

## **“Measuring Poverty: A Proposal”**

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### **Abstract:**

This chapter documents a participatory approach to developing a new, gender-sensitive measure of deprivation that improves upon existing measures of poverty and gender equity. Over 3 years, across 18 sites in Angola, Fiji, Indonesia, Malawi, Mozambique, and the Philippines, men and women in poor communities engaged in a range of qualitative discussions and quantitative evaluation exercises to help develop the Individual Deprivation Measure. The IDM tracks deprivation in 15 dimensions, uses interval scales within dimensions and can easily be administered in most impoverished areas. It represents a significant advance in multidimensional measurement by focusing on individuals rather than households, by covering all important dimensions of poverty, by being gender-sensitive in the selection and coding of dimensions and by being appropriately sensitive to the depth of deprivation. The IDM demonstrates the possibility of establishing objective tools of social valuation through a process of public reason.

**Keywords:** deprivation, gender-sensitive, multidimensional, participation, public reason

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We are privileged to have spent the better part of four years on an international, interdisciplinary research project to develop a gender-sensitive measure of poverty that is also suitable for assessing gender disparities. At the end of this work we have recommended a new tool, the Individual Deprivation Measure (IDM), which covers multiple dimensions of deprivation. It is a tool that can be used by NGOs, governments and international agencies. It has a number of features that improve on extant monetary, subjective, and multidimensional measures. The IDM is justified through a process of public reason, takes account of previously ignored dimensions of deprivation, appropriately reveals the depth of deprivation, is amenable to alternative weighting schemes, is comparable across social contexts and over time, and is measured at the individual level, allowing for assessments of the intra-household distribution of disadvantage. In this chapter we will explain how and why this new tool was developed and how it improves upon existing tools of social valuation. We will also explore what further research is needed to advance the IDM as a standing component of systems of information collection and dissemination.

Tools of social valuation are used for a range of important purposes. They are used to advocate for scarce resources, guide the allocation of those resources, evaluate existing and proposed programs, policies and institutional designs, and more broadly to determine the justice or injustice of existing social systems, grounding the claims of those who are disadvantaged by current or proposed social arrangements. A morally plausible and socially justified measure of deprivation is needed to advocate for dedicating resources to anti-poverty programs, to evaluate the success or failure of anti-poverty programs, to determine the impact of various policies and institutional arrangements on poverty alleviation, and to justify specific claims for changes to the *status quo*. It is therefore a priority concern of distributive justice to determine whether existing

measures of poverty set reasonable standards and track relevant deprivations. We believe that most existing measures have not been developed through morally justifiable procedures, do not set reasonable standards and do not track all relevant deprivations. This chapter aims to demonstrate both that a process of public reason can generate new and better measures of poverty and to give a positive account of a new, gender-sensitive measure of multidimensional deprivation.

## **1. Concerns about existing measures**

This chapter introduces the Individual Deprivation Measure and discusses its future development. However, in order to elucidate the project's motivations and strategic choices along the way, we begin with some critical comments on the serious flaws we find in existing tools used to measure poverty and gender disparity especially in developing countries. While this book focuses more broadly on well-being and public policy, we are concerned here with one important component of well-being, freedom from deprivation, and develop a tool that can be used to measure, and thus help alleviate, a set of core deprivations. We endorse other efforts to improve the measurement of well-being across entire populations, but focus our negative comments here on existing approaches to measuring poverty and related deprivations.

### **1.1 Monetary Approaches**

The most dominant form of poverty measurement is monetary (see Cowell, chapter \_\_\_\_, this Handbook). Monetary poverty lines are used in nearly every country to track poverty; they are frequently tied to entitlement programs and used to guide the allocation of scarce resources. There is no agreed, uniform method for developing national poverty lines. Two dominant approaches have emerged, although the details vary in important ways among countries. One method looks simply at the cost of acquiring some minimally adequate basket of food. This sets

an extremely low monetary poverty line that does not take account of non-food necessities to which even the poorest individuals must dedicate some expenditure (Banerjee and Duflo 2007). Another method includes the monetary costs associated with non-food basic needs, or simply a multiple of basic food costs. This generates somewhat higher national poverty lines. A third method, rarely used but often proposed by academics, sets a poverty line at the monetary level at which most people can be expected to live free from regular deprivations—in developing countries, where infant mortality rate has been reduced to an acceptable level, or in developed countries, where households are able to keep the electricity on and avoid periods of food insecurity (Woodward 2010).

Once a monetary poverty line is set, there are two dominant methods of measuring whether a household is poor. The first is to measure the household's income from all sources; the second, and preferred, method instead measures its consumption-expenditure by recording all goods and services consumed, imputing prices to anything that wasn't purchased. Both methods then relate the result to the number and ages of household members to compute a *per capita* figure to be compared with the poverty line. Both methods face difficult issues in determining the prices to be used for goods that are publicly provided, generated through subsistence work, or drawn from common resources (see Rao, chapter \_\_\_\_, this Handbook, for some of the difficult issues raised by variability in prices, preferences, and environments for making monetary comparisons of consumption across context and over time).

Monetary approaches to poverty measurement face both internal and external critiques. Internal critiques focus on the methods used for setting poverty lines and calculating individual achievements against this standard. These methods are often not anchored to a clear, plausible benchmark for identifying lives free from poverty. Within a household, monetary approaches

must either assume that all household members partake equally in the household's income or consumption or else determine how to attribute the use of or access to shared goods (see Chiappori, chapter \_\_\_\_, this Handbook). Outside of the household, monetary approaches must determine how, and whether, to impute prices for publicly provided goods. Failure to account for these goods, or to properly price them, may result in misleading poverty estimates. Furthermore, there is the problem of determining whether adjustments should be made for the different prices households face (even within a single country) and for differences in the quality of the goods or services purchased (Deaton 2013, Pogge 2010). The result of these various internal challenges is that the scope, distribution, and trend of poverty within and across countries varies greatly depending on which assumptions are used (see Chandy 2013 for a review).

Internationally, the World Bank's International Poverty Line makes comparisons of extreme poverty based on unsound calculations of purchasing power parity. The consumer price indexes (CPIs) and purchasing power parities (PPPs) (see Rao, chapter \_\_\_\_, this Handbook) it uses for comparisons across years and countries are based on the prices of all goods and services consumed by households, each weighted according to its share in consumption expenditure. Such CPI and PPP conversions are inappropriate in the context of poverty measurement because they give weight to the prices of many goods and services that are irrelevant to poverty avoidance and not consumed by poor people, such as big screen televisions and airplane tickets, while underweighting the goods most important to poor people, such as basic foodstuffs and water.

External critiques focus on the central standard of deprivation that is inherent in monetary measures of poverty, and cannot be resolved through internal adjustments. Monetary measures are insensitive to differential needs and conversion rates: one individual may need more income or consumption than another because she has a higher labor burden, is pregnant or is less

efficient at converting income or consumption into deprivation reduction, because of a faster metabolism, perhaps, or because of different capacities, different social and environmental context, or different biological features. Monetary measures typically take the household as the unit of analysis and assume that all household members are equally poor; as a result they are incapable of revealing inequalities within the household, which often correlate with gender. Chiappori (chapter \_\_\_\_, this Handbook) offers constructive advances in evaluating intra-household welfare with a money-metric index, but such advances are not yet present in any national or international poverty lines we are aware of, nor have they been adopted for the purposes of multidimensional poverty measurement. Relatedly, existing monetary measures do not take account of important deprivations that are difficult to price, such as exposure to violence and lack of control over decision-making, which again correlate with gender.<sup>1</sup>

The persistence of monetary poverty lines is due in part to a certain path dependency to social valuation. Once a standard for poverty has been set, and data collection and resource allocation have been based on this standard, it becomes practically and politically difficult to abandon. Researchers prefer to collect data that can be compared with data previously collected. Moreover, those who oppose a more poverty-avoiding distribution of economic resources and opportunities worry that alternative poverty measures will strengthen the case of anti-poverty reformers, while those who support more poverty-avoidance fear that alternative measures of poverty will decrease the impetus for such reforms (Burtless 1999). Nonetheless, we are

