

PART I

Chapter 3

How to measure the many dimensions of poverty?

by

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Ending poverty measured by USD 1.25 per day is unlikely to mean the end of the many overlapping disadvantages faced by poor people, including malnutrition, poor sanitation, a lack of electricity, or ramshackle schools. Ending poverty means addressing its multiple dimensions. This chapter makes the case for a new headline indicator to measure progress towards eradicating poverty in its many dimensions. This indicator could be an adaptation of the Multidimensional Poverty Index, or MPI, that is already being used internationally in the Human Development Report (HDR) and by many countries around the world. The index combines ten indicators reflecting education, health and standards of living; experience in using it suggests that it would be a feasible indicator to complement an income-poverty measure. It would help to bring into view the overlooked poor and to unleash energies for ending other dimensions of poverty as well. This measure would inform, guide and monitor multidimensional poverty reduction policies, adding real value for policy makers. It would also help to monitor the degree to which economic growth is equitable and to show the important links between poverty and sustainability. Eradicating poverty as measured by this new multidimensional index would dismantle a critical mass of deprivations, achieving much more than eradicating USD 1.25 income poverty alone.

Economic growth is not enough to tackle poverty

Poverty has many dimensions. It is not just a question of money, but also of a complex range of deprivations in areas such as work, health, nutrition, education, services, housing and assets, among others. This view of poverty as “multidimensional” is today widely supported by poor communities, as well as governments and development agencies.²

Those who have low incomes may not be poor in other ways and vice versa: mismatches of 40% to 80% are common

As we have seen from the first two chapters in this report, one of the goals of the international community has been to halve poverty as measured by USD 1.25 per day. The assumption has been that doing so would automatically trigger a reduction in other kinds of deprivation as well.

Unfortunately, evidence from many countries since the Millennium Development Goals (MDG) were launched shows that while growth may contribute to poverty reduction, it is not sufficient to eradicate the other dimensions of poverty (Box 3.1).

Box 3.1. Raising incomes is not enough to tackle poverty: Evidence from the literature

In their prominent analysis of trends in the MDG goals, Bourguignon and colleagues found “little or no correlation” between growth and the non-income MDGs (Bourguignon et al., 2008; 2010).

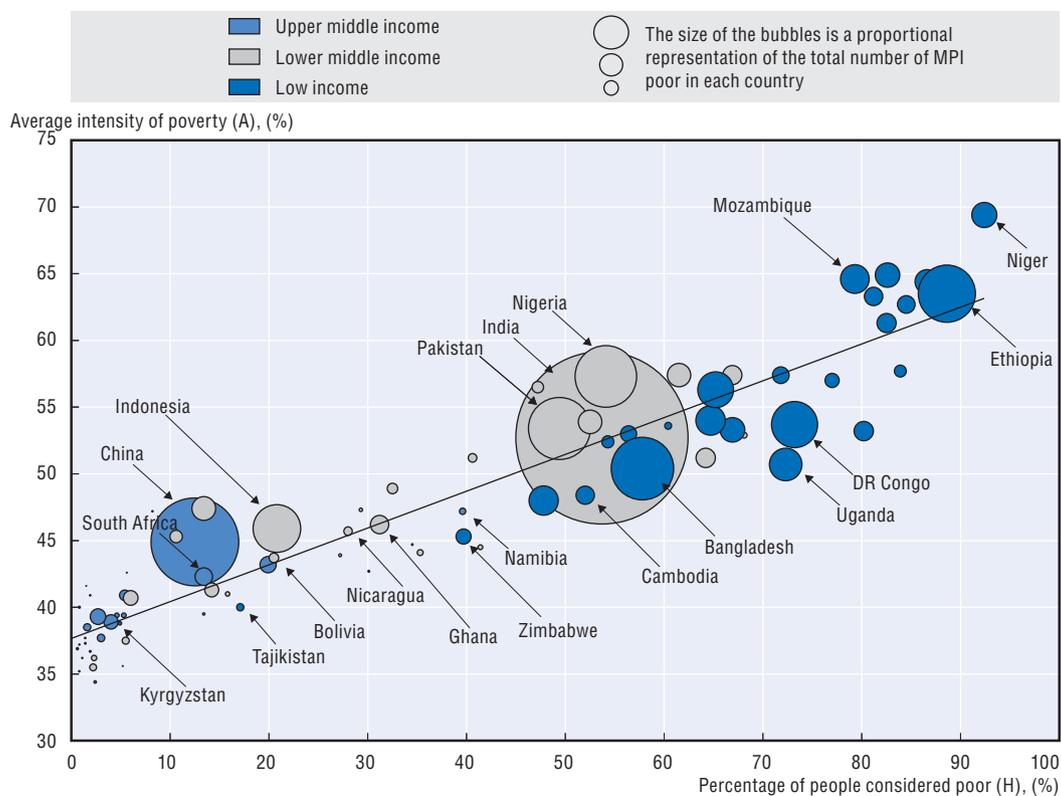
“The correlation between growth in GDP per capita and improvements in non-income MDGs is practically zero [...] [thereby confirming] the lack of a relationship between those indicators and poverty reduction [...] This interesting finding suggests that economic growth is not sufficient *per se* to generate progress in non-income MDGs. Sectoral policies and other factors or circumstances presumably matter as much as growth.”

