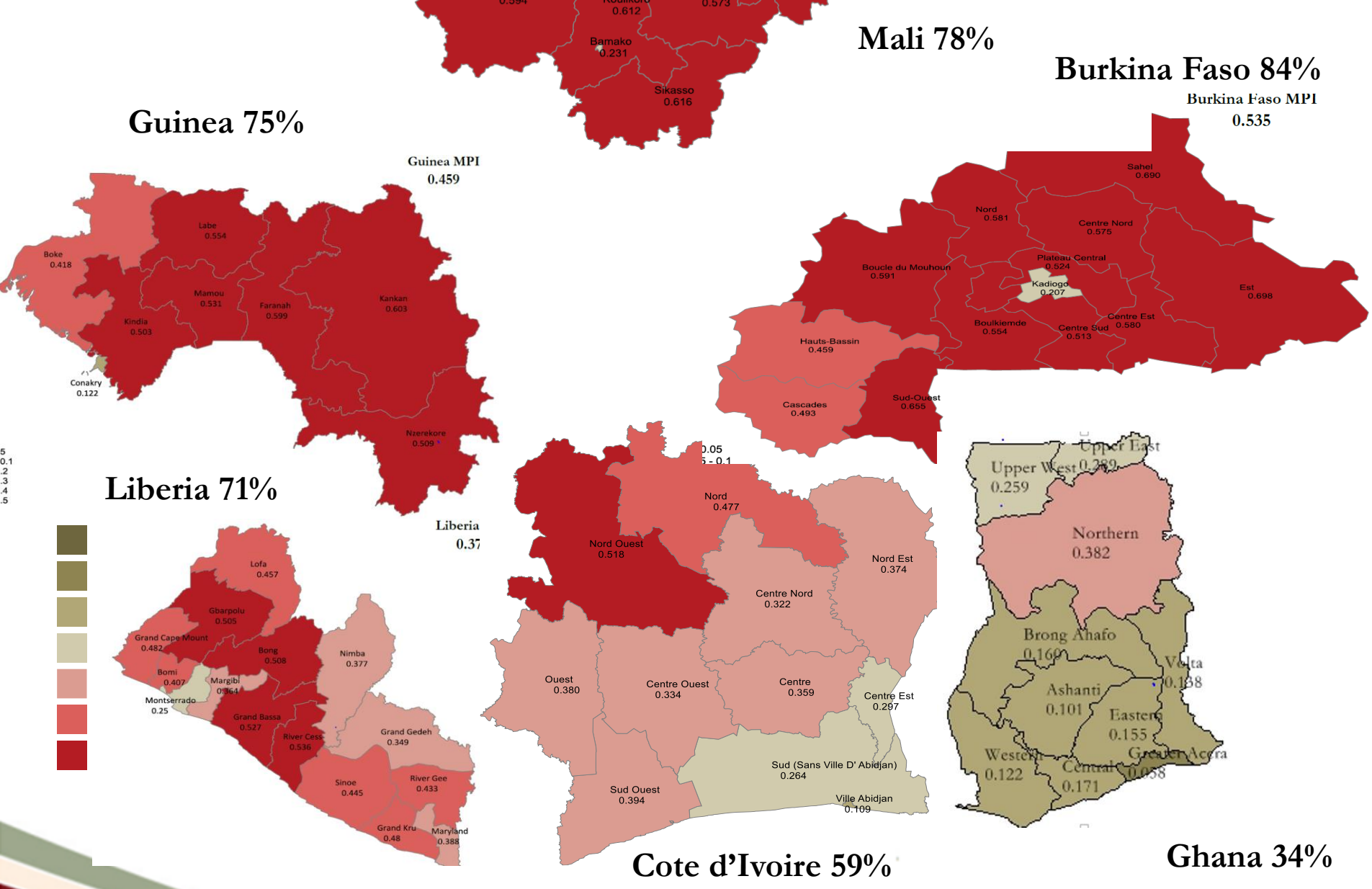
Cote d'Ivoire's MPI & its nearest Neighbours



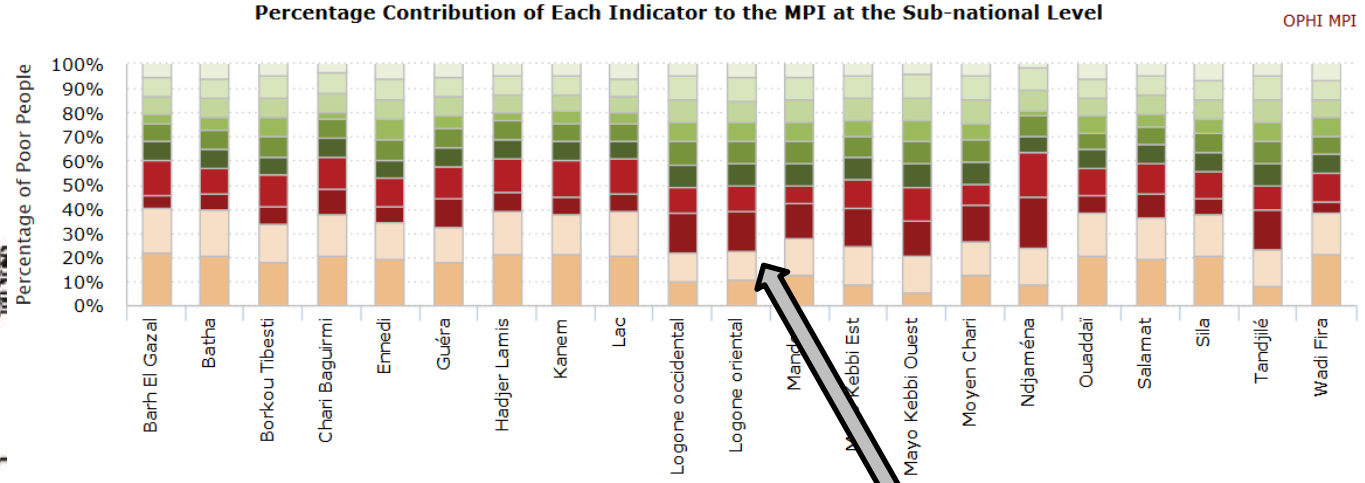
Disaggregate Cote d'Ivoire MPIs

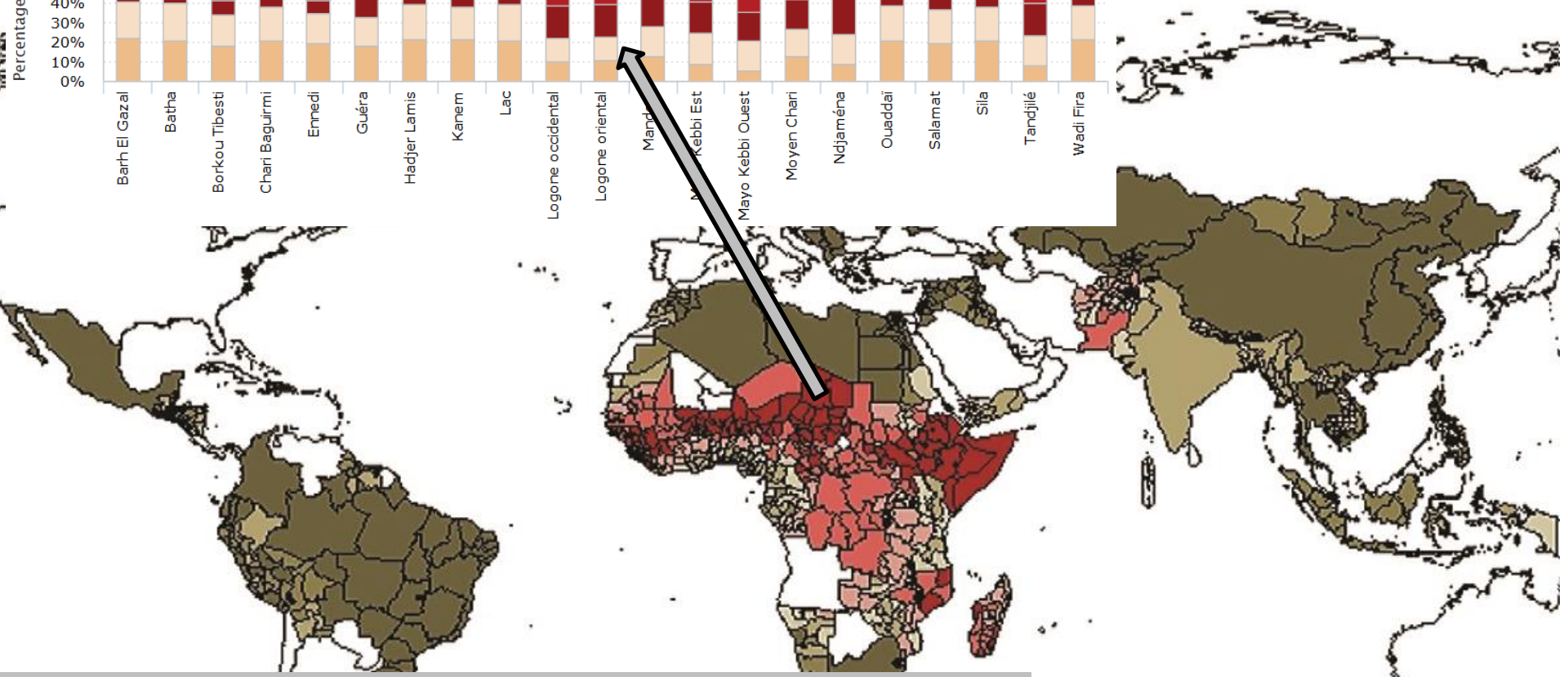
(or H, A, indicator) (by region, subgroup)




Mali 78%
Bamako
0.231
Sikasso
0.616
Burkina Faso 84%
Burkina Faso MPI
0.535
Sahel
0.690
Nord
0.581
Centre Nord
0.575
Plateau Central
0.524
Boucle du Mouhoun
0.591
Kadiogo
0.207
Est
0.698
Boulkiemde
0.554
Centre Est
0.580
Centre Sud
0.513
Hauts-Bassin
0.459
Cascades
0.493
Sud-Ouest
0.655
Guinea 75%
Guinea MPI
0.459
Labe
0.554
Boke
0.418
Mamou
0.531
Faranah
0.599
Kankan
0.603
Kindia
0.503
Conakry
0.122
Nzerekore
0.509
Liberia 71%
Liberia
0.37
Lofa
0.457
Gbarpolu
0.505
Grand Cape Mount
0.482
Bong
0.508
Nimba
0.377
Bomi
0.407
Margibi
0.364
Montserrado
0.25
Grand Bassa
0.527
River Cess
0.536
Grand Gedeh
0.349
Sinoe
0.445
River Gee
0.433
Grand Kru
0.48
Maryland
0.388
Nord
0.477
Nord Ouest
0.518
Nord Est
0.374
Centre Nord
0.322
Ouest
0.380
Centre Ouest
0.334
Centre
0.359
Centre Est
0.297
Sud (Sans Ville D' Abidjan)
0.264
Sud Ouest
0.394
Ville Abidjan
0.109
Cote d'Ivoire 59%
Upper West
0.259
Upper East
0.289
Northern
0.382
Brong Ahafo
0.160
Volta
0.138
Ashanti
0.101
Eastern
0.155
Western
0.122
Central
0.171
Greater Accra
0.058
Ghana 34%