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<sup>1</sup> Fleurbaey (chapter \_\_\_\_, this Handbook) shows how a monetary approach may be able to incorporate needs and all aspects of quality of life. Decancq and Neumann (chapter \_\_\_\_, this Handbook) examine this approach along with other approaches in the identification of the worst-off.

optimistic that alternative measures of deprivation can overcome these political and practical constraints given widespread dissatisfaction with purely monetary means of measuring poverty.<sup>2</sup>

## **1.2 Subjective Approaches**

Subjective approaches to the measurement of deprivation use survey methods to examine individual experiences (for detailed examination of subjective approaches to measuring well-being, see Graham chapter \_\_\_\_, Lucas chapter \_\_\_\_, and Clark chapter \_\_\_\_, this Handbook). Most commonly, surveys track individual happiness or individual life evaluation. Less commonly, subjective approaches measure individual affect, such as whether a person experiences stress, disappointment, sadness, loneliness, etc. (Kahneman 2011, 390-398). More radically, subjective approaches can measure biological phenomena such as cortisol levels to draw inferences about a person's (likely) subjective state (Chemin, de Laat, Haushofer 2013). Subjective evaluations may also take a multidimensional approach, evaluating a person's pleasure or displeasure with her achievements in a range of areas, such as her health, education, security, environment, and so on (OECD 2013).

It may be useful to include some subjective assessments in an overall system of social valuation. For example, recent findings showing that American women have not made subjective gains despite their very large objective gains over the past two generations likely have important public policy implications and may ground claims for various changes to government policy (Stevenson and Wolfers 2008). Similarly, studies showing that similar phenomena, such as common headaches, are experienced as worse by individuals with lower incomes (Kahneman

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<sup>2</sup> There is substantial evidence of a shift away from purely monetary approaches, as evidenced by, among others, the OECD's work on measuring well-being, the shift of many national governments towards subjective or multidimensional approaches to measurement, and the burgeoning academic literature and public discourse on these topics.

and Deaton 2010) suggest that objective measures of deprivation may understate the badness of poverty.

However, subjective approaches to measuring deprivations are not adequate for guiding anti-poverty work. First, and most importantly, subjective assessment is subject to the problem of adaptation. In response to unjust circumstances or widespread deprivation, individuals may ‘lower their gaze’ and adjust their evaluative framework for thinking that their life overall, or their life in particular dimensions, is better than objective circumstances indicate (Sen 1999, 62-63). Such adaptation manifests itself when women and men assign differential scores when evaluating their objectively equivalent circumstances. Second, sheer personality explains some variations in subjective well-being (see Lucas, chapter \_\_\_\_\_, this Handbook). While we endorse agent-relative and need-sensitive measurement to some extent (for example, that a person with a faster metabolism should count as hungry if she doesn’t have enough calories to meet her particular biological needs), we do not believe that anti-poverty work should give greater attention to those who are by nature grumpier than the rest of the population.<sup>3</sup> Third, individuals who are very well-off and isolated from more deprived individuals may ‘raise their gaze’ and evaluate their own life as worse than it actually is. (For a general critique of subjective approaches to human development, see Stewart 2014).

### **1.3 Multidimensional approaches**

Multidimensional approaches to measuring poverty and deprivation have become more common in recent years. Formal adoption of multidimensional poverty measures is due in large

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<sup>3</sup> This claim does not entail the stronger claim that significant unhappiness is irrelevant to all kinds of social evaluation. For example, it may be that government policy should include the distribution of happiness among the population as one relevant tool for determining how society is progressing, and use it to shape some public policies (such as the protection and development of open spaces for recreation or the provision of support for child care to change time-use patterns for overly busy parents). It may also be the case that certain forms of unhappiness, such as depression and other relevant mental health disorders, should generate certain entitlements, such as to anti-depression treatment. Our claim merely denies that poverty evaluation and anti-poverty programs should be sensitive to subjective well-being (though, of course, reducing poverty would be likely to increase happiness).



part to the work done at the Oxford Poverty and Human Development Initiative.<sup>4</sup> OPHI has developed modules for missing dimensions of development, has created the Multidimensional Poverty Index (MPI), now added to the United Nations Development Program's suite of composite indices of human development, and has helped many national governments develop multidimensional poverty measures.<sup>5</sup> We focus here on the MPI to examine the strengths and weaknesses of extant multidimensional measurement (for further discussion, see Alkire, chapter \_\_\_\_, Duclos and Tiberti, chapter \_\_\_\_, this Handbook).

Following the Human Development Index, the MPI measures deprivations in three dimensions, giving equal weight to health (two indicators), education (two indicators) and standard of living (six indicators). The MPI uses a dual cut-off method. Within each indicator, a household is classified as deprived or not depending on whether it exceeds the relevant threshold. A household is classified as poor or not overall depending on whether it is deprived in at least 1/3 of the weighted indicators.

**Table 1: The Multidimensional Poverty Index**

<b>Dimension</b>	<b>Indicator</b>	<b>Deprived if</b>	<b>Weight</b>
Health	Child Mortality	Any child has died in the family	1/6
	Nutrition	Any adult or child in the family is malnourished	1/6
Education	Years of Schooling	No household member has completed five years	1/6
	Child Enrolment	Any school aged child is out of school in years 1 to 8	1/6
Standard of Living	Electricity	The household has no electricity	1/18
	Drinking Water	The household lacks access to clean drinking water within 30 minutes	1/18

<sup>4</sup> For updates on their continuously evolving work, visit <http://www.ophi.org.uk>. This includes effort to develop individual level multidimensional poverty measures and gender-sensitive multidimensional poverty indices.

<sup>5</sup> For national applications of multidimensional poverty measurement, see <http://www.ophi.org.uk/policy/multidimensional-poverty-index/>.

Sanitation	The household sanitation is not improved, or is shared	$\frac{1}{18}$
Flooring	The floor is dirt/sand/dung	$\frac{1}{18}$
Cooking Fuel	Wood, charcoal, dung are used	$\frac{1}{18}$
Assets	The household does not own more than one of: radio, TV, telephone, bike, motorbike, car or tractor	$\frac{1}{18}$

The MPI is an impressive achievement, calculating for the first time household level multidimensional poverty on a global scale. However, it suffers from a number of serious flaws which arise largely as a result of working from existing data collection that is capable of global coverage. First, it is insensitive to the extent to which a household falls below or above the cutoff within each indicator. For example, the MPI considers it irrelevant to determining persons' overall poverty whether they have 4 years of schooling or none at all – all that matters is whether one has or has not completed five years. Second, the MPI is similarly insensitive to the extent to which a household's proportion of weighted deprivations falls below or above the threshold proportion. Thus, a household deprived in all ten indicators is classified in the same way as a household deprived in only the two education indicators. At each of these two steps, the MPI thus discards important information about the depth of deprivation. Combining both criticisms, the MPI implausibly counts as poor overall a household that falls very slightly below the deprivation thresholds in 1/3 of the weighted indicators and counts as not poor a household that falls short massively in 5/18 of the weighted indicators.<sup>6</sup> Third, the MPI is calculated at the household level and is therefore insensitive to the intra-household distribution of deprivation and thus incapable of revealing important and often gendered differences in deprivation. Fourth, the

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<sup>6</sup> Alkire and Foster rightly suggest that these problems can be mitigated through a variant of their multidimensional index that would replace binary cut-offs with sensitivity to the extent to which households fall short in each indicator. Still, their MPI as currently deployed is subject to the problems posed here.

MPI excludes important dimensions of deprivation, such as freedom from violence.<sup>7</sup> Finally, although the MPI claims justificatory support from participatory processes, it has not been justified through a process of public reason. That is, while the dimensions included in the MPI may find support in various participatory or deliberative exercises, the specific design of the measure and the selection of dimensions have not been justified through a public, deliberative process.<sup>8</sup>

Given the shortcomings of extant approaches to measuring deprivation, a new tool is needed that reveals the depth and breadth of deprivation at the individual level, takes account of gender-specific deprivations experienced by individuals, is justified through a process of public reason, is comparable across social contexts and over time and is capable of guiding anti-poverty work. Designing and implementing such a new measure, specifically for the purposes of providing plausible guidance for anti-poverty work, is not inconsequential. As Decancq and Neumann (chapter \_\_, this Handbook) show, alternative measures of well-being may differ radically in how they rank and classify individuals. Therefore a great deal hangs on which measure is used for purposes of institutional and policy design.

