High Visibility
How disaggregated metrics help to reduce multidimensional poverty

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In the digital age, it is becoming ever-easier to take good quality, clear photos to share with family and friends. With new technologies that enable us to zoom in and see vivid detail, photos are no longer low-resolution and blurred. And just as we demand clarity from pictures, so we need high resolution poverty metrics. Ahead of the sustainable development goals (SDGs) beginning in September 2015, policymakers across the world are preparing new ways to confront abject poverty in all its forms. As they seek tools to help them do this most effectively, one thing that they are calling for is 'disaggregated data'.

Using the Winter 2014/2015 MPI estimations, this briefing note demonstrates how disaggregated data provide a more detailed picture of the interlinked conditions of the poorest, so that policies can be most effectively designed and targeted. For poverty varies by sub-national regions, rural and urban areas, and among different population subgroups. Here we analyse poverty by sub-national regions; of course, decompositions by ethnicity and age enrich the picture further (Alkire & Vaz 2014, Vaz 2014).

About the global MPI: Updates and coverage in Winter 2014/2015

The global MPI is an international measure of poverty that combines simultaneous disadvantages experienced by the poor across different areas of their lives, covering education, health and living standards (Alkire and Santos 2014; UNDP 2014, Alkire Conconi Robles and Seth 2015). If a person is deprived in one-third or more of ten weighted indicators, they are identified as multidimensionally poor (Figure 1). The MPI has been estimated by OPHI and published in UNDP's *Human Development Reports* since 2010.

In Winter 2014/2015, OPHI has updated the global MPI using new datasets for 15 countries, and added estimates for St Lucia and Comoros. The global MPI covers 5.4 billion people in 110 developing countries. The household surveys used were carried out from 2002-2014, with 22 countries having surveys from 2012 or later, 61 countries from 2010 or later, and 85 countries from 2006 or later. Across 71 of these countries, including 15 of those updated in January 2015, the MPI has been decomposed into 803 sub-national regions. For each country and region, OPHI posts the MPI value plus a set of consistent indicators: the percentage of poor people (headcount ratio) and intensity (average share of deprivations poor people experience) for each sub-national region, as well as the percentage of people who are poor and deprived in each of the ten component indicators, the weighted contribution of each indicator, and other related measures. All information, including maps and sub-national MPI values, is available in OPHI's interactive databank.

Figure 1: Inside the MPI
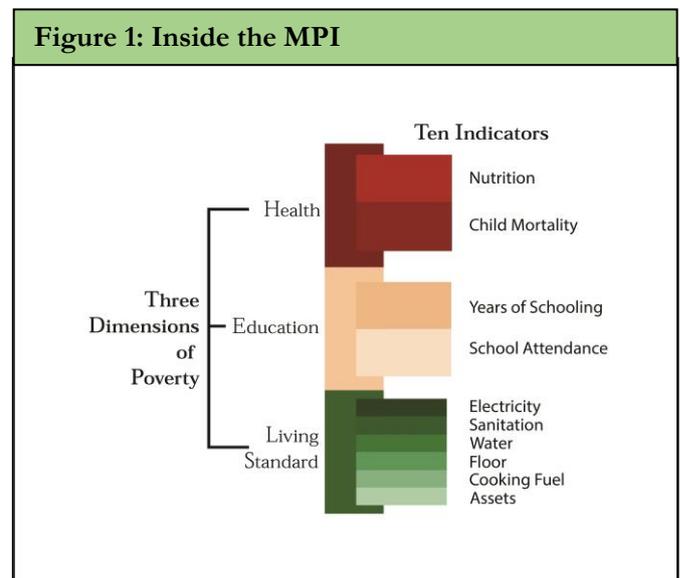
Which are the poorest regions?

Starting at the bottom, the poorest region of all 803 that we cover is Salamat in south-east Chad, a

Figure 2: Composition of poverty - Chad

landlocked region just south of the Sahel, bordering the Central African Republic. Salamat's 2010 MPI report shows that nearly 98% of its 354,000 inhabitants are poor. On average, each poor person in Salamat is deprived in nearly 75% of the MPI dimensions, which also makes it the region with the highest intensity of poverty. In fact, three of our five poorest regions are in Chad and two are in Burkina Faso. However, significantly, the poorest country overall is neither of these – it is Niger.
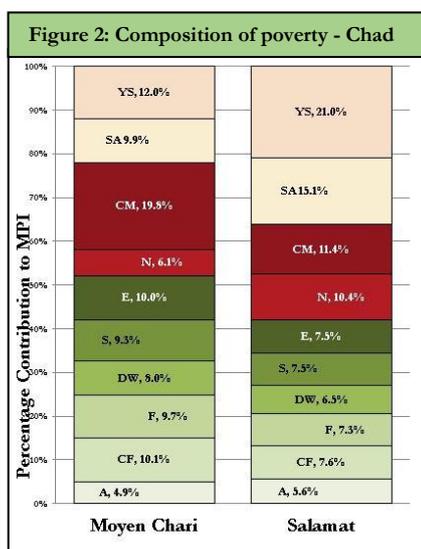
The MPI can be unfolded to show different patterns of interlocking deprivations. Consider the composition of poverty in Salamat in comparison with that of a neighbouring region in Chad, Moyen Chari. The overall contribution of educational deprivations - the top light boxes - is much larger in Salamat than Moyen Chari - so different sub-national policies are required. A national average would hide this information.