Global MPI: Headline + Disaggregated detail

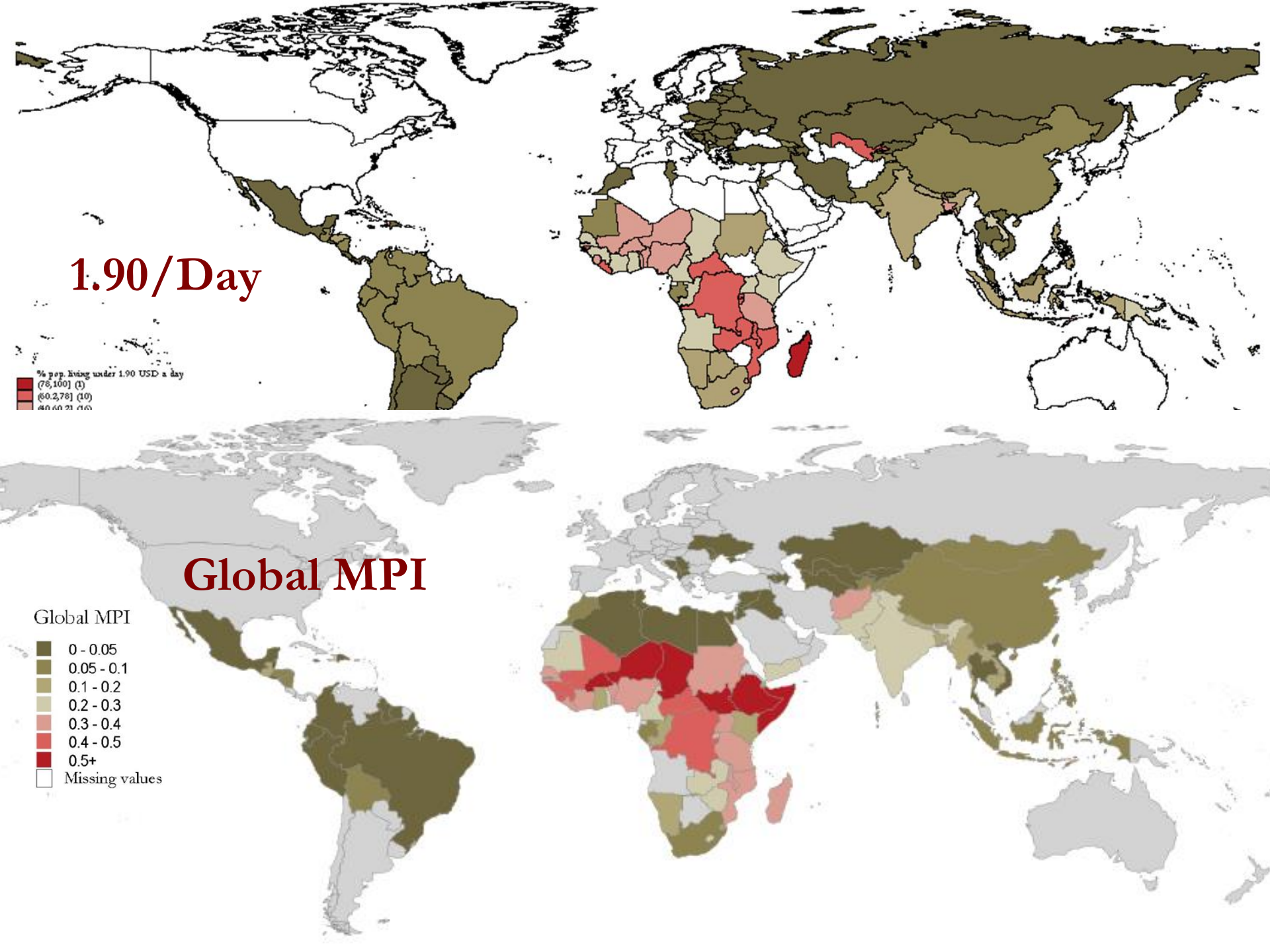




"Poverty measures should reflect the multi-dimensional nature of poverty."

Ban Ki Moon (2014), Former UN Secretary General

Global MPI in Dialogue


1.90/Day
% pop. living under 1.90 USD a day
(78,100] (3)
(60.2,78] (10)
Global MPI
Global MPI
0 - 0.05
0.05 - 0.1
0.1 - 0.2
0.2 - 0.3
0.3 - 0.4
0.4 - 0.5
0.5+
Missing values

MPI and $1.90 poverty: data

- Of the 103 countries, we have $1.90 for **86 countries**.

- In **10 countries** MPI and $1.90 come from the **same year**
- In **24 countries** $1.90 data are **More Recent**
- In **52 countries** MPI data are **More Recent**

- Low or Middle Income Countries with MPI but not $1.90 include: **Afghanistan, Algeria, Belize, Egypt, Guyana, Iraq, Jordan, Libya, Saint Lucia, Myanmar, Somalia, South Sudan, Suriname, Syrian Arab Republic, Turkmenistan, Yemen.**

High income countries with MPI but not $1.90**:**
Barbados, Trinidad and Tobago, (UAE).

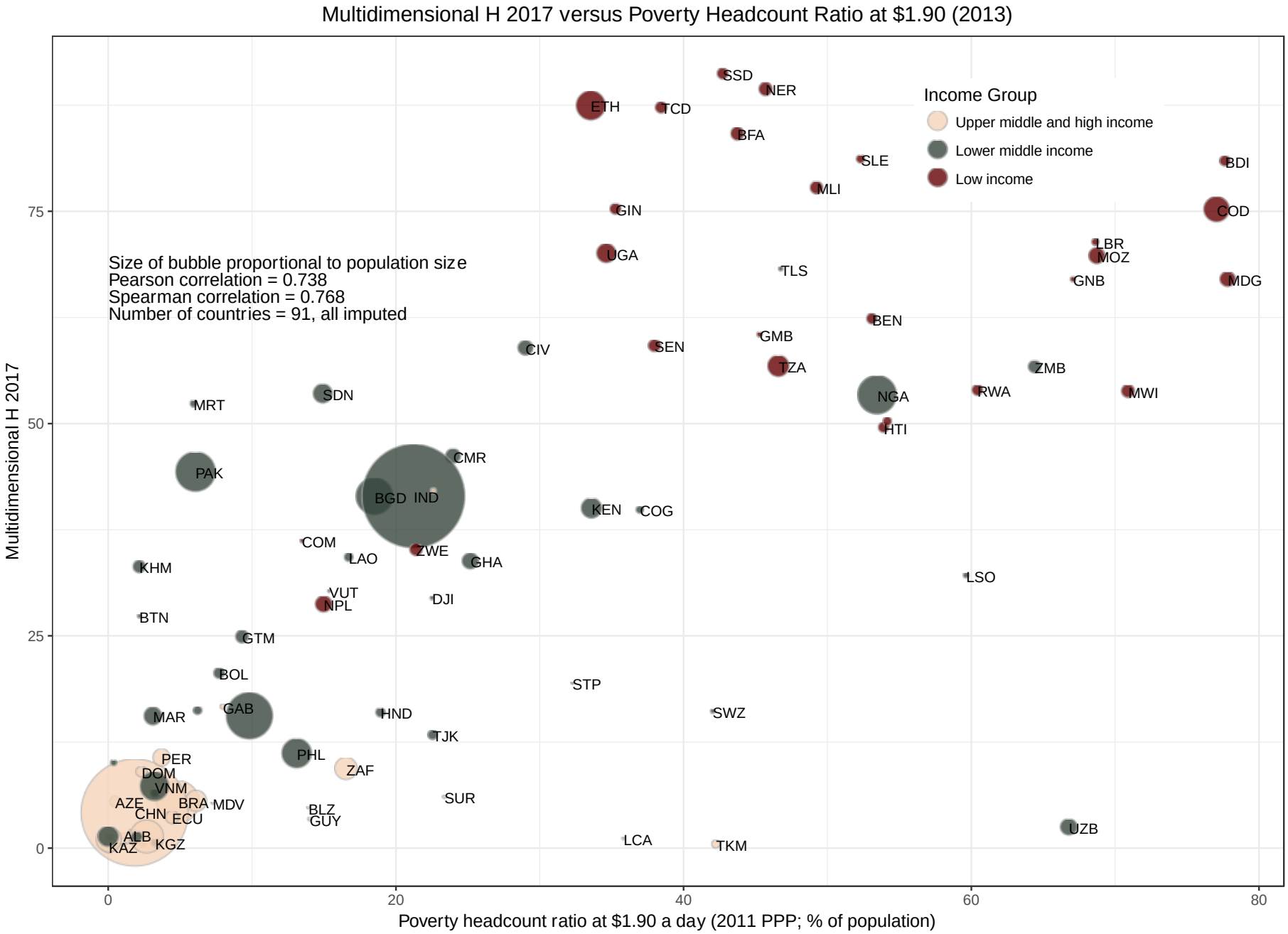
MPI and $1.90 poverty: data

- If we consider MPI & $1.90 estimations from 2003 on, we **lack global MPI** estimations for the following 22 countries for which $1.90 estimations are available:

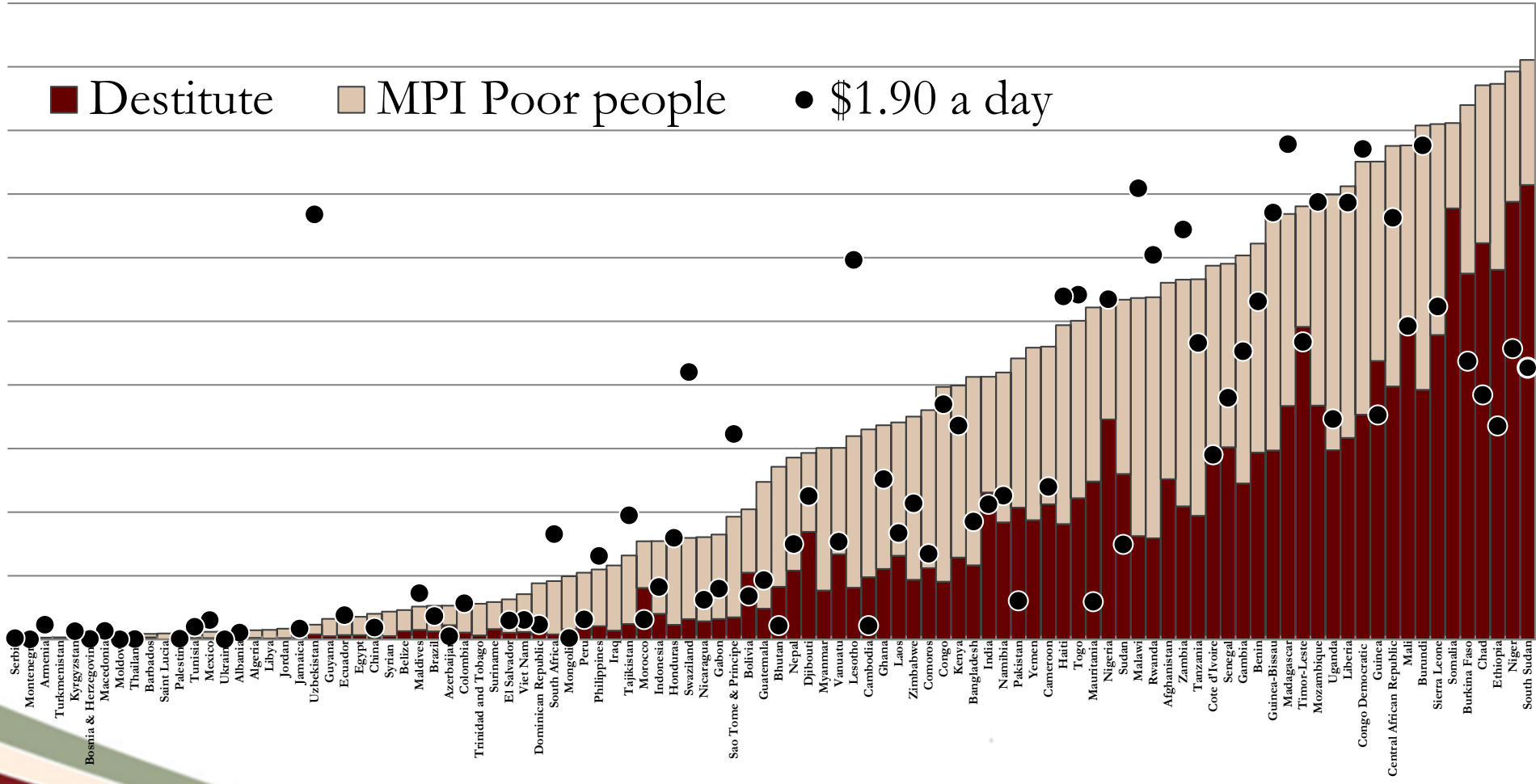
- **Botswana, Bulgaria, Chile, Costa Rica, Fiji, Iran, Kiribati, Kosovo, Latvia, Lithuania, Malaysia, Mauritius, Panama, Papua New Guinea, Poland, Romania, Samoa, Seychelles, Solomon Islands, Tonga, Venezuela**