## **2. A Feminist, Pro-Poor Approach**

There are two main respects in which our research project's methods and methodology are distinctively feminist. First, most if not all poverty measures are gender insensitive in at least three ways: they take the household as the unit of analysis and are therefore incapable of revealing gendered disparities within households, they exclude some dimensions of deprivation that are especially important to women and they are insensitive to often gender-correlated

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<sup>7</sup> This much is recognized by the creators of the MPI (see Alkire and Santos 2010), who have chosen to limit their exercise according to existing data. The MPI excludes health (beyond infant mortality), shelter (beyond floor), relationships, violence, family planning, environment, time use, voice and work status, which are all included in the IDM.

<sup>8</sup> For a more extensive discussion of challenges facing the MPI, see Duclos and Tiberti, chapter \_\_, this Handbook.

personal heterogeneities that systematically affect the ability of individuals to convert resources into achievements. Given the widespread phenomenon of gender-insensitive poverty measurement, it is appropriate to adopt explicitly feminist methods to correct for these past failures. Second, feminist research methods tend to privilege deliberative, participatory research that protects vulnerable populations and promotes the most marginalized voices. In contrast to isolated academic exercises that stipulate poverty lines through economic analysis of the cost of basic food needs or by averaging selected domestic poverty lines set by experts, feminist research methods provide an avenue for the perspectives and views of poor men and women to develop a morally justified, empirically informed measure of those deprivations that are most important to the people who live with them.

## **2.1 Conceptual Analysis**

Before discussing our feminist approach to social epistemology, which guides this research project, it is worth making a few remarks about conceptual analysis and what it is that one might be doing when one is engaging in a project to redefine a commonly used concept. Rather than deliberating with people in poor communities to understand how poverty and related hardships are best understood, why can't we simply adopt the definitions prominent in dictionaries, development economics textbooks, national planning documents or international agencies? First, there is widespread disagreement among development experts about the best definition of poverty—a dispute the World Bank seeks to avoid by simply averaging select domestic poverty lines (converted at PPPs) of very poor countries (Chen and Ravallion, 2010). Second, to the extent that agreement exists or can be attained, there are good reasons for skepticism. It is often true that we ought not accept the conceptual schema that has emerged historically. Consider the conceptual history of rape. Initially the concept did not exist, then it

was used to describe when a married woman (consensually or not) had intercourse outside of marriage (this was deemed to be a violation of her husband's private property), then it was reformed to capture non-consensual intercourse but excluded many violations such as forced intercourse within marriage and amongst acquaintances, which are now widely accepted as instances of rape. The mere fact that previous generations had established conceptions of rape was no reason to avoid drastic revisions to the concept (Burgess-Jackson 1996).

If we have good reasons to revisit conceptions of poverty and deprivation, we need a method of conceptual analysis. Sally Haslanger (2000) usefully distinguishes three approaches.<sup>9</sup> In the first, an individual analyst simply tries to clarify and stipulate her understanding of the term in question, and situates the concept within her broader conceptual schema. In the second, a person tries to understand how the term is used in common social practice—what, exactly, is the referent of the term as commonly used? In a third, and in our view preferable approach (at least for the concept of poverty, which is central to our work), normative input is needed. Critical reflection on how the concept is and could be used, in service of certain purposes and values, must inform how that concept is developed. This approach is constrained but not fully limited by various sources of information, including the term's current usage, its relationship to other concepts, its purpose in broader linguistic, social, and political practice and the feasibility of adopting an alternative conception. But on this ameliorative approach, we must explore the values that underlie existing conceptions of poverty and must debate which values should underlie any future conceptual revisions (Haslanger 2012).

## **2.2 Social Epistemology**

To construct a new measure of deprivation, we argue that a social epistemology is needed to discover what it is that people think should count as part of the constructed conception. Rather

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<sup>9</sup> Haslanger also discusses a fourth, a genealogical approach, which we do not discuss here.

than pursuing arm-chair theorizing, or seeking to develop a measure from existing data, a deliberative, inclusive procedure is needed that privileges the perspectives of those who a) have the greatest experience with the phenomenon under investigation and b) have the most at stake in how the phenomenon is to be measured and thus addressed. That is, a pro-poor, gender-sensitive measure of deprivation must be developed through deliberative procedures that include people who live with severe deprivation on a daily basis and are able to reflect on the question what aspects of their lives are most relevant to considering oneself free from deprivation.

Undertaking a **process of public reason** to develop tools of social valuation, and of tracking deprivation in particular, has significant advantages over alternative approaches. First, the process will provide access to better information than sequestered academic investigation. Much knowledge is lost when individuals with relevant experience are excluded from decision making about what should count. Second, an inclusive process will confer legitimacy on any resulting tool of social valuation. Individuals and development institutions have more reason to endorse measures that have been subject to public input and critical revision than others that are developed through isolated ‘expert’ reflection. Whereas past measures of poverty have referred to findings in participatory poverty research, our project explicitly designed participatory research to develop an internationally comparable measure of deprivation.

With support detailed in the acknowledgments, we undertook participatory research in 18 sites across six countries in Asia, Africa, and the Pacific. Country selection was driven almost entirely by the interests and capacities of research partners. With more time and greater resources, we would have expanded the countries under consideration, especially by including a country from Latin America. In Angola, Fiji, Indonesia, Malawi, Mozambique, and the Philippines, we hired local research teams with experience in working with poor communities

and expertise in gender-sensitive research to explore with community members how poverty should best be conceived and measured. The field guide for the first phase of research was developed with local research teams in two methodology workshops held in Canberra and Pretoria in 2010.

Within each country, we aimed to have three different types of communities participate in the research. In all but one country, research teams identified an urban research site, a rural research site and a marginalized research site. A marginalized community might be one that is subject to systematic exploitation or disadvantage, such as a minority ethnic group or a post-conflict community, an illegal urban squatter settlement or a group living on an administrative boundary, for example. A diverse selection of research sites aimed to include the perspectives of people with a range of experiences. Similarly, we aimed for a diverse selection of participants. Participatory groups were broken up into age and gender categories: older men, older women, middle age men, middle age women, younger men, and younger women.<sup>10</sup> Researchers attempted to recruit participants from a wide range of life circumstances, such as people living with disabilities and sexual minorities. However, given the limited amount of time researchers spent in communities and the social and political constraints facing some of these highly marginalized groups, they were not included in all participatory groups.

### **3. Qualitative Research**

The research was initially guided by an overarching research question. We aimed to learn “What is a just and justifiable gender-sensitive measure of poverty?” This research question was divided into three sub-questions: 1) How is poverty best measured? 2) How is poverty gendered? 3) What are the most important gender inequalities for men and women?

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<sup>10</sup> Due to differences in life expectancy of up to 20 years in our research countries, we varied the thresholds for age categories across countries.

The first phase of qualitative research involved six key methods to begin to construct a gender-sensitive measure of poverty. The first method was key informant interviews. Working with leaders and knowledgeable insiders from local communities, researchers were able to orient (or in most cases re-orient) themselves to the particular community, its recent history and other relevant context-specific information. Group exercises were undertaken using four distinct methods: guided group discussions, a group exercise to generate poverty ladders that allow individuals to discuss different levels or categories of poverty, a group exercise to rank different dimension of poverty and a household mapping exercise to discuss how poverty may vary within the household and by age and gender. These group exercises were followed by a final set of in-depth individual interviews to revisit any key points or themes from the group exercises that required further elaboration.

The first-phase results began to provide some of the features of a conception of deprivation that should be used to determine whether individual lives are free from poverty and hardship. People drew clear distinctions among different levels of poverty, endorsing a conception with multiple levels of deprivation rather than a simple binary distinction between the poor and non-poor. Nearly all participants conceived of poverty as multidimensional and included several dimensions that were not primarily material. Participants also seemed to endorse agent-sensitive and context-sensitive measures of deprivation, that is, measures that take account of individuals' particular needs in the specific context in which they find themselves. From this initial participatory work, we then needed to move to an exercise that would clarify which dimensions should be included in this multidimensional measure of deprivation.