They also found hardly any correlation between income poverty reduction and changes in under-five mortality, or between income poverty reduction and changes in primary school completion rates and undernourishment (see also OECD, 2011).

Franco et al. (2002) found that 53% of income-poor children in India and 66% of income-poor children in Peru were not malnourished. On the other hand, of children who were not income poor, 53% in India and 21% in Peru were malnourished. In brief, income-poor people are not necessarily malnourished, while non-income poor people are regularly malnourished. Nolan and Marx (2009) observe a similar lack of association using European data: “Both national and cross-country studies suggest that [...] low income alone is not enough to predict who is experiencing different types of deprivation: poor housing, neighbourhood deprivation, poor health and access to health services, and low education are clearly related to low income but are distinct aspects of social exclusion.”

As part of a research project co-hosted by the Oxford Poverty and Human Development Initiative (OPHI) we have constructed an income poverty and multidimensional poverty measure made up of several indicators of deprivation (described further below and see Figure 3.1).³ We then identified the poor according to each measure using several poverty lines. We found striking divergence between those defined as income poor and those defined as multidimensionally poor. In Viet Nam, for example, if we look at the lowest 17% of the population that is income poor at one point in time and do likewise for the multidimensionally poor, we find only a 6% overlap; in other words, at the same point in time only 6% of people are both income poor *and* multidimensionally poor. Mismatches of 40% to 80% between multidimensional and income poverty are common. The analysis also showed that countries which fall in the same country income category can have quite different levels of multidimensional poverty (Figure 3.1).

Figure 3.1. **Incidence and intensity of multidimensional poverty by income categories**



Note: the MPI is a product of two elements: the percentage of people who are poor (incidence – H) times the average intensity of deprivations among the poor (intensity – A); see Alkire and Foster (2011a).

Source: S. Alkire, J.M. Roche and A. Sumner (2013), “Where Do the Multidimensionally Poor Live?”, *OPHI Working Paper*, No. 61, Oxford Poverty and Human Development Initiative, University of Oxford, Oxford.

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Ending poverty must address its multiple dimensions

The evidence presented above highlights that ending USD 1.25 per day poverty is unlikely to mean the end of the many overlapping disadvantages faced by poor people, including malnutrition, poor sanitation, a lack of electricity or ramshackle schools (Alkire and Sumner, 2013). The MDGs identified in 2000 were multiple because each indicator had some ethical

importance. Now, many years into the MDGs it has become clear that this ethical motivation is backed up by an empirical necessity: associations – at least between indicators like income, child mortality, malnutrition and education – are surprisingly variable. Hence, no one indicator is a sufficiently accurate proxy for the multiple dimensions of poverty.