- **Some have official National MPIs:** Chile, Costa Rica, Panama
- **Others are designing National MPIs:** Malaysia, Seychelles

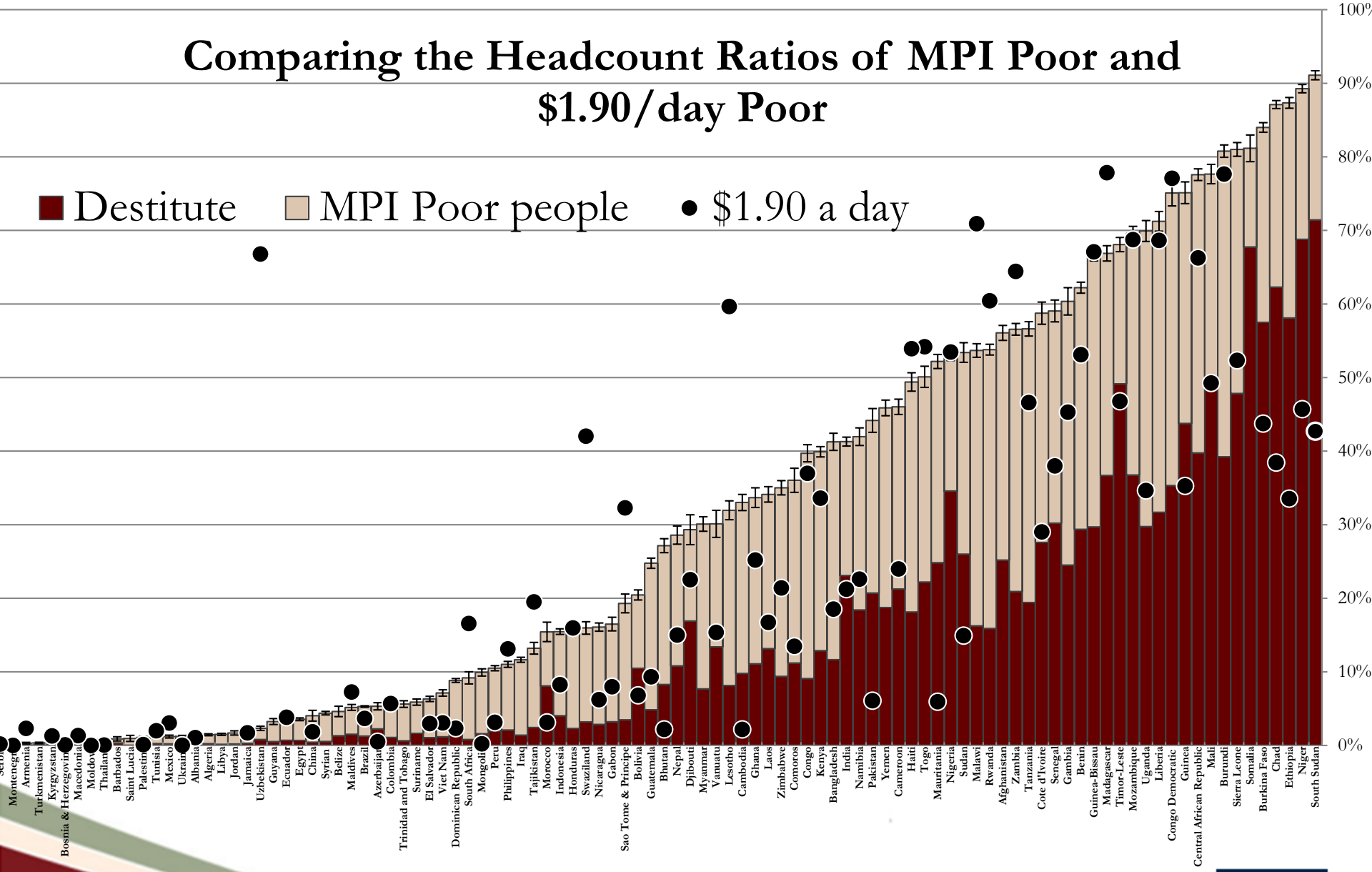
MPI (H) 2017 and $ 1.90 a Day (2013)



Comparing the Headcount Ratios of MPI Poor and Destitute, and $1.90/day Poor



Comparing the Headcount Ratios of MPI Poor and $1.90/day Poor



- **Global Peace Index**

- 23 indicators of the violence or fear of violence.
- All scores for each indicator are normalized on a scale of 1-5: qualitative indicators are banded into five groupings and quantitative ones are scored from 1-5, to the third decimal point" (p. 113). "
- Two subcomponent weighted indices were then calculated from the GPI group of indicators:

1. A measure of how **at peace internally** a country is
2. A measure of how **at peace externally** a country is

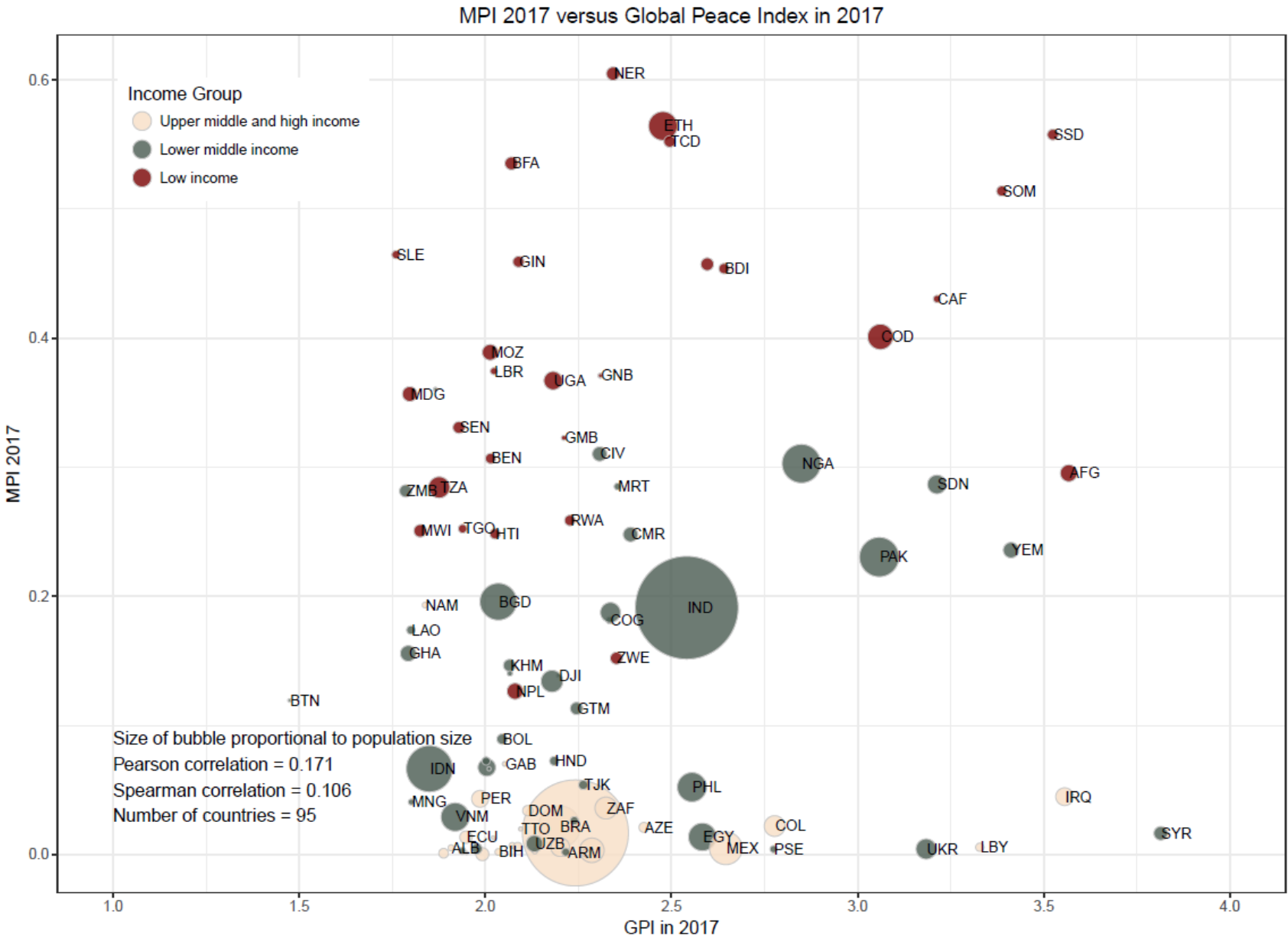
The GPI has a weight of 60% on internal peace and 40% on external peace" (p. 114).

Robustness tests are conducted to weights.

• Global Peace Index: 23 Components

- Perceptions of criminality
- Security officers and police rate
- Homicide rate
- Incarceration rate
- Access to small arms
- Intensity of internal conflict
- Violent demonstrations
- Violent crime
- Political instability
- Political Terror
- Weapons imports
- Terrorism impact
- Deaths from internal conflict
- Internal conflicts fought
- Military expenditure (% GDP)
- Armed services personnel rate
- UN peacekeeping funding
- Nuclear and heavy weapons capabilities
- Weapons exports
- Refugees and IDPs
- Neighbouring countries relations
- Number, duration and role in external conflicts
- Deaths from external conflict

MPI with Global Peace Index 2017



OPHI

• Social Progress Index

-"The overall Social Progress Index score is a simple average of the three dimensions: Basic Human Needs, Foundations of Wellbeing, and Opportunity. Each dimension, in turn, is the simple average of its four components"

· Principal component analysis [PCA] is used to help select the most relevant indicators and to determine the weights of the indicators making up each component"

· After performing PCA in each component, we assess goodness of fit using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy"

· The final step in calculating each component is to provide transparency and comparability across the different components. Our goal is to transform the values so that each component score can be easily interpreted, both relative to other components and across different countries. To do so, we calculate scores using an estimated best- and worst-case scenario dataset in addition to the individual country data"

Social Progress Index: Components

– **Basic human needs**:
* Nutrition and basic medical care
* Water and sanitation
* Shelter
* Personal safety

– **Foundations of wellbeing**:
* Access to basic knowledge
* Access to information and communication
* Health and wellness
* Environmental quality