#### **4. Selecting Dimensions**



Poverty and human development are now widely recognized as multi-dimensional (see Alkire 2002 on the multiple dimensions of development, and Alkire chapter \_\_\_\_, and Chakvaratay and Lugo, chapter \_\_\_\_, this Handbook). They are not generally thought to be confined to a single domain, such as income. Since 1990, education, health, and the standard of living have been three widely recognized dimensions included in the UNDPs influential human development index.<sup>11</sup> Some philosophers and economists have generated their own lists of what ought to be included in multidimensional conceptions and measures of human development and poverty (Nussbaum 2000). Notably, Amartya Sen (2004), Ingrid Robeyns (2003), Serene Khader (2011), and others have rejected this approach, endorsing a procedural approach to developing one or many lists of capabilities that ought to be measured in social valuation exercises and (arguably) protected and promoted by institutional arrangements. Having a deliberative approach in line with the process of public reason endorsed by ‘proceduralists’ about developing multidimensional measures, we had to devise a method for deciding whether or not to include specific candidate dimensions in our Individual Deprivation Measure.

In addition to developing the contours of the target conception that might be developed, the first phase of research generated a long list of candidate dimensions that could be included in a multidimensional measure of deprivation. Some are familiar from other common conceptions, such as health, education, sanitation, water, shelter, and food. Others are not, such as control over decision making, access to social support, freedom from violence.

One approach to designing a multidimensional measure of deprivation would simply include all candidate dimensions in multidimensional measurement. We did not follow this approach because it leads to distortions where dimensions overlap and also wastes measurement

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<sup>11</sup> For all of the UNDP compiled human development indices, visit <http://hdr.undp.org/en/content/human-development-index-hdi> .

resources on dimensions that receive very little weight in the overall measure.<sup>12</sup> Even if one opts for a ‘dashboard’ approach, which includes many indicators that are never aggregated, it is still true that the large number of indicators will reduce the attention that policy makers and practitioners will devote to each.

In the second phase of the development of the IDM, we therefore sought to determine the relative importance of the various dimensions of deprivation in order to assign differential weights to them within our multidimensional measure. Participants in all 18 sites across 6 countries were involved in this participatory effort. They were provided physical images that depict each of the dimensions under consideration and then asked to rank them, in groups of five, from most to least important in determining whether an individual’s life is free from poverty and hardship. This ranking proceeded from a list of 25 candidate dimensions that were generated from the first-phase research.<sup>13</sup> As in the first phase, the phrase ‘and hardship’ was included to give participants the opportunity to reflect on non-material dimensions that may be important even if not traditionally thought of as forms of poverty.

Dimensions of deprivation were described in some detail to ensure that participants had a shared understanding. Furthermore, each dimension description included statements both about life ‘near the bottom’ and ‘near the top’ of this dimension, so that participants had in mind a shared sense of possibility of severe deprivation or adequate achievement in the dimension. This may not alleviate the possibility that participants had in mind different ‘increments’ within

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<sup>12</sup> There are two ways in which dimensions might end up with very little weight assigned to them. To preserve the importance of other weights, each additional dimension might be given very little weight, so that it makes little difference to the overall score. Alternatively, added dimensions may be given substantial weight, thereby marginalizing some of the established dimensions, which then end up with very little weight. For further discussion, see Chakravarty and Lugo chapter \_\_\_\_, this Handbook.

<sup>13</sup> While there was one ranking exercise in the first phase of research, that ranking proceeded not from a previously specified list of dimensions, but from dimensions that were listed as a part of a guided group discussion. In order to investigate the priority that participants placed on candidate dimensions, it was necessary to give all participants the same list of candidate dimensions for the ranking exercise.

dimensions when undertaking the ranking exercise but, so long as such variation in mental associations was not systematically biased against some dimensions and in favor of others, the exercise should retain its usefulness.

The exercise only provides ordinal information about how participants evaluate the importance of the various dimensions for determining whether a life is free from poverty and hardship. Following this exercise, the inputs from all participants were aggregated to rank the dimensions in the following descending order of importance: (1) food, (2) water, (3) shelter, (4) health care, (5) education, (6) toilet, (7) clothing, (8) cooking fuel, (9) electricity, (10) family relationships, (11) personal care, (12) environment, (13) family planning, (14) information and communication, (15) freedom from violence, (16) location of services, (17) voice in the community, (18) free time, (19) freedom of movement, (20) participation in the community, (21) property rights, (22) freedom from debts/having assets/accessing credit, (23) sexual autonomy, (24) freedom from disruptive behavior, and (25) discretionary items.

One might think that from this information we could simply read off the top 10 or 15 or 20 dimensions and use these to construct a multidimensional measure. However, there are other desiderata that must be taken into account in selecting a particular dimension. First, it must be conceptually plausible and coherent to include this dimension in a multidimensional measure. Second, the dimension should be morally important, in the sense that it is connected to fundamental human interests. Third, it must be possible to measure this dimension with acceptable ease and reliability. Fourth, the dimension must yield information that it is possible and appropriate for governmental or development agencies to take into account in their policy or institutional-design decisions – either by aiming to improving some persons' low status in the dimension in question or by aiming to compensate for some persons' low status in this dimension

by raising their status in another. It is arguably normatively inappropriate, for example, to take into account the strength of people's religious faith or of the happiness of their love lives, and these dimensions are therefore not included in the IDM. Fifth, the set of selected dimensions must be reasonably comprehensive with minimal overlap. They must cover the target conception that emerged in the first phase with dimensions that do not overlap too much. Finally, the dimensions must serve the values and purposes that are, upon normative reflection, deemed of relevance to the measure in question. For example, selected dimensions should be able to reveal gender-specific deprivations.

Using these desiderata, the project team selected 15 dimensions for inclusion in the IDM (see Table 3 below for a list of dimensions). All of the 13 most highly ranked dimensions were included, except that we merged four dimensions into two, in order to reduce potential overlap: cooking fuel and electricity were combined into a single dimension of energy, and personal care and clothing were combined into a single dimension, reflecting persons' ability to present themselves according to the standards of their society.

Among the less highly ranked dimensions we included three in our measure for their ability to reveal gender-specific disadvantage<sup>14</sup>: freedom from violence, voice in the community, and time-use. Although ranked lower than information and communication, these dimensions seemed more important because in them women often experience disproportionate disadvantage. As a new dimension we added status in paid and unpaid work which, though not included in the ranked dimensions, had emerged as very important to participants in the first-phase qualitative exercise. We excluded discretionary items, sexual autonomy, freedom from debt and access to financial services, freedom from the disruptive behavior of others, access to information and

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<sup>14</sup> It is worth noting that within specific sites of research, there were on rare occasions significant differences in the rankings that were provided by men as compared to women. But across all sites, there were not major differences in the rankings of women and men.

communication, and freedom of movement because they were ranked less highly and also seemed to overlap or correlate substantially with already included dimensions.

Dimension selection and design of the IDM were carried out by the project team. This might be met by a charge of hypocrisy—how can a project team committed to the participation of the poor override the stated preferences of poor people and impose its own views upon poverty measurement? While we are committed to participatory processes that inform the development of tools of social evaluation, we do not deny the importance of expertise in the overall exercise. This is parallel to how public deliberation ought to shape decisions regarding environmental protection even while it remains important to involve civil engineers, environmental scientists, philosophers, and other experts in making final determinations about proposed plans for preservation or energy development. Importantly, these experts, like our project team, should be engaged in dialogue with the general public, giving reasons that the public could come to accept.

## **5. Designing the Measure**

Multidimensional measurement raises the question of how, if at all, measurement should be quantified within each dimension and how, if at all, it should be aggregated. We endorse both the quantification of categorical information onto interval scales and the intrapersonal aggregation of dimension scores to produce a composite gender-sensitive, multidimensional measure of deprivation. This section describes how we moved from the 15 dimensions of the IDM to a final measure quantifying any individual's overall degree of deprivation.