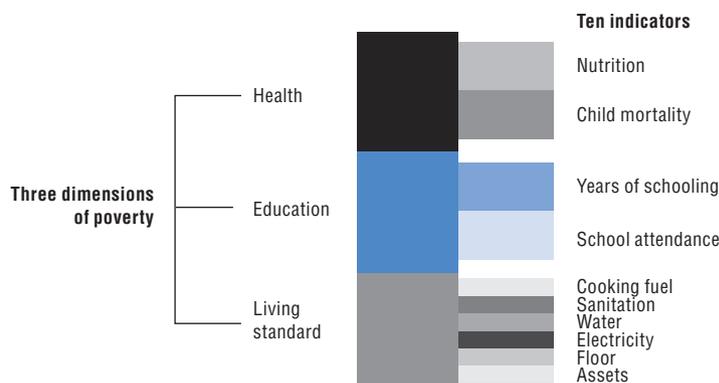
This is why a focus on ending poverty must address its multiple dimensions. But how do we approach such a task effectively without becoming overwhelmed by a torrent of information? I propose a three-pronged approach, using new data and new measures:

1. Add a new global multidimensional poverty indicator to the new goals that will replace the MDGs when they expire in 2015.
2. Develop a survey that includes key global goals.
3. Report national multidimensional poverty indicators alongside the global multidimensional poverty indicator.

A global indicator of multidimensional poverty already exists

An indicator already exists to measure deprivation in many types of poverty. Known as the Multidimensional Poverty Index (MPI) and developed by OPHI and the United Nations Development Programme (UNDP), this internationally comparable measure of multidimensional poverty is based on ten indicators of education, health and standards of living (Figure 3.2). A person is considered “multidimensionally poor” if they are deprived in one-third of the weighted indicators. Since 2010, the MPI has been published every year by the UNDP in its *Human Development Report*.

Figure 3.2. **What is included in the Multidimensional Poverty Index?**



Source: S. Alkire and M.E. Santos (2010), “Acute Multidimensional Poverty: A New Index for Developing Countries”, OPHI Working Paper, No. 38, Oxford Poverty and Human Development Initiative, University of Oxford, Oxford.

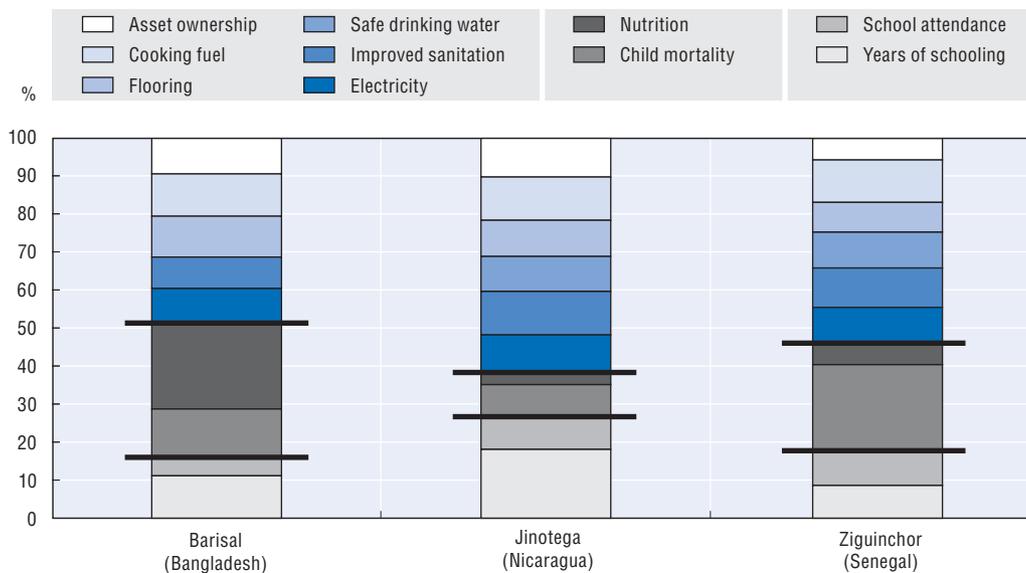
For the new framework that will be developed to replace the MDGs when they expire in 2015,⁴ the recent report by the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda already envisages numerous goals and sub-goals at the global and country levels, each with an accompanying bevy of indicators (Chapter 11; and HLP, 2013). Adding a headline MPI (which we refer to here as the MPI 2.0) to the framework could provide an eye-catching and intuitive overview measure of progress towards these goals, complementing rather than replacing an income-poverty measure (Alkire and Sumner, 2013).