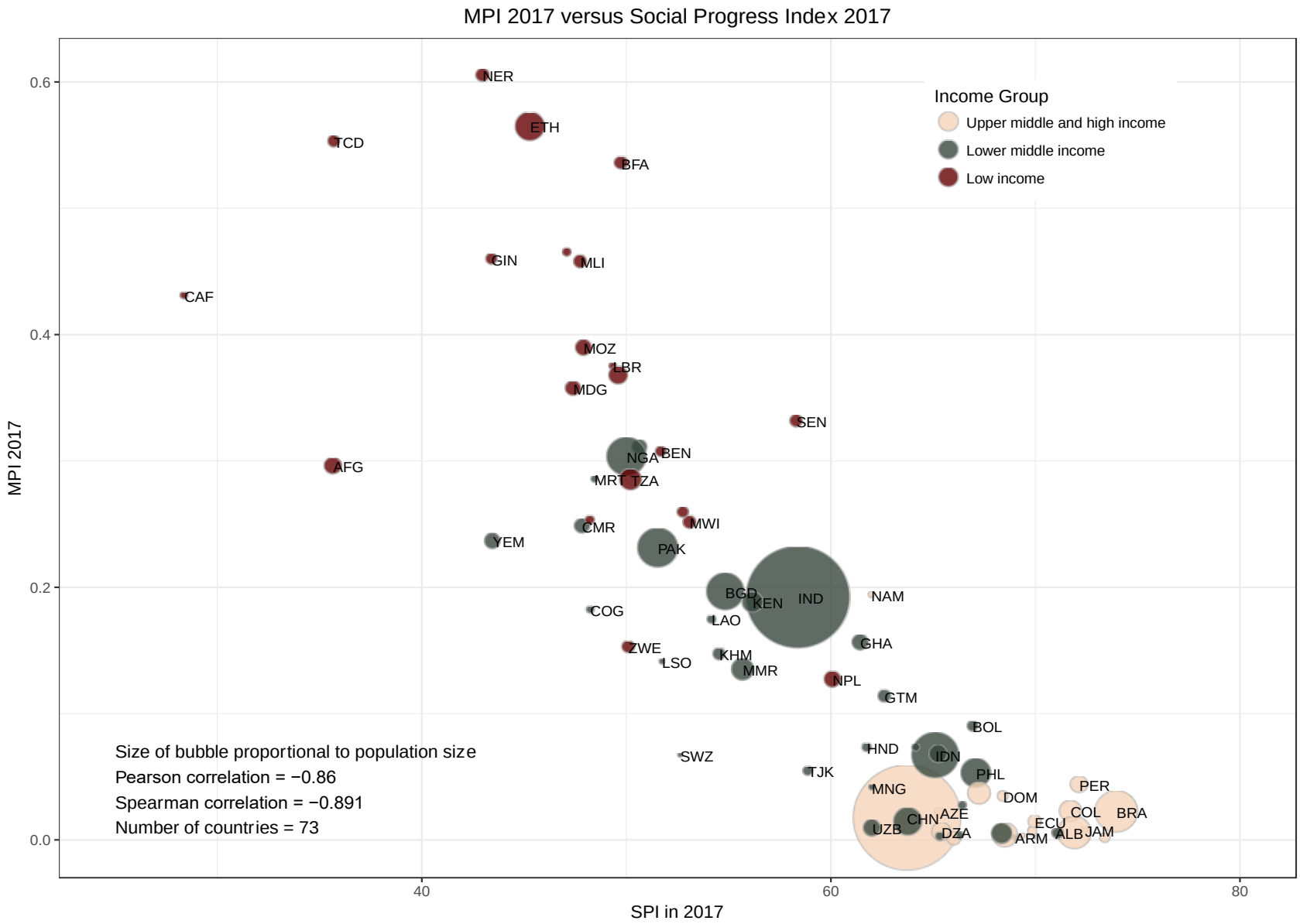
– **Opportunity**:
* Personal rights
* Personal freedom and choice
* Tolerance and inclusion
* Access to advanced education[6]

– **Nutrition and Basic Medical Care**: *Undernourishment, Depth of food deficit, Maternal mortality rate, Child mortality rate, Deaths from infectious diseases*

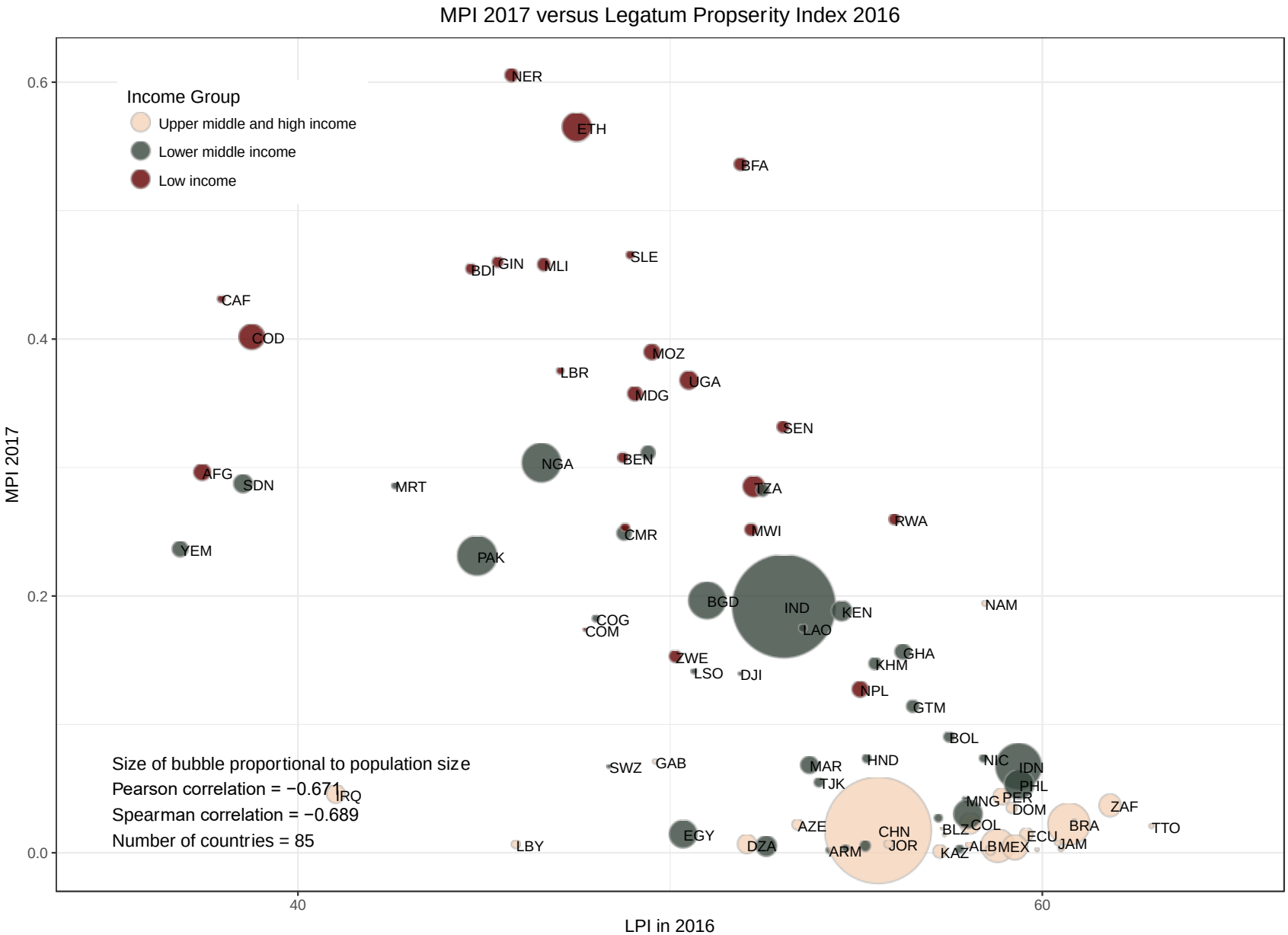
– **Water and Sanitation**: *Access to piped water, Rural access to improved water source, Access to improved sanitation facilities*

– **Shelter**: *Availability of affordable housing, Access to electricity, Quality of electricity supply, Household air pollution attributable deaths*