The MPI can be broken down to reveal what percentage of the population are both MPI poor (because they experience multiple deprivations), and are deprived in each particular indicator. These poverty-specific statistics are available for every sub-national region. For example, the region with the highest rates of people who are multidimensionally poor and simultaneously deprived in nutrition is Affar in Ethiopia, and that with most child mortality is Nord-Ouest in Cote d'Ivoire. Karamoja in Uganda is the most deprived region for sanitation, and Wad Fira in Chad for drinking water, electricity and years of schooling. Androy Madagascar has the highest rates of people who are poor and don't own any assets, and Kuntuar in Gambia for school attendance. Interestingly, none of these regions is Salamat in Chad. In Salamat, however, there are consistently high rates of deprivation in many different indicators at the same time.

Looking across sub-national regions, Nigeria is the country with the most extreme regional differences in multidimensional poverty. In Lagos, the former capital, 8.5% of people are multidimensionally poor, compared to 91.9% in Zamfara. The country with the lowest regional difference in multidimensional poverty is Jordan. Box 1 below gives the five poorest sub-national regions in each major region.

Effective action needs joined-up metrics. The global MPI is not perfect - not all data are comparable or up to date, and we don't have data on all of the world's sub-national regions - but it is pretty good and getting better fast. Unlike poverty measures that are reported only at a national level, the headline MPI is just the first layer. Looking closer, we can zoom in and see exactly how and where people are poor – which pockets of the world they live in and which deprivations they experience together. It gives a clearer view.

Box 1: The five poorest sub-national regions in different geographical areas

Sub-Saharan Africa: Salamat, Hadjer Lamis and Lac in Chad; and Est and Sahel in Burkina Faso.

Central and Eastern Europe and Central Asia: Eastern Turkey; and four areas in Tajikistan: Khatlon, Gorno-Badakhshan, Sughd, and Districts of Republican Subordination.

Arab States: 'the Capital and all other districts' of Djibouti; and Missan, Al-Qadisiya and Al-Muthanna in Iraq.

Latin America and Caribbean: Central, Grande-Anse, North-East, Artibonite and North-West - all in Haiti.

East Asia and the Pacific: Oecussi, Ermera, Ainaro and Viqueque in Timor-Leste; and Mondol Kiri/Rattanak Kiri in Cambodia.

South Asia: Bihar and Jharkhand in India; South and West Afghanistan; and Balochistan in Pakistan.

Policy Implications - an enlarged set of 'least developed regions'?

Looking at poverty within countries can bring to light some interesting facts that should inform policy priorities for multiple actors. Consider the 48 countries identified as 'Least Developed' by the United Nations Economic and Social Council (2014), based on their per capita income, human assets, and economic vulnerability. The Global MPI covers 40 of these 48 countries.[1] All of the 25 poorest countries according to the MPI are Least Developed Countries (LDCs). Yet the MPI also draws attention to poor people that live in sub-national regions that are as poor as these LDCs, but are not classified as LDCs.

For example, across the 238 sub-national regions whose levels of poverty (MPI) are the same as or higher than the 25 poorest Least Developed Countries, 768 million people are poor. But only 40.4% of the poor people in these regions live in 29 LDCs (310 million people). More than 60% (458 million) live in sub-national regions of India, Nigeria, Pakistan, Cameroon, Kenya, Cote D'Ivoire, Ghana, Namibia, and the Republic of Congo. These countries, with the exception of Kenya, are categorised as Middle Income Countries. And a striking 380 million of these poor people live in India - more than those living in the poorest LDC regions. While this should not at all lessen the energy and emphasis in addressing hard situations in the LDCs, it does mean that poor sub-national regions in other countries require equivalent energy and visibility.

Why can't all our poverty lenses zoom?

Surprisingly, many poverty measures are reported only at the national level. One reason for this is technical. For example, the well-known $1.25/day income poverty measure provides national aggregates only, and cannot be decomposed by sub-national regions or ethnic groups. This is because many conversions are very difficult - for example to convert sub-national prices, which may vary across the country, into a common currency like US dollars. In contrast, the indicators included in the global MPI – such as malnutrition, child mortality and sanitation – are measured directly, not mediated by prices or specific markers, and it is these deprivation profiles of the poor which are compared.