About 1.65 billion people in the 104 countries covered by the global MPI 2013 live in multidimensional poverty with acute deprivation in health, education and standards of living; this exceeds the number of people in those countries who live on USD 1.25 per day or less

The MPI 2.0 would be created with dimensions, indicators and cut-offs that reflect the goals that are agreed for the post-2015 framework. The process of selecting the indicators and cut-offs should be participatory, and the voices of the poor and marginalised should drive decisions. By reporting national MPIs alongside the global MPI 2.0 (see below), this global MPI 2.0 would also enable cross-national comparisons – thereby fostering learning and exchange among countries – as well as some global tracking, much in the way that income poverty measures now do.

The MPI 2.0 would supplement individual indicators, adding value by synthesising policy-relevant information, displaying patterns of overlapping deprivations, and facilitating a focus on the eradication of multidimensional poverty, which is more appropriate than a focus on income poverty. For example, with income poverty measures we know who is poor and that they are income poor; with an MPI we can see not only who is poor, but also how they are poor – what combined disadvantages they experience (Figure 3.3).

Figure 3.3. **Profiles of poverty: Similar MPI, different composition**



Source: S. Alkire, J.M. Roche and A. Sumner (2013), "Where Do the Multidimensionally Poor Live?", OPHI Working Paper, No. 61, Oxford Poverty and Human Development Initiative, University of Oxford, Oxford.

Most of the added value of a global MPI 2.0 lies in the fact that it combines a user-friendly headline indicator with a set of informative graphics and maps that reveal inequality within a country. It would also generate rigorous and detailed profiles of the levels, extent and changes in the composition of multidimensional poverty (Alkire and Sumner, 2013).

We need a quick, powerful and participatory survey instrument

The next step would be to develop an internationally comparable survey instrument to measure progress on the agreed global goals. This instrument should be short, powerful and selective – taking 45-60 minutes to complete. The sample surveyed should be representative of the key regions or social groups across which multidimensional poverty is to be assessed. This proposed core module would not cover all the post-2015 goals for several reasons: some indicators may require specialised surveys; some may not require updating as frequently as others; some may be provided by community, administrative or census data; and some complex indicators (e.g. detailed consumption and expenditure information) may require more than one hour to collect on their own. Together with this core global survey, each country that wishes to could develop and append a set of questions (involving another 30-45 minutes to complete) reflecting national priorities as well as the cultural, climate and development context. The national modules could include participatory inputs on the characteristics and priorities of the poor in that country.

There are a number of reasons for keeping a core survey relatively brief and strong. The most important is periodicity: the survey would be conducted in the field every two to three years in order to update the key indicators in a timely way; an excessively long or complex survey would be an obstacle. Also, because not all indicators will be equally relevant in all national contexts, the core module must select indicators that are widely applicable, leaving space for national adaptations.

The survey could be conducted using a variety of institutional arrangements for different contexts. Some administrations may welcome the survey being conducted by an outside institution to ensure data quality and frequency; others may wish to generate their own data because they already have or wish to invest in statistical capacity.

Would such a survey be feasible? The global MPI currently used by UNDP draws on less than 40 of the 625 or so questions that are present in an average demographic and health survey (DHS). Once the data are cleaned, constructing a pre-designed MPI and its associated analysis takes less than two weeks for a trained team to prepare, cross-check and validate. In similar fashion, a strong MPI 2.0 could be built from new data based on key post-2015 goals. There would, of course, be an initial cost of designing a global MPI 2.0 and its associated programming tools, and in training people in its calculation, but subsequent costs would be much lower.

The global index could be complemented with national and regional indices

Just as we have seen that the global USD 1.25 per day measure is used for national policy in many individual countries (Chapters 1 and 2), a global MPI 2.0 may reflect only a subset of the goals and priorities of many individual countries.

Twenty-two countries are developing their own national multidimensional poverty measures

Increasingly, national governments are developing “official” multidimensional poverty indices that either include or stand alongside monetary poverty measures – and which could also complement a global MPI 2.0. For example, the governments of Bhutan, Colombia and Mexico (Chapter 5, Local solution 1) each have official national multidimensional poverty indices (national MPIs), whose dimensions and indicators, thresholds and weights are

tailored to their specific national policy contexts. Other measures are in use at sub-national levels – for example in the state of Minas Gerais in Brazil. A number of national and subnational MPIs are also under development – for instance in El Salvador – and many other countries are considering them for national use (such as Iraq and Malaysia). Indeed a peer network comprising 22 countries plus regional associations who are considering or actively pursuing national multidimensional poverty measures was launched in June 2013. International support in the form of technical training could greatly contribute to the development of national MPIs, as could sharing experiences among countries.