MPI 2017 vs Social Progress Index 2017

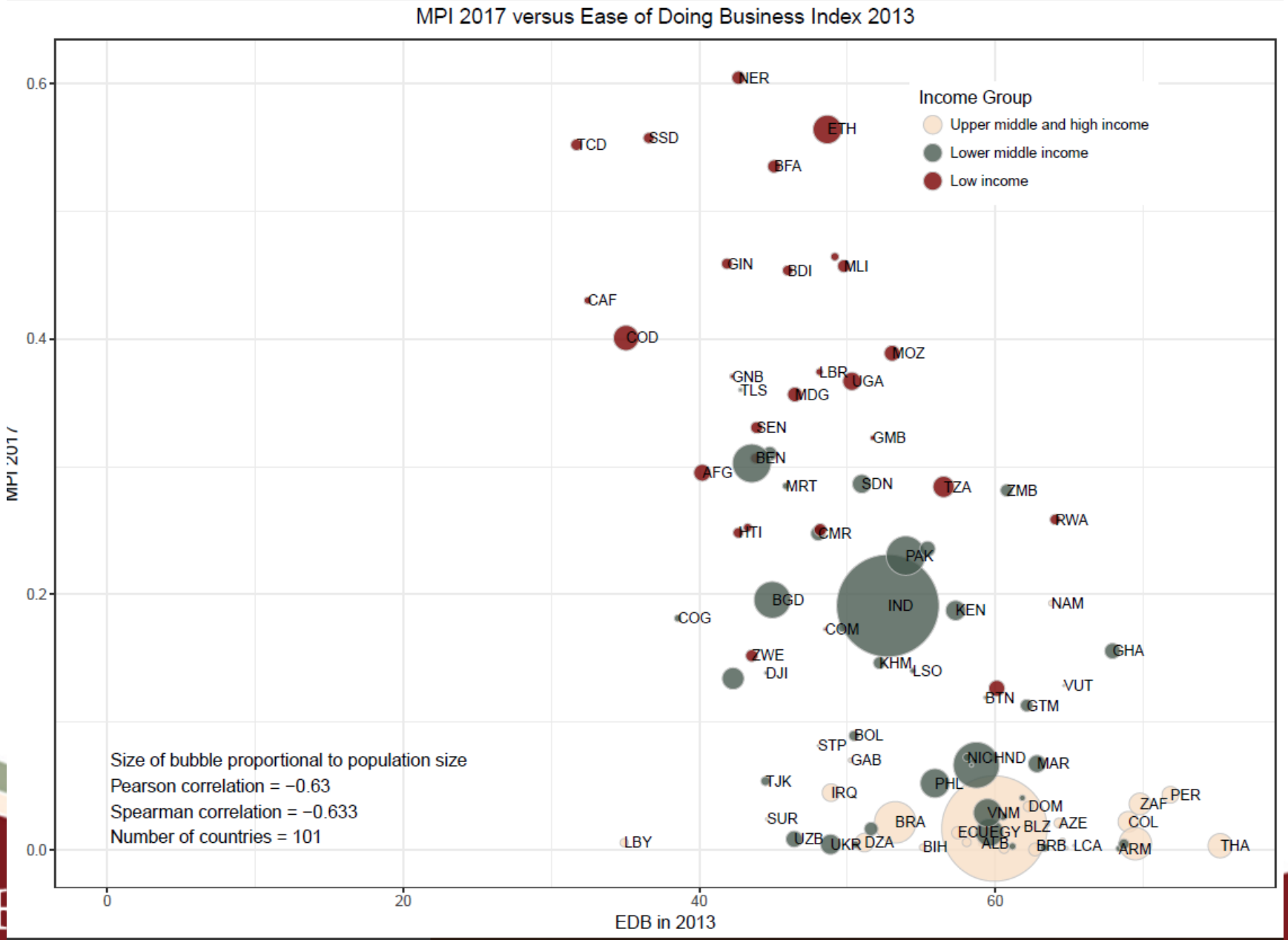


MPI with Legatum Prosperity Index 2016

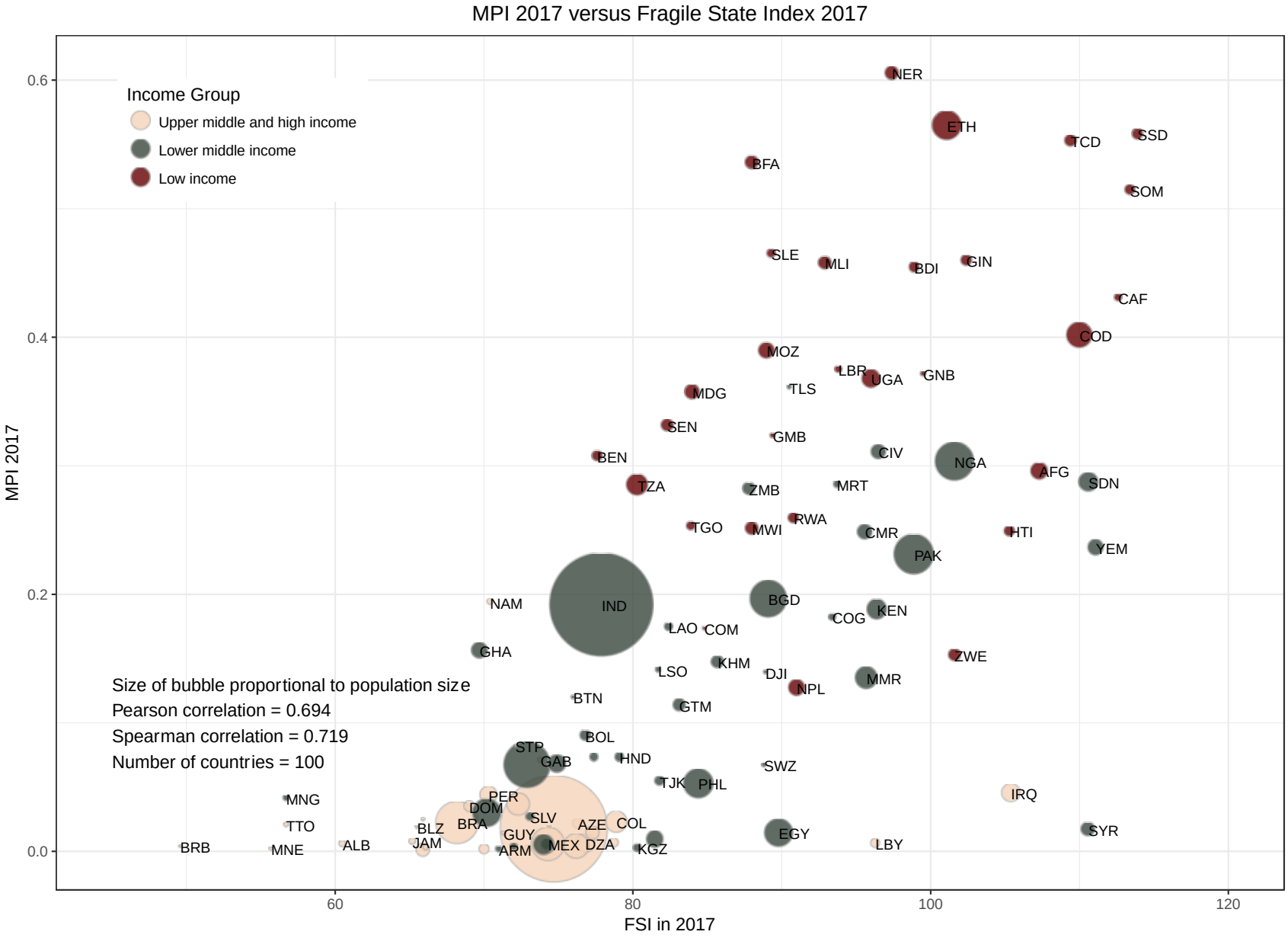


OPHI

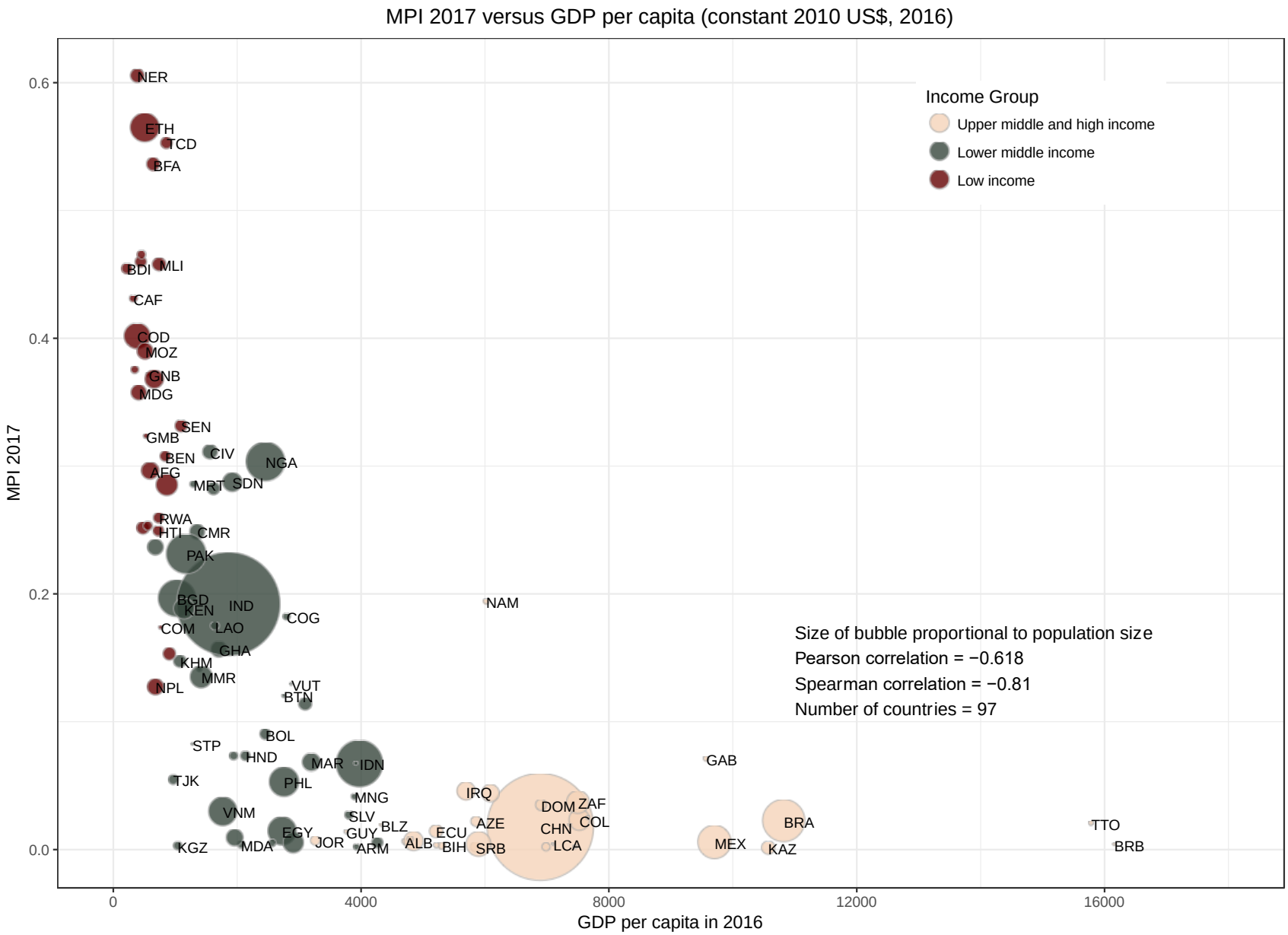
MPI with Ease of Doing Business 2013



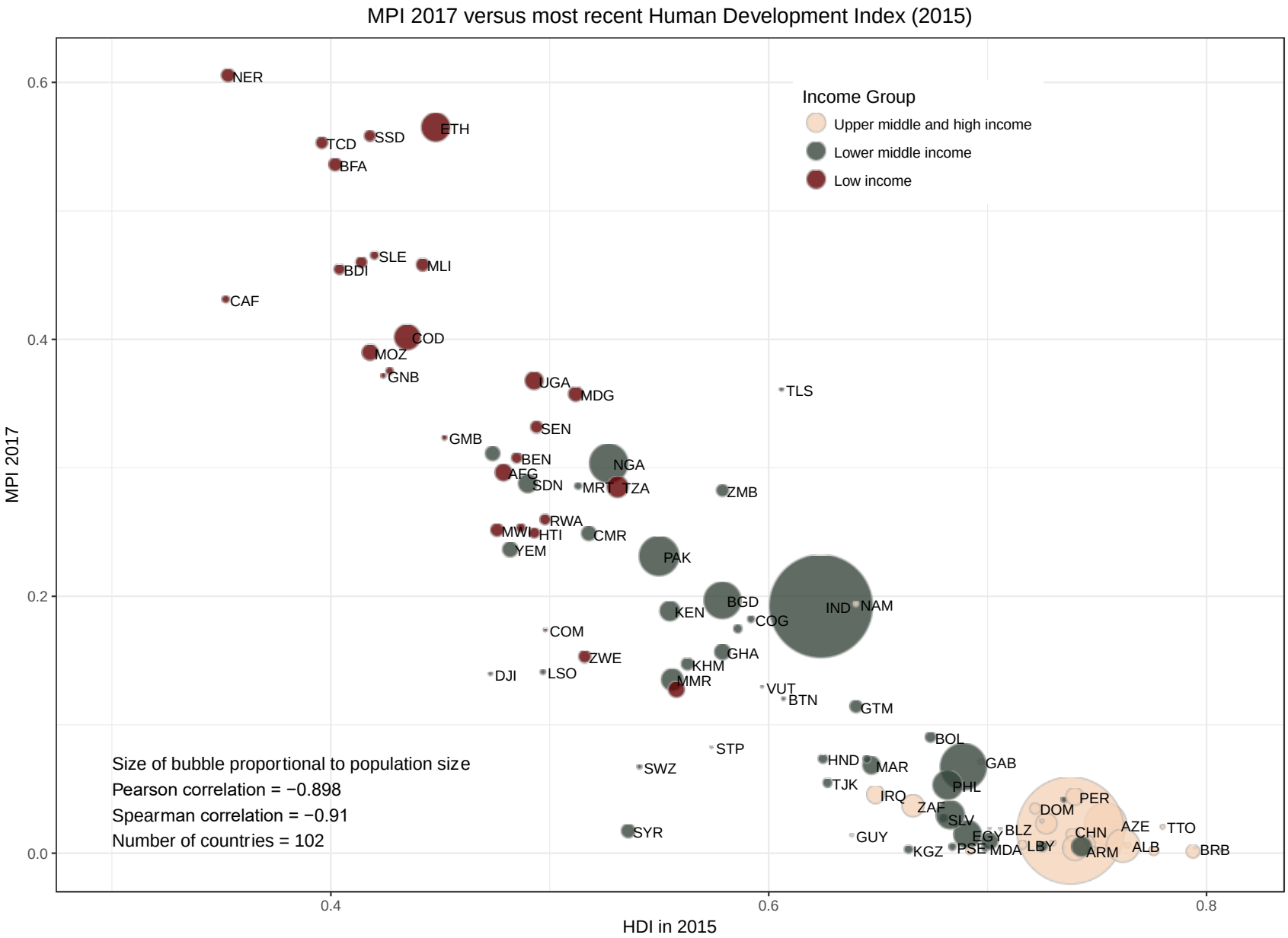
MPI 2017 vs Fragile State Index 2017



MPI 2017 vs GDP per capita (constant 2010 USD$, 2016)



MPI 2017 vs Human Development Index



Composite Indicators vs Counting

Order of aggregation differs.

- Traditional composite marginal measures aggregate first across units in a society for a given dimension, standardize, then aggregate across dimensions.

- Multidimensional Counting Measures first aggregate across dimensions for the same unit (person), then across units in the society.