Secondly, data are often only representative nationally - hence the rightly energetic recent push for a 'data revolution' includes a call for survey data that is representative by sub-national regions and groups. At present the global MPI covers 110 countries but we only have sub-national information for 71 of these. Some of the countries without sub-national data are very small – Sao Tome and Principe have 178,000 people, Vanuatu has 236,000, Belize has 309,000 and the Maldives has 326,000. Yet, some LDCs and low income countries like the Central African Republic and Mali (which are considerably poorer than these) decompose to regions of 50,000 people or less. Still, few datasets can be disaggregated by other pertinent characteristics like disability status.

> **Box 2: MPI and Ebola - Health crises compounded**
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> The Winter 2014/2015 MPI has been updated for the three countries in which the tragic Ebola crisis has raged: Guinea (using data from a survey fielded in 2012), Liberia (2013), and Sierra Leone (2013).
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> According to the $1.25/day income poverty measure, only 30.9% of people are income poor in Guinea (2012), 57% in Sierra Leone (2011), and 84% in Liberia (2007).
>
> The MPI in contrast is more uniform across the three countries, all of which show high levels of multidimensional poverty. **71%** of people are MPI poor in Liberia, **75%** in Guinea, and **81%** in Sierra Leone.
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> The $1.25/day and MPI figures all pre-date the Ebola crisis. Still, the MPI shows that striking health deprivations were present in all three countries as the crisis hit. For example, according to the MPI figures, 45% or more of the populations are MPI poor and have suffered the death of a child, and between one quarter and one third of people in each country are MPI poor and live in a household in which someone is undernourished - highlighting the fundamental need to strengthen health systems.

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[1] MPI covers these LDCs: **Afghanistan**, Angola, Bangladesh, Benin, Bhutan, **Burkina Faso**, **Burundi**, Cambodia, **Central African Republic**, **Chad**, Comoros, **DRC**, Djibouti, **Ethiopia**, **Gambia**, **Guinea**, **Guinea-Bissau**, Haiti, Lao, Lesotho, **Liberia**, **Madagascar**, **Malawi**, **Mali**, **Mauritania**, **Mozambique**, Nepal, **Niger**, **Rwanda**, Sao Tome and Principe, **Senegal**, **Sierra Leone**, **Somalia**, **Timor-Leste**, Togo, **Uganda**, **Tanzania**, Vanuatu, Yemen, and **Zambia**. MPI estimations are not available for Equatorial Guinea, Eritrea, Kiribati, Myanmar, Solomon Islands, South Sudan, Sudan, or Tuvalu. The 25 poorest countries by MPI are in bold.

A surprise: Disaggregated data in poor countries

It might seem unlikely to be feasible to collect good quality, disaggregated data in poor countries. But let's consider the 30 low income countries that have MPI estimations, and have a 2010 gross national income (GNI) per capita of less than $1000. Here is the surprise. In fully 29 of those 30 countries, the MPI can be and has been disaggregated sub-nationally into 293 regions. Furthermore, 10 of these countries have data that were collected in 2012-14, and 26 of these countries have data that are from 2010-14.[2] Data for the MPI come from the Demographic and Health Surveys (DHS), and the Multiple Indicator Cluster Surveys (MICS), and in cooperation with national statistics offices in these countries, high quality, recent and disaggregated data are available. This illustrates what is possible - even in low income countries.

Individual poverty profiles: further focusing

This briefing has highlighted how sub-national data is essential for providing a more accurate picture of the condition of the poorest. How can we go beyond this - or use datasets that cannot be disaggregated?

The MPI also enables us to zoom in on poverty by considering the intensity of deprivation experienced by people at an individual level. In a recent paper, Alkire Roche Seth and Sumner (2014) identify the poorest one billion poor persons ('bottom billion'), according to the MPI. They find that if one counts the poor persons living in the poorest <u>countries</u>, one billion poor persons live in the 28 poorest countries. Moving to counting the poor persons living in the poorest <u>sub-national regions</u>, they find that these poor persons live in 307 regions stretched across 45 countries. Seeking an even higher resolution - and endeavouring to include countries that could not be disaggregated - they rank <u>persons</u> according to their poverty profiles - the share of clustered deprivations they experienced at the same time. Looking at individual poverty profiles reveals that the poorest one billion people in the world who suffer the greatest intensity of poverty are distributed, strikingly, across 104 countries - in every region, and of every income level.

The policy demand for high resolution and integrated poverty optics that permit multiple actors to make a visible and well-informed dent in poverty is apparent. Zooming in on poverty at a sub-national or even the individual level is vital to shine a light on the different levels and characteristics of poverty within countries and help to design high-impact policy responses.

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[2] Kenya, Guinea-Bissau, Gambia, and Madagascar have older data from 2005/6 to 2008/9.