



Measuring multidimensional deprivations and living conditions based on survey data

Multidimensionality: No indicator alone can capture the multiple living conditions that matter to people. Monetary measures are increasingly supplemented by data on other deprivations and achievements that people experience directly. Large and eclectic dashboards provide an incredible resource of information. Yet they also pose significant challenges for policy and priority-setting. Furthermore, sometimes it is important to know how deprivations or achievements overlap. If a person is multiply deprived – lacking education, nourishment, water, and assets – their situation is importantly different in policy terms from a person who lacks only one of these.

New Methodology: OPHI has developed new methodologies and technical tools including software, for measuring deprivations and living conditions. The Alkire Foster (AF) methodology described here is flexible, like an open source technology. Deprivations and standards are selected at a national or institutional level to create a measure tailored to the context. The measure gives an overview of who is multiply deprived. It shows which deprivations people experience at the same time – overlapping conditions. And it can be broken back down into each component indicator. These measurement methodologies are being used to measure deprivations and living conditions over time, to target social protection, or to evaluate social and economic policies.

Applications: This approach has been applied by the Government of Mexico to measure social deprivations alongside income poverty using an integrated framework. It is used in Colombia to track progress in five dimensions of their national plan as well as to target conditional cash transfers. It was applied in a simplified cross-national way in the UNDP HDRO's Multidimensional Poverty Index to provide an overview of achievements in certain MDG-related deprivations. And it underlies Bhutan's Gross National Happiness Index.

Why are countries moving to multidimensional methods?

- **To complement monetary measures.** Multidimensional measures reflect changes in deprivations directly. So they change more quickly than monetary measures in response to some policy interventions. For example, increasing school attendance may not improve incomes for a number of years, but if a multidimensional measure includes it, the change will be seen immediately. Given the importance of statistics in reflecting the impact of policy changes enacted by the government, this sensitivity of the multidimensional measure is an advantage.
- **To provide an overview of changes in component indicators.** Dashboards are tremendously valuable to experts but can be too complex for the media and busy citizens. Further, they risk seeming vague, because some indicators will have improved and others worsened or stayed unchanged over a given time period. A multidimensional measure can show, at a glance, the trends in the incidence and intensity of deprivation in a country and by region or population group.
- **To reflect the experience of people themselves.** Participatory exercises reveal that people describe ill-being as including unemployment, low income, poor health, nutrition, lack of adequate sanitation and clean water, social exclusion, low education, bad housing conditions, violence, shame, disempowerment and so on. Their accounts of well-being are similarly multi-faceted. A multidimensional measure better reflects citizens' experiences and empowers policy makers to affect it.
- **The new multidimensional measures retain all key information.** The value-added of the AF multidimensional measures is that they retain information on each of the key component indicators. Composite measures often don't. This is vital, because policy makers can break down overall trends to see which indicators drove changes, and how changes varied by region or ethnicity. This can help support a results-based approach in the relevant public institutions.

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What is new?

The AF method works from people up. By mapping outcomes for each person or household against the criteria being measured, the method captures both the percentage of people who are deprived and the overlapping deprivations that each individual or household faces. This is unique to the AF technique and conveys advantages:

- Measures created using the technique reflect the **intensity of deprivation** (the average number of deprivations or weighted sum of deprivations that each individual experiences) and the headcount.
- Measures created using the technique are transparent because they **can be broken down by dimension**, either for the country or for any subgroup such as region or ethnicity.

Main uses of multidimensional measures

- **Official national measures.** The AF method can be used to create national, regional or international measures of deprivation or living conditions that are tailored to the particular context.
- **Targeting beneficiaries.** The AF method can be used to target individuals for public service programmes or conditional cash transfers against set criteria.
- **Monitoring and evaluation.** The AF method can be used to monitor and evaluate the effectiveness of programmes over time in reaching their anticipated goals and targets.

What resources are available?

- **Software:** The Alkire Foster methodology requires unit level data. It can be calculated using standard software: Stata, SPSS, SAS, DAAD, and R. Some free online statistical programmes, such as DASP, already have a simplified code in built for the calculation of these measures.
- **Training Resources:** The OPHI website provides lectures, problem sets, sample stata .do files, and other resources for those creating national or project-specific multidimensional measures. The online training portal can be found here: <http://www.ophi.org.uk/teaching/online-training-portal/>
- **Technical Courses:** OPHI offers intensive technical courses for those intending to construct national measures. The next open two-week course is in Jakarta in August – September 2012. Tailor-made courses are also available in English and Spanish.
- **Policy Clinics:** OPHI, in collaboration with colleagues in national statistical offices and institutions that are already using multidimensional measures, offers brief (1-2 day) clinics for senior policy makers.

Current applications

The AF method for multidimensional measurement is being applied at both the national and international level.

- **National.** Governments have used the Alkire Foster method to create their own national measures of deprivation and living conditions or poverty that employ dimensions and indicators appropriate to their context.
- **International.** OPHI created a new international measure of poverty for the UNDP's *Human Development Report* to complement the \$1.25/day measure. The Multidimensional Poverty Index was introduced as a tool to measure the prevalence and intensity of overlapping deprivations. The 2011 MPI covers 109 countries. OPHI's research illustrates how countries could analyse their own measures – conducting analyses of changes in MPI over time, overall and in each indicator and region for countries, as well as decomposing 66 countries into 683 regions to show regional patterns.

About OPHI

OPHI's objective is to advance the human development approach to poverty reduction through fundamental, sustained, and multidisciplinary research that is effectively disseminated. OPHI, a research initiative at the Oxford Department of International Development, University of Oxford, was launched in May 2007 by the Vice Chancellor and OPHI's three advisors. OPHI receives funding from ESRC-DFID, the Fell Fund, UNICEF, and various universities and foundations, and is advised by Amartya Sen, Tony Atkinson, and Sudhir Anand.