Order of Aggregation: Composite

Joint Distribution I

	Income	Education	Shelter	Water
1.	D	ND	ND	ND
2.	ND	D	ND	ND
3.	ND	ND	D	ND
4.	ND	ND	ND	D
	.25	.25	.25	.25

Std Composite

Joint Distribution II

Income	Education	Shelter	Water
ND	ND	ND	ND
ND	ND	ND	ND
ND	ND	ND	ND
D	D	D	D
.25	.25	.25	.25

ND: Not Deprived

D: Deprived

Marginal

Order of Aggregation: Counting

Shows who is deprived in more indicators at the same time

Joint Distribution I

	Income	Education	Shelter	Water
1	D	ND	ND	ND
1	ND	D	ND	ND
1	ND	ND	D	ND
1	ND	ND	ND	D

Joint Distribution II

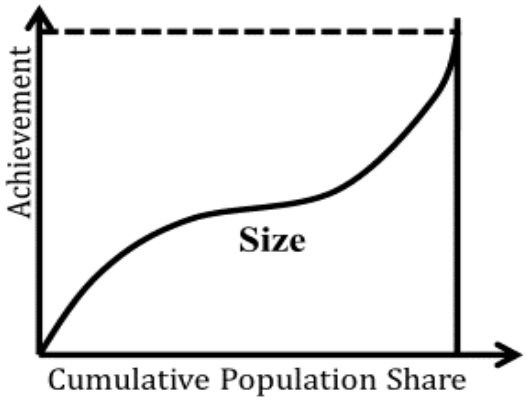
	Income	Education	Shelter	Water
0	ND	ND	ND	ND
0	ND	ND	ND	ND
0	ND	ND	ND	ND
4	D	D	D	D

Counting

Kinds of Measures:

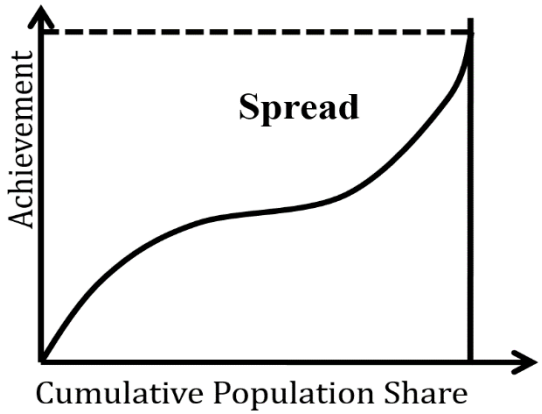
Well-being

Size



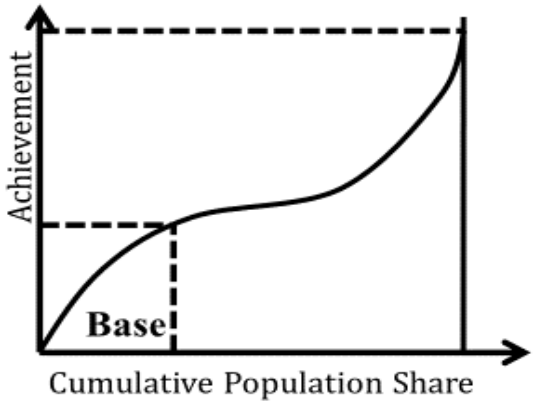
Inequality

Spread



Poverty

Base



Foster, J. E., Seth S., Lokshin, M., and Sajaia Z. (2013). *A Unified Approach to Measuring Poverty and Inequality: Theory and Practice*. The World Bank.

Alkire, S. (2016) "Measures of Human Development: Key concepts and properties." *OPHI Working Paper* 107, University of Oxford.

SDG Indicators: Poverty (in structure)

At least 60 SDG indicators take the structure of 'poverty' indicators. They identify the relevant population then aggregate their data across the population into a statistic – such as the headcount ratio – showing who are affected by a condition:

1.1.1, 1.2.1, 1.2.2, 1.3.1, 1.4.1, 1.5.1, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 3.1.2, 3.3.1, 3.3.2, 3.3.3, 3.3.4, 3.3.5, 3.7.1, 3.7.2, 3.8.2, 3.b.1, 4.1.1, 4.2.1, 4.3.1, 4.4.1, 4.6.1, 5.2.1, 5.2.2, 5.3.1, 5.3.2, 5.6.1, 5.b.1, 6.1.1, 6.2.1, 7.1.1, 7.1.2, 8.3.1, 8.5.2, 8.6.1, 8.7.1, 8.10.2, 9.1.1, 9.c.1, 10.2.1, 10.3.1, 11.1.1, 11.2.1, 11.7.2, 11.a.1, 16.1.3, 16.1.4, 16.2.1, 16.2.2, 16.2.3, 16.3.1, 16.5.1, 16.6.2, 16.7.2, 16.9.1, 16.b.1, 17.8.1

- **Global MPI: differences from some composite indices (SPI, DB, FSI, LPI, GPI)**

1. Counting-based, hence reflects **hh level profiles**
2. All from same survey, so all indicators **same year**
3. Easily **disaggregated** if underlying data permit
4. **Standard errors** available for level, trend, disagg.
5. **Harmonisation** is strict, and equates definitions
6. **Weights** are deprivation values on 0-1 (no MRS)
6. **Measures Poverty**; others may combine welfare, inequality, death, non-human units.
7. **Methodology** is transparent and replicable (GPI)
8. **Robustness t**ests to weights etc are done (GPI)

Country	Survey	Year
Bangladesh	DHS	2011
Benin	DHS	2011-2012
Burkina Faso	DHS	2010-2011
Burundi	DHS	2010-2011
Cambodia	DHS	2010-2011
Cameroon	DHS	2011
Central African Republic	MICS	2010
Chad	MICS	2010
Comoros	MICS	2013
Congo (Brazzaville)	DHS	2011-2012
Cote d'ivoire	DHS	2011-2012
Democratic Republic of the Congo	MICS	2009-2010
Equatorial Guinea	DHS	2011
Ethiopia	DHS	2011
Gabon	DHS	2012
Gambia	MICS	2010-2011
Ghana	MICS	2011
Guinea	DHS-MICS	2012
Iraq	MICS	2012
Kenya	DHS	2008-2009
Lao PDR	LSIS	2011-2012
Lesotho	DHS	2009-2010
Liberia	DHS	2013
Malawi	DHS	2010
Mongolia	MICS	2010
Mozambique	DHS	2011
Nepal	DHS	2011
Niger	MICS	2012
Nigeria	MICS	2011

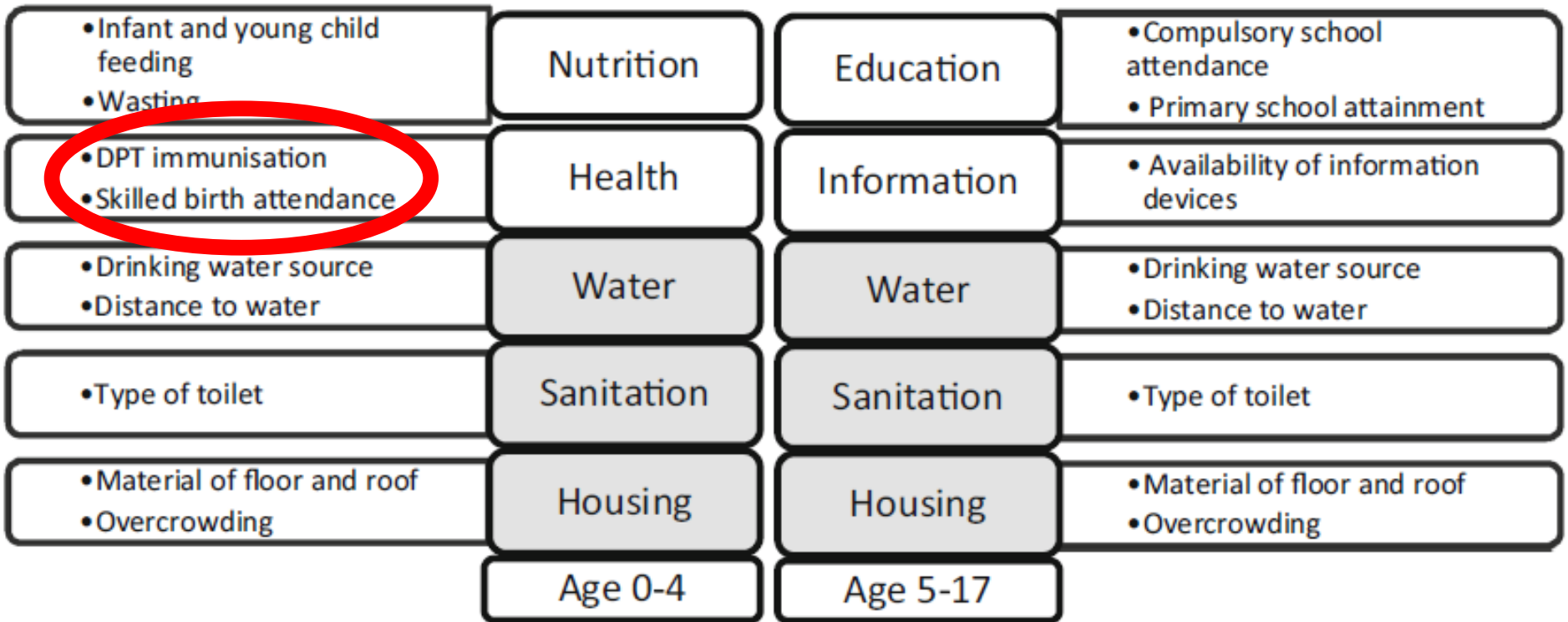
Country	Survey	Year
Occupied Palestine Territory	MICS	2010
Rawanda	DHS	2010-2011
Senegal	DHS	2010-2011
Sierra Leone	MICS	2010
Sawziland	MICS	2010
Timor-Leste	DHS	2009-2010
Togo	MICS	2010
Uganda	DHS	2011
Tanzania	DHS	2010
Viet Nam	MICS	2010-2011
Zimbabwe	DHS	2011-2012

In 2014, UNICEF released a study of Cross Country **Multiple Overlapping Deprivation Analysis** of children, covering 40 countries using data 2008-2013.

The purpose was to design an advocacy tool for child rights.

CC MODA: 2 differences from MPI

1. individual; specified for children 0-4, 5-17 years
2. creates union-based dimensional sub-indices
   - results in higher H for advocacy
   - loses indicator level information for policy



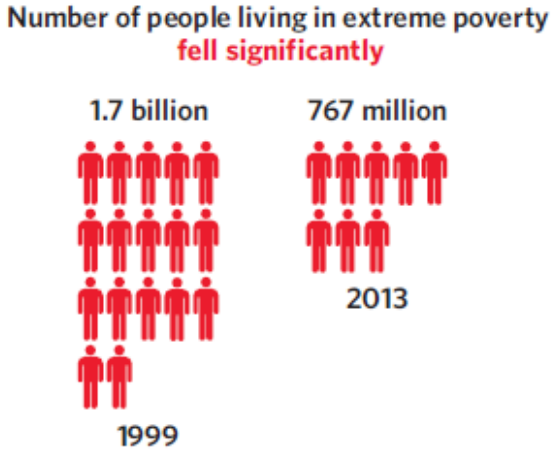
SDG Reporting

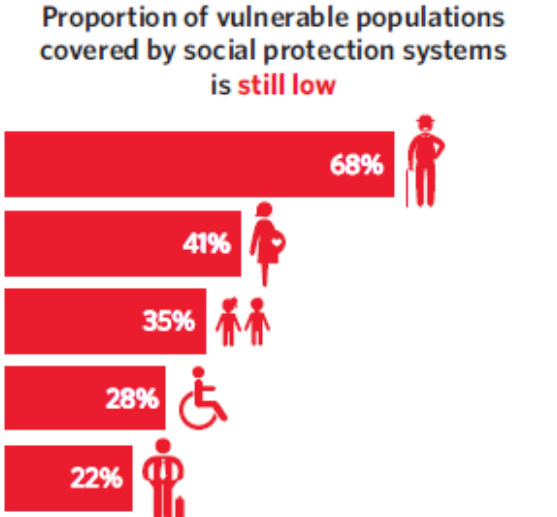
SDG Report 2017: $1.90, unemployment

Goal 1: End poverty in all its forms everywhere

Giving people in every part of the world the support they need to lift themselves out of poverty in all its manifestations is the very essence of sustainable development. Goal 1 focuses on ending poverty through interrelated strategies, including the promotion of social protection systems, decent employment and building the resilience of the poor.