### **5.1 Indicator Selection**

For each of 15 dimensions, a series of survey questions (or enumerator observations) were selected to determine a person's objective position within a given dimension. In some

cases, a series of questions were asked. These questions generated categorical information, which can be obtained for any given dimension in 6 ‘spaces’: Information may be gathered regarding *availability* of a given resource,<sup>15</sup> *access* to that resource, *use* of that resource (such as how much food a person eats), *achievement* from using that resource (such as how well nourished a person becomes from eating), a person’s *happiness* or subjective assessment of their position regarding that resource, and the overall *importance* they assign to the resource in question.<sup>16</sup> We reject the use of availability because persons who cannot obtain the food they need are no less poor for the fact that food is plentiful in their region. We reject the use of subjective happiness or importance assigned to a particular dimension because individual subjective assessment may adapt to unjust circumstances (see Section 1.2 above).<sup>17</sup> This does not mean that subjective theories of well-being or well-being preferentialism are necessarily false (on these topics, see Haybron and Byvyst, chapters \_\_\_ and \_\_\_\_, this Handbook). Rather, we eschew the use of such accounts to approach questions of a specific sort, particularly to determine how deprived a person is and how great a claim she should have to anti-poverty resources. Subjective assessments of how well-nourished a person is or how important they think

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<sup>15</sup> Here we understand resource in a loose sense that will include dimensions that are not material in nature, such as control over decision making or participation in the community.

<sup>16</sup> Our distinction of these six spaces diverges from the traditional distinction between either measuring functioning or capability to function. As is recognized in the capabilities literature, it is not generally possible to measure capabilities, in the sense of a person’s genuine opportunity to be or do something they value. The reason is that this requires an assessment of information that cannot be captured through surveys or other reliable methods. For example, in the simple case of income, looking at a person’s current income does not reveal whether they genuinely have additional income opportunities that they choose to forgo. We therefore prefer to work with a categorization of the six spaces in which indicators of deprivation and achievement currently fall and to select from these candidate spaces those that are best suited for multidimensional poverty measurement.

<sup>17</sup> One might note that this worry about adaptation is in tension with our explicit desire to undertake participatory research to design a multidimensional measure of poverty. Given that adaptation may arise in individual assessments in specific dimensions, might it not also affect the overall design of the IDM? There are two reasons to think adaptation is not an acute worry for the IDM but it is an acute worry for indicator selection that relies on subjective assessments. First, it is unlikely that the IDM is significantly distorted by the same form of adaptation having arisen across all 18 sites in 6 countries. Second, while individual people may wrongly assess their own status in a particular dimension, it is unlikely that many of our 1800 participants went wrong in identifying the more general information about what is relevant to living a life free from poverty and hardship.

food is are no guide to understanding how well or poorly nourished they are and therefore ought not guide the allocation of scarce anti-hunger resources. We therefore restricted the selection of indicators to the spaces of access, use, and achievement.

However, the survey developed to populate the IDM required participants to provide their subjective assessment of their objective position in some surveyed dimensions. For example, respondents were asked to what extent they had control over the decisions that are important to them, such as with whom they associate and when they get health care.<sup>18</sup> Absent a method that allows for determining in some more objective manner how much control persons actually have over the decisions that affect their lives (such as experimental methods or anthropological observation) we must rely on subjective reports about objective facts.

In many cases, indicators for a single dimension are taken from multiple spaces. For example, in education we measure both a person's highest grade completed and test their competency in reading, writing, and arithmetic. One might object that such mixing of indicators is mistaken, that a measure should be focused on only one space. One might think, for example, that an essential feature of a conception of poverty or deprivation is that it is about access to resources and that the mere fact that some persons are poorly educated or sick does not settle whether they are deprived of access to education or access to health care. There are two possible responses to this objection. On the one hand, one might hold that whether a person is in fact educated is a decent proxy indicator for whether they had access to decent schooling. Since

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<sup>18</sup> *In general, how much control do you have over personal decisions that have a major impact on your life, such as whether you will go out of the house into the community, with whom you will associate outside of your household, or when and from whom to seek health care for yourself?*

Scoring:

1=No Control

2=Very Little Control

3=Some Control

4=A Fair Amount of Control

5=Full control

merely knowing enrollment information tells us nothing about the quality of the teachers, the availability of textbooks, the size of the classroom and so on, testing educational achievement is a good way to get better information about access to resources. A deeper response holds that a person's right to education, or to health, requires a genuine opportunity and that individual distributive shares of social resources should include access not simply to the possibility of being in school or the possibility of receiving health care, but rather requires a full institutional environment that responds to the many impeding factors that may cause a person's failure to become educated or to remain healthy. In the case of education, such a supportive institutional environment is one where suitable educational materials are available and learning is promoted, where both men and women are encouraged to pursue education at all levels, where schools are publicly funded or subsidized, where accountability systems ensure teacher performance and so on. Finally, one might respond that no poverty measure distinguishes between behavioral and other causes of poverty. Simply measuring income, for example, does not provide any information on whether the individual in question could be earning more than they currently do. Nor does it provide information on whether the person in question had previously had educational or career opportunities that they failed to pursue. We think society should reasonably assume that people want to be educated, to have enough to eat, to remain healthy, to be free from violence and so on, and should then be committed to removing deficits where they exist, even if individual choices or behaviors sometimes contribute to these deficits.

## **5.2 Scoring Achievement**

Once IDM respondents have been surveyed, the categorical information provided by their answers is converted into a 1-5 scale, where 1 represents the position of severe deprivation and 5 represents the position of a minimally adequate achievement in the dimension under



consideration. By making the highest level of 5 represent minimally adequate achievement for a decent life, the IDM conforms to the deprivation focus axiom. This axiom holds that gains above some deprivation threshold in one dimension cannot compensate for losses in another. According to this axiom, a person who lacks access to a third meal each day cannot be compensated for this lack by having more-than-ample leisure time of, say, over six hours daily. Having plenty in one dimension cannot compensate for being in dire need in another.

Let us illustrate this point with the indicators for freedom from violence and access to drinking water. In violence, we have one indicator that combines information on a person's experience of violence in the last 12 months and their prediction of violence in the next 12 months.

Indicator: Freedom from Violence<sup>19</sup>

*May I ask you some questions about your experience of violence? (If 'yes', the following questions are asked. If 'no', the interviewer moves to the next module.)*

*In the past year, did you experience being hit, slapped, shoved, pushed, punched, or kicked by any one?*

*In the past year, did you experience being beaten, stabbed, burnt, or otherwise attacked with a weapon, such as a bottle, knife, gun, club, hot liquid, or explosive device?*

*In the past year, did anyone use physical force or threats to make you or try to make you have sexual intercourse or perform other sexual acts against your will?<sup>20</sup>*

*If you answered yes to any of the preceding questions, were you subject to any of the violent events more than once?*

*In the past year, did anyone regularly insult, belittle or humiliate you, make you feel bad about yourself, or try to intimidate you (for example by yelling or smashing things)?*

*In the next 12 months, do you think it is likely that you will be subject to any of the violent events described in the previous questions? (yes or no)*

Levels:

1=multiple violent incidents

2=one violent incident

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<sup>19</sup> This module is from Diprose (2007).

<sup>20</sup> Enumerators undertook several steps to protect the participants from any potential harmful repercussions from answering these questions. First, respondents placed their answers in a sealed envelope that was not viewed by the enumerator. Second, enumerators did not ask any information about perpetrators, thereby indicating to all such respondents (including possible perpetrators) that no such information had been revealed.

- 3=no violent incidents, but perceived risk
- 4= [in regard to violence, there is no level 4]
- 5=no violent incidents, and no perceived future risk

In access to drinking water, we have two equally-weighted indicators, one on the source of drinking water and the other on the amount of water a person uses.