In a given country, low levels of deprivation on many indicators may be concentrated in a small group – such as the Roma in Eastern Europe or a geographically remote community – rather than spread out among the non-poor. National indicators do not distinguish among these situations. An MPI measure does so very easily. Given the disparate nature of inequality today, the analysis would need to include not only national aggregates but also regional and group-based decompositions. This would include looking at results at specific points in time, as well as trends across periods.

Conclusions

Ending poverty as measured by the MPI is a very sensible goal to have – perhaps even more sensible than a “dashboard” of getting-to-zero indicators. Why? In terms of “eradicating” multidimensional poverty indicators one by one, there are actually some problems with the aim of getting to zero. For example, an activist may be voluntarily living on “less than USD 1.25 per day” for the survey recall period (usually 7 or 30 days) out of solidarity with others, but may not be consumption-poor otherwise. A self-made millionaire may have never gone to school. A tragic road accident could have occurred, involving a child’s death, yet that tragedy may not be associated with poverty. Or an indigenous or eco-farming community may not have, or want, a finished floor because of their culture or climate. Given circumstances such as these, deprivation levels could occur even in societies that rightly assess that they have “got to zero” on core features of multidimensional poverty. The non-poverty deprivations appear either because of tragic circumstances or measurement error, or because internationally comparable indicators can never fully capture the complexity of culture and circumstance. In contrast, getting to zero on the MPI means that no person experiences a critical mass of deprivations. This leaves room for some variation in single indicators across culture, climate and personal values.

Because of the lack of correlation between growth and improvements in areas such as nutrition, child mortality, education or jobs, there is a growing emphasis on inclusive growth by the OECD,⁵ among many others. Only certain kinds of growth will get us to zero poverty in the fuller sense. What is needed is growth that creates jobs (Chapter 4), coupled with complementary social policies (Chapter 6), legal protections, and activities by civil society, non-governmental organisations (NGOs) and the private sector (Drèze and Sen, 2011; 2013).

In conclusion, as many have argued, eradicating USD 1.25 income poverty would be a step forward, but would not indicate a decisive finale to income poverty. If we were to eradicate poverty as measured by a global MPI 2.0, we would have definitely dismantled a critical mass of deprivations. For example, if the current global MPI were taken to zero in a given country, it would mean that no people in that country were deprived in more than one-third of the weighted indicators at the same time. This has indeed occurred: Slovenia and the Slovak Republic, for example, have achieved zero poverty according to the global

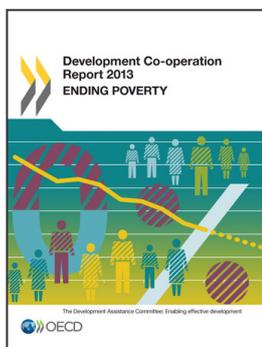
MPI (Alkire and Santos, 2010), although there are some people who may experience one or another deprivation. The eradication of poverty based on a global MPI 2.0 would not only be far more appropriate than considering indicators one by one – it would represent a solid milestone, and one worthy of profound celebration.

Notes

1. I am grateful to John Hammock, Hildegard Lingnau and Simon Scott for comments on this chapter.
2. This is also reflected in the widely-held view that well-being is also multidimensional and requires measurement approaches that portray its depth and composition holistically. See for example OECD's *Better Life Initiative* at www.oecdbetterlifeindex.org.
3. The study is called the Dynamic Comparison between Multidimensional Poverty and Monetary Poverty. See www.ophi.org.uk/workshop-on-monetary-and-multidimensional-poverty-measures.
4. Referred to as the post-2015 framework.
5. The OECD *Initiative on Inclusive Growth* recently held a *workshop* which clarifies the current areas of consensus and most central questions (see www.oecd.org/inclusive-growth/workshop.htm). Likewise, the Asian Development Bank and many country governments have renewed their emphasis on inclusive growth (see www.adb.org/themes/poverty/topics/inclusive-growth).

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