- An estimated 767 million people lived below the extreme poverty line in 2013, down from 1.7 billion people in 1999. This represents a reduction in the global rate of extreme poverty from 28 per cent in 1999 to 11 per cent in 2013.
- Almost 10 per cent of the employed population worldwide lived with their families on less than 1.90 US dollars per person per day in 2016. Vulnerability was much higher for younger workers: 9 per cent of adult workers and their families lived in extreme poverty compared to 15 per cent of youth workers.
- In 2016, only 22 per cent of the unemployed worldwide received unemployment benefits, 28 per cent of people with severe disabilities collected a disability pension, 35 per cent of children were covered by social protection, 41 per cent of women giving birth received maternity benefits, and 68 per cent of people above retirement age collected a pension.
- Economic losses from natural hazards are now reaching an average of 250 billion to 300 billion US dollars a year, with a disproportionate impact on small and vulnerable countries.

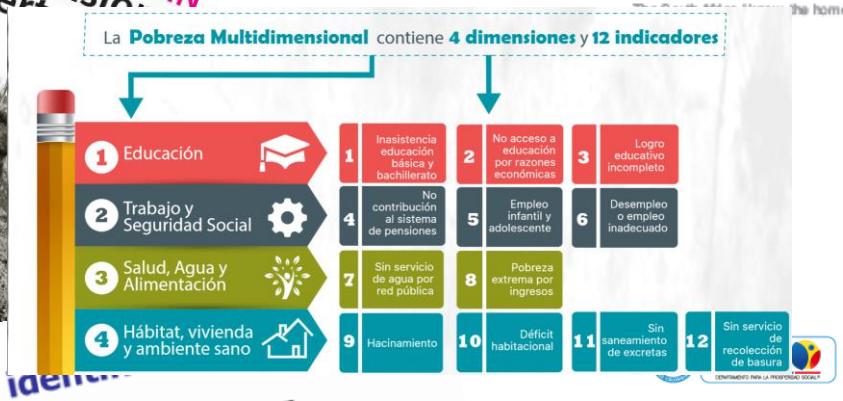


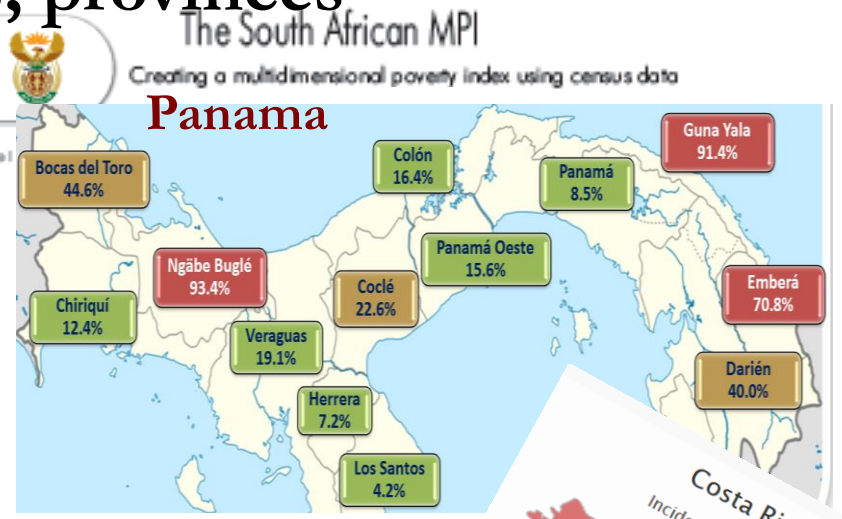


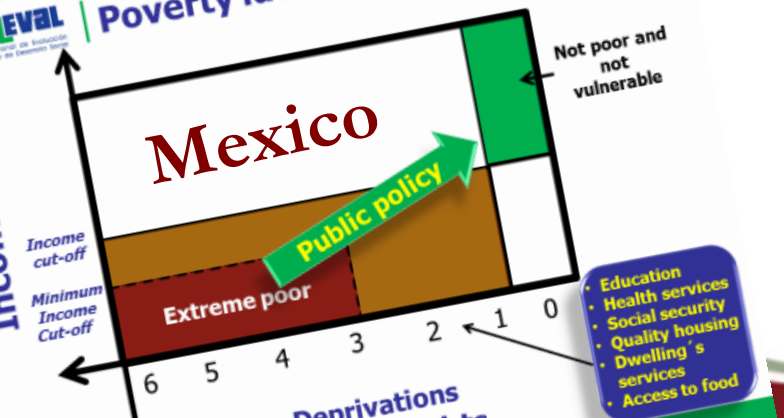
National MPIs: Tailor made for policy

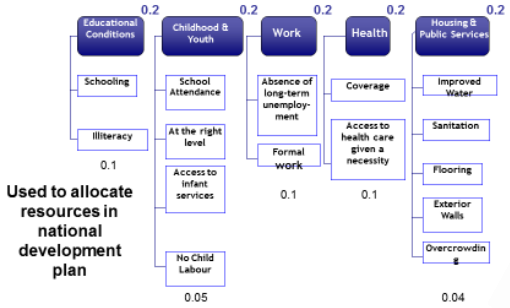
- Reflect National Priorities
- Compute as official national statistics
- Vital for policy: target, coordinate, monitor
- Comparable over time, groups, provinces

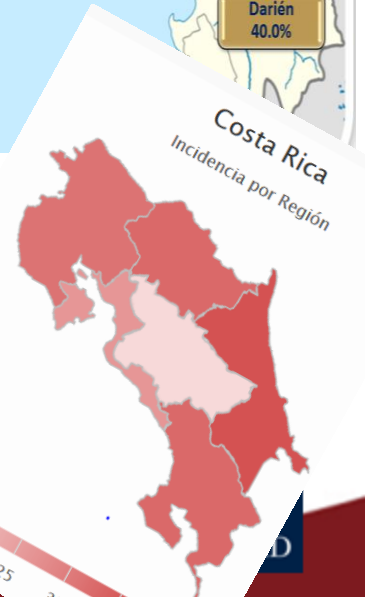
Ecuador





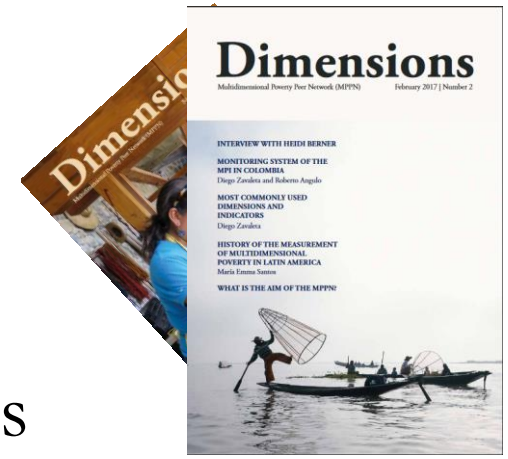






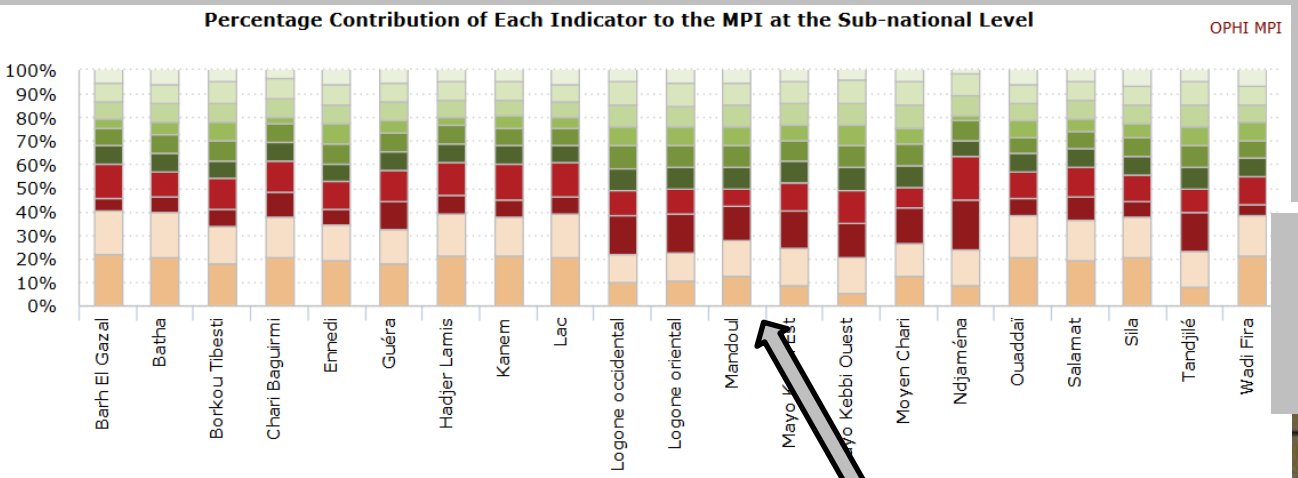
Chile

Policy makers are using national or global MPIs to:



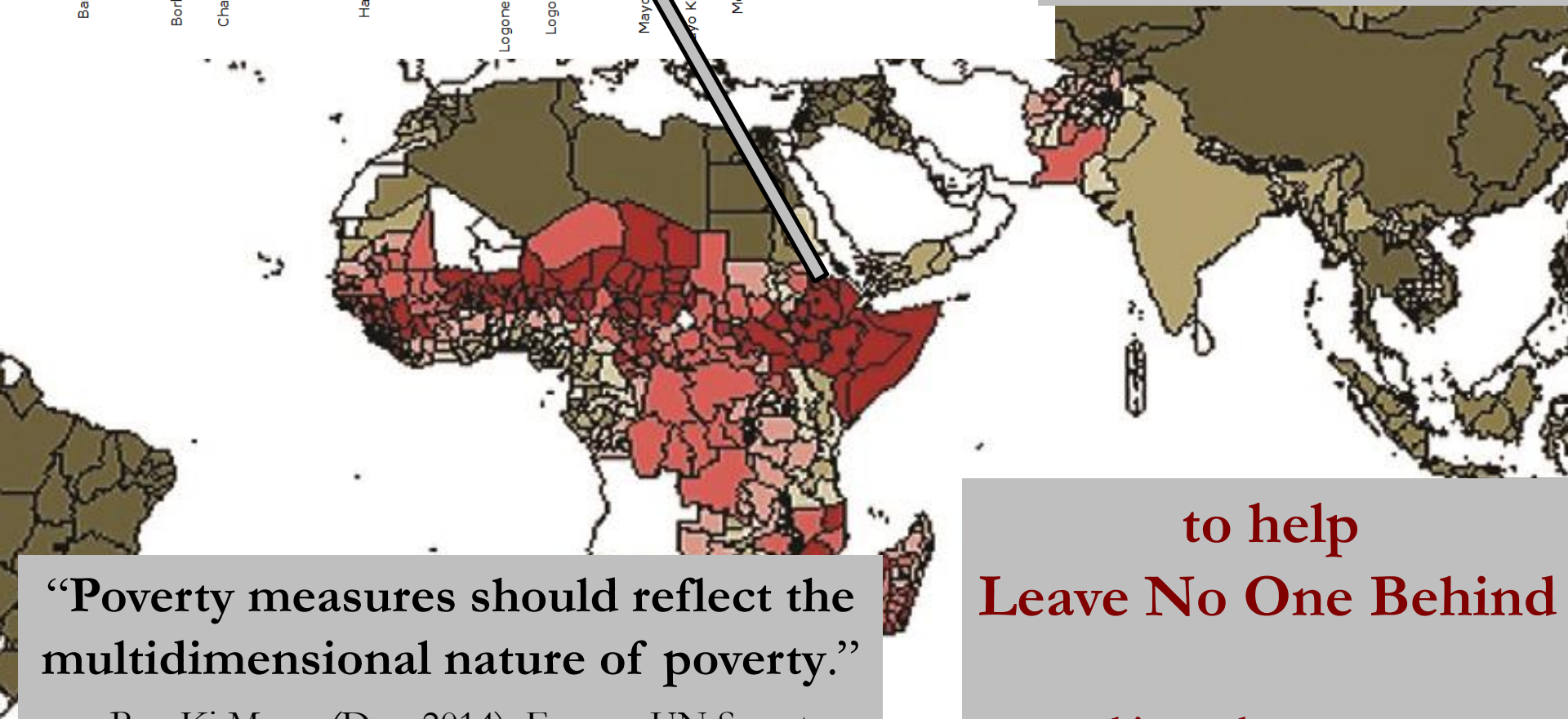
1. **Complement** monetary poverty statistics
2. **Track poverty** over time (official statistics)
3. **Allocate resources** by sector and by region
4. **Target** marginalized regions, groups, or households
5. **Coordinate** policy across sectors and subnational levels
6. **Adjust** policies by what works (measure to manage)
7. **Leave No One Behind** see the poorest & track trends
8. **Be Transparent** so all stakeholders engage – NGOs,
    - Private Sector etc, all parts of government.