*What is the main source of drinking water for members of your household? How long does it take to reach the water source from your dwelling (one way)?*

Levels:

- 1= No improved source, more than 30 minutes from home
- 2= No improved source, 30 minutes or less from home
- 3= Improved source, more than 30 minutes from home
- 4= Improved source, 30 minutes or less from home
- 5=Improved source in dwelling

*How often do you have enough water to meet all your personal needs—including drinking, washing and cooking? (Always, Often, Sometimes, Rarely, Never)*

Levels:

- 1=Never
- 2=Rarely (1-2 days per week)
- 3=Sometimes (3-4 days per week)
- 4=Often (5-6 days per week)
- 5= Always

### **5.3 Weighting of Increments within Dimensions**

In order to aggregate a person's achievements in the various dimensions, it is necessary to assign weights to increments within and across these dimensions. One simple way of assigning such weights is to treat the levels themselves as an interval scale<sup>21</sup>: to assume, that is, that the difference between levels 1 and 2 is of equal importance as that between levels 2 and 3, as that between levels 3 and 4, as that between levels 4 and 5. We rejected this weight assignment, assuming instead that lower increments have greater importance. This assumption is supported by two mutually independent and mutually reinforcing reasons (Pogge 2011, 50-51).

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<sup>21</sup> An interval scale is a scale on which distances or intervals between scores can be meaningfully compared with one another (in contrast to ordinal scales, where only the ranking is significant), but ratios between scores cannot be (in contrast to cardinal scales, where both intervals and ratios are significant).

First, lower increments are of greater importance to poor people themselves than higher increments; for example, the difference between being frequently hungry and being occasionally hungry is more important to people than the difference between being occasionally hungry and being rarely hungry. This is often referred to as the decreasing marginal importance of food and other essentials. Second, lower increments are also of greater moral significance under the prioritarian principle that we morally ought to prioritize the worse-off.<sup>22</sup> Thus, even if poor people themselves view as equally important the difference between 12 and 14 meals a week and the difference between 15 and 18 meals a week, say, others should nonetheless give priority to getting very poor people from 12 to 14 meals over getting less-poor people from 15 to 18 meals a week. Combining these two reasons, we concluded that substantially more weight should be assigned to lower intervals. Setting the weight of the highest interval (between levels 4 and 5) equal to 1, we then assigned a weight of 2 to the next lower interval (between levels 3 and 4), a weight of 3 to the next lower interval (between levels 2 and 3) and a weight of 4 to the lowest interval (between levels 1 and 2). We thus ended up with an interval scale where level 5 has a value of 10, level 4 has a value of 9, level 3 has a value of 7, level 2 has a value of 4, and level 1 has a value of 0.

These intra-dimensional weights were stipulated by the project team. Participatory or expert-driven approaches might plausibly end up with somewhat different weights. But the idea that greater weights should be attached to lower intervals seems highly compelling to us in comparison to a scheme that assigns equal importance to all one-level increments.

#### **5.4 Weighting of Increments across Dimensions**

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<sup>22</sup> For debate on the proper conception and reasons for being prioritarian, see, among others, Parfit 2002, Otsuka and Voorheve 2009, Crisp 2011, and Adler 2012.

First-phase qualitative research, second-phase ranking exercises, and existing academic research on the priorities of deprived people suggest that deprivations in some dimensions are more important than deprivations in other dimensions. We therefore assigned different weights to different IDM dimensions. As with our intra-dimension weighting, we simply stipulated the weight ratios among top rated, middle rated, and low rated dimensions while recognizing that somewhat different ratios could also plausibly be employed. Nonetheless, we believe this is a good starting point for inter-dimension weighting, appropriately reflects the belief that some dimensions are more important than others and is amenable to alternative weighting schemes. We divide dimensions into three groups, giving the 5 dimensions ranked most highly by the participants a weight of 3, the next 5 dimensions a weight of 2, and the last 5 dimensions a weight of 1. Combining intra- and interdimensional weighting, we then end up with the following scheme of weighted scoring:

**Table 2: IDM Dimensions and Increments**

	Five dimensions (1-5) of greatest importance	Five dimensions (6-10) of intermediate importance	Five dimensions (11-15) of lesser importance
Level 1	0	0	0
Level 2	12	8	4
Level 3	21	14	7
Level 4	27	18	9
Level 5	30	20	10
Maximum	150+100+50=300 raw points		

The result of this scoring system is that the lowest increments in the most important dimensions are assigned 12 times as much weight as the highest increments in the least important dimensions. The maximum possible score is 300 points. Again, we recognize that alternative dimension weighting schemes could be generated through participatory or expert driven processes. However, our chosen scheme maintains fidelity to the rankings of our participants and is clearly much to be preferred over a scheme that weights all increments equally.

**Table 3: Explication of IDM Dimensions**

<b>Dimension</b>	<b>Indicators</b>	<b>Weighting</b>
<b>1. Food/nutrition</b>	Hunger in last 4 weeks	X 3
<b>2. Water</b>	Water source, water quantity	X 3
<b>3. Shelter</b>	Durable housing	X 3
<b>4. Health care/health</b>	Health status, health care access; for women pregnant now or within the last 3 years, substitute pre-natal care, birth attendance and actual/ intended place of birth	X 3
<b>5. Education</b>	Years of schooling completed, literacy and numeracy	X 3
<b>6. Energy/cooking fuel</b>	Source of cooking fuel, any health impacts, access to electricity	X 2
<b>7. Sanitation</b>	Primary toilet, secondary toilet	X 2
<b>8. Family relationships</b>	Control of decision making in household, supportive relationships	X 2
<b>9. Clothing/personal care</b>	Protection from elements, ability to present oneself in a way that is socially acceptable	X 2
<b>10. Violence</b>	Violence (including sexual and physical assault) experienced in the last 12 months, perceived risk of violence in the next 12 months	X 2
<b>11. Family planning</b>	Access to reliable, safe contraception, control over its use	X 1
<b>12. Environment</b>	Exposure to various environmental harms that can affect health, wellbeing, income and livelihood prospects	X 1
<b>13. Voice</b>	Ability to participate in public decision making in the community, ability to influence change at community level	X 1
<b>14. Time-use</b>	24 hour clock (labour burden, leisure time)	X 1
<b>15. Work</b>	Status of/respect in/for paid and unpaid work; safety/risk in relation to paid and unpaid work	X 1

### **5.5 Aggregate Scores and Categorization**

Summing a person's scores in all 15 dimensions produces an aggregate score representing this person's overall level of deprivation. For ease of interpretation, we divide these raw scores by 3 so as to scale all individual scores to a 0-100 scale. One might introduce somewhere along this scale a simple division that categorizes individuals as either deprived or not deprived. We did not follow this binary approach because it would be insensitive to the depth of deprivations below and above the chosen cut-off and because it would incentivize policy