An MPI offers: a Headline, Disaggregation & Interlinkages



to inform
integrated action

to complement
monetary measures



to help
Leave No One Behind

"Poverty measures should reflect the multidimensional nature of poverty."

Ban Ki Moon (Dec, 2014), Former UN Secretary

www.ophi.org.uk www.mppn.org

7 March 2017: Side-Event at UN Statistics Commission

Statistical Offices presented:

- Mauricio Perfetti, **Colombia**
- David Vera, **Ecuador**
- Lisa Grace Bersales, **Philippines**
- Pali Lehohla, **South Africa**
- Ben Paul Mungyereza, **Uganda**
- Hedi Saidi, **Tunisia**
- Nesma Amer, **Egypt**

Reflections from the floor were offered by UNICEF, ECLAC, and OPHI.

High Level Political Forum

- The theme for the 2nd UN High Level Political Forum for Sustainable Development was 'eradicating poverty in all its forms and dimensions'

- At the HLPF to date, 17 countries included multidimensional poverty in their VNRs: **Bangladesh, Belize, Chile, Colombia, Costa Rica, Egypt, El Salvador, Guatemala, Honduras, India, Indonesia, Jordan, Nepal, Panama, Philippines, Sierra Leone, and Tajikistan**

- Here and elsewhere countries indicate the intention to report their national MPI, the global MPI, or both, against indicator 1.2.2

19 Sept 2017: UNGA Shows MPI as governance tool

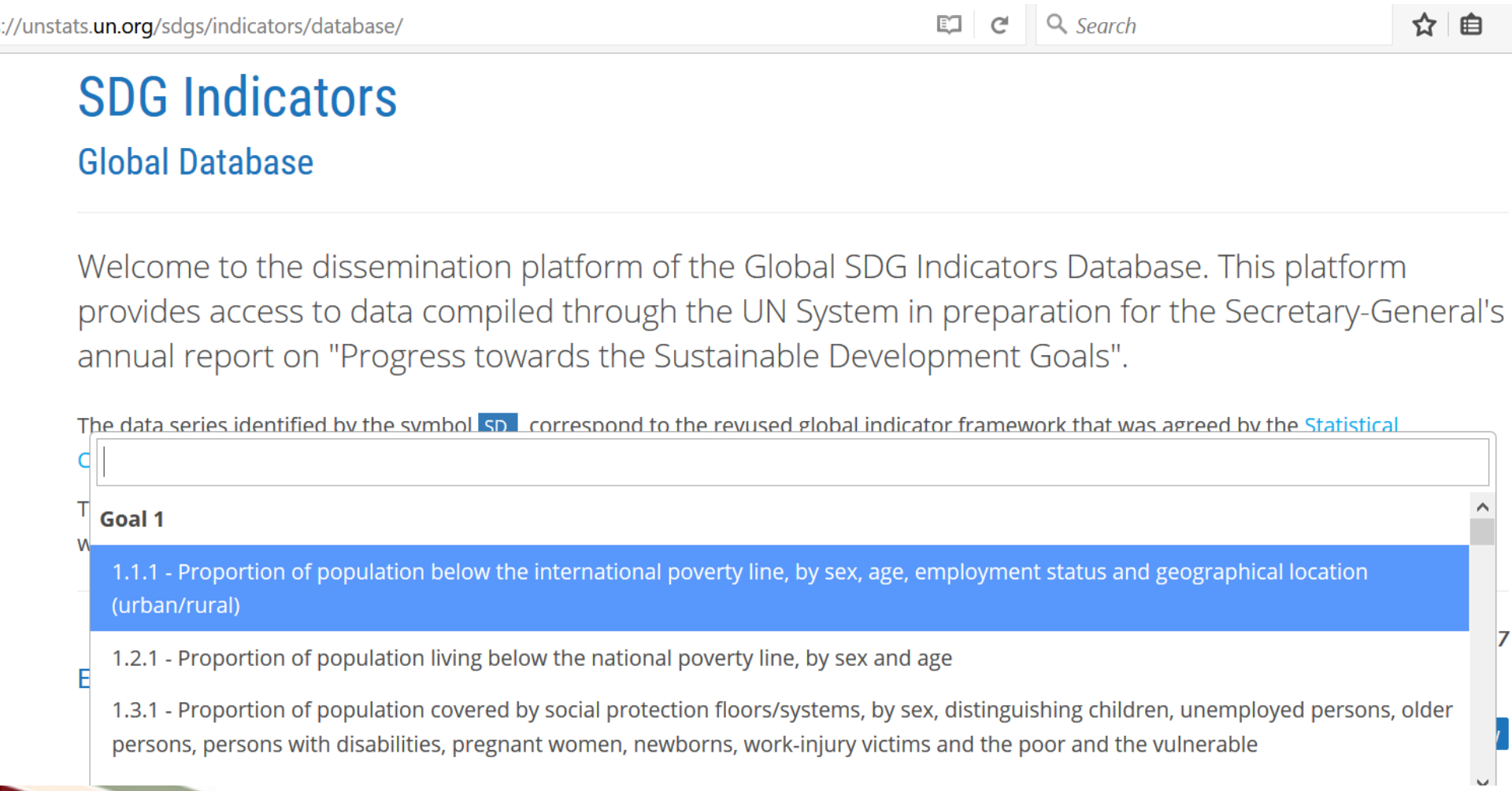
- **H.E. Juan Orlando Hernández**, President of **Honduras**
- **H.E. *Dasho* Tshering Tobgay**, Prime Minister of **Bhutan**
- **H.E. Juan Manual Santos,** President of **Colombia**
- **H.E. Pena Nieto,** President of **Mexico**
- **H.E. Ana-Helena Chacón**, Vice President of **Costa Rica**
- **H.E. Isabel de Saint Malo de Alvarado**, Vice President of **Panama**
- **Mr. Achim Steiner**, Administrator of **UNDP**
- **Mr. Ángel Gurría**, Secretary-General of **OECD**
- **H.E. Ahmed Aboul Gheit**, Secretary-General of **League of Arab States**

Plus 11 speakers from South Africa, Egypt, Philippines, Bangladesh,. UN-ESCWA, Sida, UN-DESA, UNICEF, World Bank, and OPHI

Global and National MPIs

Country	MPI Headcount Ratio (National MPI H)	Year	Global MPI (Headcount Ratio)	Year
Armenia	29.1%	2015	0.3%	2010
Bhutan	12.6%	2012	27.2%	2010
Colombia	17.8%	2016	5.4%	2010
Dominican Republic	35.6%	2017	8.8%	2014
Ecuador	35.0%	2015	3.5%	2013/14
El Salvador	35.2%	2014	6.3%	2014
Honduras	74.2%	2013	15.8%	2011/12
Mexico	43.6%	2016	1.2%	2015
Mozambique	53%	2014/15	69.6%	2011
Pakistan	38.8%	2014/15	44.2%	2013/14
Panama	19.1%	2017		
Chile	20.9%	2015		
Costa Rica	20.5%	2016		

SDG indicators: no reporting on 1.2.2



SDG indicators: confusion on global-comparable /national

Target 1.2: by 2030, **reduce at least by half** the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions.

Target 1.1 is to end $1.90/day poverty – so a comparable measure. Reducing by half makes less sense as a global goal if it refers to national MPIs.
Is the goal to halve a global MPI?

Atkinson Commission Report

"focuses, as requested, on global poverty measurement, one important recommendation is that the two levels of analysis—global and national—should be viewed in conjunction. This does not mean any unwarranted imposition of uniformity of approach, but rather that there should be a better understanding of the relationship between global estimates for a country and the estimates of poverty made at the national level. The proposal of brief (two-page) National Poverty Statistics Reports for each country is intended to produce greater coherence between the two activities, with, it is hoped, benefits on both sides."

Similar work will be useful on national and comparable MPIs.

Ways Forward

Aligning MPI with the SDGs:

An Exercise to explore data availability to improve MPI to better reflect SDG indicators:

Objective	:	**To identify potential 'new' and 'improved' indicators to modify the Global MPI in light of SDG indicators and recent improvements in DHS & MICS surveys**
83 Countries covered	:	including nearly all high MPI countries and LICS
Population covered (2012)	:	**5,010,917,205**

83 diverse countries:

	Number of Countries	Population
DHS	48	2.90
MICS	33	0.56
CFPS	China	1.35
PNAD	Brazil	0.20
Arab States	8	0.23
East Asia & Pacific	10	1.92
E. Europe & C. Asia	13	0.08
Latin America	12	0.41
South Asia	7	1.63
Sub-Saharan Africa	33	0.74

31 potential indicators explored (each SDG-related)

Household (11)	Child (5)	Women (15)
• Information technology	• Registration of birth	• Anemia
• Small physical assets	• Child disability	• Disability
• Electrical assets	• Early childhood education	• Female genital mutilation
• Agricultural/fish/farm assets	• Child vulnerability	• Daily access to informatn
• Financial transaction	• Child labour	• Ownership of assets
• Treated mosquito nets		• Recent migration status
• Exposure to tobacco		• Unwanted pregnancy
• Overcrowding		• Use of contraception
• Iodized salt		• Antenatal care
• Health insurance		• Assisted delivery
• Waste management		• Post-delivery care
		• Breastfeeding
		• Domestic violence
		• Informal work
		• Decision making

Summary of feasible options

Available for over 70 countries and 3B people:

Health

- Change undernutrition to **stunting** for children 0-5; **age-specific BMI** 15-19
- **Child mortality** in last 5 years – unchanged

Education

- **Years of schooling** – change to **6 years**
- **School attendance** – same

Living Standards

- **Safe Water** – same
- **Sanitation** same
- **Flooring:** add **Roof and Wall** (explore options how to do so)
- **Assets – improve**: land, livestock, mobility, technology? Validate thoroughly.
- **Electricity** – Possibly replace with **overcrowding.**
- **Cooking Fuel** – same

Active Research Frontiers

- Child Poverty [linked child poverty measures]
- Incorporating ENR into MPI measures
- Gendered Poverty measures
- New Brief Indicator modules: work, violence
- Inequality among the poor
- Multidimensional inequality
- Multidimensional analysis (macro/micro/multi-level),
- Multidimensional impact evaluation
- Data improvements – missing populations, surveys, etc.
- Merging with Geo-spatial sources
- Chronic multidimensional poverty
- Multidimensional measures of well-being

Atkinson Commission Report: Closing Words

The estimation of the extent of global poverty is an exercise in description… As Commission member Amartya Sen (1980, 353) has written, "description as an intellectual activity is typically not regarded as very challenging." However, as he goes on to say, "description isn't just observing and reporting; it involves the exercise—possibly difficult—of selection . . . description can be characterized as choosing from the set of possibly true statements a subset on grounds of their relevance" (Sen 1980, 353–54)…Understanding the choices underlying the monitoring indicators, and their full implications, is indeed challenging. There will doubtless be differences of view… but it is hoped that the ensuing debate will bring together all those concerned and provide a basis for action to tackle one of the gravest problems facing the world today.

www.ophi.org.uk/multidimensional-poverty-index

Global MPI: anything distinctive?