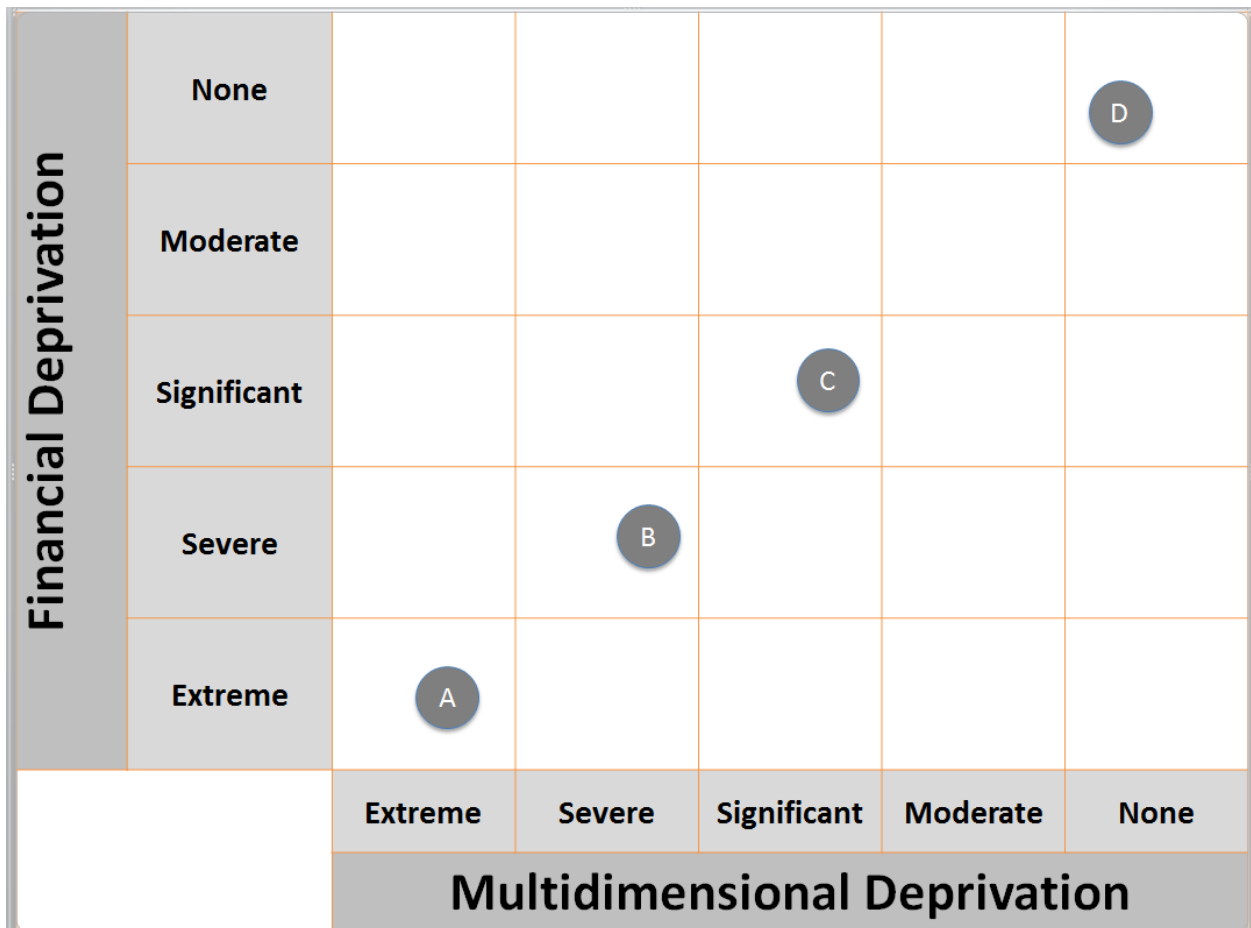
makers to raise those just below the line just over it. Rejecting the binary approach, one might just leave the final scores to speak for themselves. But we thought that a little more interpretive guidance would be useful and thus divided the scale into a few broad categories. While in one sense this provides no new information about a person's level of deprivation, it is useful for evaluative and public policy purposes. Information about the distribution of deprivation is best conveyed to the general public and policy makers through categories and associated descriptions, rather than by simply providing raw distributional information.

For the purposes of the IDM, which is presented on a 0-100 scale, we have established the following thresholds. From 90-100, we categorize individuals as *not deprived*. While these individuals may in some dimensions fall below what is meant to be a threshold deemed sufficient for a minimally decent life, we think it is fair to categorize them as not deprived as these individuals' shortfalls must be of moderate depth and few in number to stay above 90. From 80 up to but not including 90, we categorize individuals as *moderately deprived*. Falling in this category indicates that an individual suffers from non-negligible deprivations, but is still relatively well off. From 70 up to but not including 80, we categorize individuals as *significantly deprived*. These individuals fall below the minimum threshold in a range of dimensions and some of their shortfalls are significant. From 60 up to but not including 70, we categorized individuals as *severely deprived*. These individuals are deprived in a larger number of dimensions or are more deprived in the dimensions where they fall short (they necessarily fall below level 3 in some dimension). And below 60, we categorize individuals as *extremely deprived*. These people are deprived in a large number of dimensions and fall below level 3 in four or more of them.

## **5.6 Two Axes of Assessment**

Finally, we aim to retain information regarding the financial status of individuals, independently of their multidimensional achievements. Following the recently debuted Mexican Multidimensional Poverty Index (Foster 2010), we track the assets of a household as a crude reflection of an individual’s financial status. Individual-level consumption-expenditure is preferable to measuring household assets in terms of reflecting a person’s financial status. However, this information is costly to retrieve. We therefore use a simple asset index at the household level as a proxy for a person’s financial status.

**Chart 1: Correlating IDM Scores with Financial Status**



In the graph above, the person A has very few assets and many multidimensional deprivations (falling in the extremely deprived category). Person B has a few assets and still a considerable number of multidimensional deprivations (falling in the severely deprived category). Person C has some assets and some multidimensional deprivations (counting as significantly deprived). Person D has many modern assets and very few multidimensional deprivations (not deprived).

Using this framework, the aim of anti-poverty work is to move individuals up and to the right, that is, to increase their financial status (as reflected crudely in our measure by household assets) and to reduce their deprivations in the 15 dimensions of the IDM.<sup>23</sup> By keeping the two axes separate, we do not specify any terms of trade between financial and multidimensional deprivation. Rather, we assert that both are relevant for evaluating and addressing disadvantage, though composite multidimensional deprivation is more important, on our view, than asset deprivation. The IDM tracks these two tasks imperfectly, but much better than other tools.

## **6. Surprising Results in the Philippines**

To test the feasibility of conducting a multi-topic survey that would generate individual level indicators for all 15 dimensions of the MPI and to evaluate the results of the IDM against extant indices of poverty and gender equity, a trial was conducted in the Philippines in 2013. A nationally representative sample was generated using the 2000 National Census as the sampling frame. 150 households were interviewed in each of five sub-national regions: the National Capital Region, North and Central Luzon, South Luzon, the Visayas and Mindanao. Households were randomly selected for interviews. Within households, we attempted to interview all household members. This eschews traditional approaches which have a single head of household

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<sup>23</sup> Alternatively to the two-axes approach, a single composite figure can be calculated which includes the financial scores and the achievement scores. However, we prefer treating financial status as a separate category, which allows us crudely to evaluate whether a household is converting its financial status into deprivation reduction in the 15 dimensions we investigate. This exercise flags up deprivations that cannot easily be addressed by money in the hands of individuals, such as violence, poor governance or voice.



provide answers for all respondents, with perhaps a second module on women’s health to be answered by a second respondent. Interviewing all household members allows for the investigation of the intra-household distribution of deprivation. However, as we discuss in section 6.3, this sampling method within households may generate some bias in the number of respondents.

### **6.1 Ease of Measurement**

Regarding the feasibility of using the IDM in developing-country contexts, the results were overwhelmingly positive. The response rate for contacted households was quite high. Of 1910 attempted interviews, only 104 were not completed. Of 750 households interviewed, a total of 1806 household members completed the survey, with 649 households having a second respondent complete the survey. The dimension with the lowest response rate, freedom from violence, still had a completion rate of 91%. The individual interview module could be completed within 45 minutes to an hour, with no special expertise required of individual trainers. This is a vast improvement over the many hours, or days, that are required by more in-depth multi-topic surveys. This bodes well for the use of an IDM survey to track multi-dimensional deprivation in a range of challenging environments.

### **6.2 Comparison with other Metrics**

More importantly, the pilot in the Philippines provided an opportunity to generate a unique picture of multidimensional deprivation in the Philippines which can be contrasted with existing measures of deprivation.

**Table 4: Using Alternative Measures to Assess Deprivation in the Philippines**

IDM Category	IDM cumulative	Other Measures
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<b>Extremely Deprived:</b>	<b>4.6%</b>	<b>4.6%</b>	Philippine Nat'l Food Poverty Line:	7.2%
			Multidimensional Poverty Index:	13.4%
<b>Severely Deprived:</b>	<b>13.8%</b>	<b>18.4%</b>	World Bank \$1.25/day Poverty Line:	18.4%
			Ph Nat'l Basic Needs Poverty Line:	20.9%
<b>Significantly Deprived:</b>	<b>29.6%</b>	<b>48.1%</b>	World Bank \$2.00/day Poverty Line:	41.5%
<b>Moderately Deprived:</b>	<b>41.4%</b>	<b>89.5%</b>		

The IDM shows nearly half (48.1%) of Filipinos to be extremely, severely or significantly deprived and an additional 41.4% of the population moderately deprived. This may seem to be at odds with domestic assessments that identify only 7.2% of the population as falling below the National Food Poverty Line and 20.9% falling below the National Basic Needs Poverty Line. Further examination confirms, however, that the IDM conveys a plausible picture of deprivation in the Philippines, that indeed only a small percentage of Filipinos can be said to be largely free from deprivation. The World Bank reports that 41.5% of Filipinos fall below its USD 2.00 PPP 2005 international poverty line. The slightly higher USD 2.50 PPP 2005 line counts 53.32% of Filipinos as deprived. By reference to a poverty line of USD 10.00 PPP 2005, 95% of Filipinos are deprived, approximately the same number as count as deprived on the IDM. All of this serves as a reference point for the IDM results. Of course, the IDM paints a much richer picture of deprivation than any uni-dimensional measure. Even individuals who escape these low levels of consumption may be beset by other deprivations, such as experiences of violence, poor health or health care, severe environmental problems or lack of control over decision-making in their life. Using this broad perspective on deprivation, it appears entirely

credible that nearly half of Filipinos should be at least significantly deprived and nearly 90% at least moderately deprived.

### 6.3 Gender Differences

To measure deprivation at the individual level, we used an innovative sampling method whereby, after the random selection of a household, the data enumerator attempted to interview every adult household member. Rather than follow the standard formula of interviewing a single head of household, who answers on behalf of all members (and perhaps conducting a second interview for women-specific modules), our data collection team sought to interview every household member. Using this approach we hoped to examine the intra-household distribution of deprivation, which is obscured by household-level measurement.

Unexpectedly, our survey found women to score slightly higher on the IDM than men.

**Table 5: Results of the IDM Survey in the Philippines**

IDM score	Males (no.)	Males (%)	Females (no.)	Females (%)
$\geq 90$ , not deprived	61	7.4	129	13.1
$\geq 80 < 90$ , moderately deprived	322	39.1	426	43.3
$\geq 70 < 80$ , significantly deprived	259	31.5	276	28.1
$\geq 60 < 70$ , severely deprived	130	15.8	120	12.2
$\geq 50 < 60$ , extremely deprived	44	5.3	30	3.1
$\geq 40 < 50$	7	0.9	1	0.1
$< 40$	0	0	1	0.1
<b>Total</b>	823	100	983	100

We have thought of six possible explanations of the surprising result that the IDM portrays women as slightly less deprived than men. Three of these would explain how in the Philippines women are in fact less deprived than men. First, the Philippines scores very well on

composite gender equity indices that focus on gender gaps or social institutions.<sup>24</sup> Second, in many dimensions in which the IDM measures deprivation, independent domain-specific indicators show women outperforming men in the Philippines. Women clearly are less deprived in health<sup>25</sup> and education.<sup>26</sup> Third, many gender inequities may occur above the minimum thresholds set by level 5 of the IDM. For example, disparities in political representation, or in consumption at high income levels, will not be captured by the IDM. Furthermore, it is important to note that although men appear slightly more deprived than women in the Philippines, this does not rule out that gender injustice against women is prevalent and systematic there. Just as a minority religious group may be less deprived than the general population but suffer religious persecution, or a sexual minority may be less deprived than the general population but face legal discrimination and physical threats, so too might women in the Philippines be less deprived than the general population despite various forms of patriarchy they face. Nothing we say here implies that in the Philippines women do not face severe barriers to progress (in fact, our first-phase qualitative research indicates the existence of such barriers). Our result simply shows that, despite any gender injustice and other gender-specific obstacles Filipina women may face, they do not register as more deprived than men, on average, according to the indicators included in the IDM.

Three other possible explanations would explain how our survey overestimates how well women do in the Philippines relative to men in regard to deprivations. First, some indicators rely on subjective assessments of objective situations. For example, women and men are asked to

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<sup>24</sup> The Philippines currently ranks 12<sup>th</sup> on the Social Institutions and Gender Index and 5<sup>th</sup> on the Global Gender Gap Index.

<sup>25</sup> According to the World Development Indicators, current life expectancy in the Philippines is 72 for women and 65 for men.

<sup>26</sup> Basic literacy among women is 96.1% versus 95.1% for men. Functional literacy is 88.7% for women versus 88.2% for men.

evaluate the degree to which they have control over decisions that affect their lives. It is conceivable that women have lower expectations than men and therefore ‘overrate’ their objective status. Of the dimensions in which we found statistically significant differences between men and women, some, such as control over decision-making, might reflect this phenomenon. Second, it is a feature of the IDM that it treats deprivations equally for men and women. But it is possible that some deprivations are actually worse for women than men. For example, being subject to violence counts equally for women and men, even though women may suffer more, or bear more harmful consequences, as a result of being subject to violence. Similarly, both women and men count as deprived if they lack access to contraception, but a lack of modern contraception surely is worse for women. Third, the survey sample included more women than men – presumably because men who work away from home were unable or unwilling to be available when data enumerators were visiting the home. Because our sample randomized household selection but not household member selection, it may be that our sample is missing men with employment away from home and that these men are generally less deprived than the men included in the survey. It is possible that inclusion of the missing men would have raised the average male score.

Absent further testing we cannot say conclusively whether the IDM has mistakenly portrayed men as more deprived than women. But we are confident that the IDM does not confirm for the Philippines the widely held but unsubstantiated proposition that ‘women are 70% of the poor’.<sup>27</sup> It is our hope that these results add weight to the growing academic consensus recommending skepticism about such assertions still frequently made by international officials.

#### **6.4 Other Differences**

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<sup>27</sup> This claim is currently made by UN Women at [http://www.unifem.org/gender\\_issues/women\\_poverty\\_economics/](http://www.unifem.org/gender_issues/women_poverty_economics/). For a thorough review of the origins of the claim, and the absence of evidence for it, see Chant 2007.

Among the sub-groups we examined, the divide between urban and rural participants was among the most significant. Urban Filipinos average a score of 80.66 versus 75.42 for rural Filipinos. The urban population scores significantly higher in shelter, health, education, access to energy, and toilet facilities. Not surprisingly, rural populations scored higher on a single dimension: the environment.

Like the case of gender, we were surprised to find that there were no significant differences in net IDM scores across age groups. Using age groupings of 19-35, 36-54, and 55+, we did not find any meaningful differences in overall IDM scores. However, there are various dimensions in which significant differences do exist. For example, older participants—not surprisingly, given the rapid expansion of access to education—have much lower educational scores than younger respondents do. But younger respondents have much lower scores in freedom from violence, suggesting that (given the limited time frame the violence indicator covers) young adults are much more likely to experience violence than their elders.

## **7. Future Research**

We believe that the IDM we have been developing provides a promising alternative to existing multidimensional measures of poverty. Further research is needed to continue to refine and develop the IDM to make it a useful evaluative tool for governments, NGOs, and international institutions to measure progress against deprivation.

### **7.1 Refining Dimensions and Indicators**

The selection of dimensions and indicators may be refined through further participatory processes and expert analysis. Although the participation of several thousand people from six countries provides a substantial informational base, it is nonetheless limited in geographic, social, and economic scope. Further participation may help us highlight other missing

dimensions, refine our understanding of currently included dimensions or change the relative importance assigned to particular dimensions. There are several areas in which we might hope to better capture individual deprivation. In the dimension of access to contraception, the IDM currently treats male and female lack of access to contraception as equivalent, despite the fact that women are almost certainly more burdened than men by lacking such access. Similarly, exposure to acts of violence currently counts equally for men and women, despite the fact that domestic violence suffered by women at the hands of a partner or family member may be worse, and have worse long term consequences, than most violence experienced by males in public.

## **7.2 Weighting**

Alternative weighting schemes, both inter-dimensionally and intra-dimensionally, can be developed and tested through participatory approaches. Recent scholarship on multidimensional weighting has usefully highlighted the range of methods available for setting weights. Our project has not done extensive work on this issue, so we only make preliminary remarks in favor of some approaches and against others. (See Decancq and Lugo 2013 for a review of multidimensional weighting).

First, we generally believe that a participatory approach, as used in the design of the IDM, is probably the best method for setting multidimensional weights. Further testing is needed to determine whether this is best done through a deliberative exercise or through some other activity such as voting, willingness to pay exercises, dimension or increment ranking, or some alternative method. We favor using the same weighting scheme (generated through a participatory exercise) for all respondents over letting each person set her own weighting scheme. This avoids the implausible outcome where one participant is seriously deprived in only one dimension but, because she places all of her weight on this dimension, counts as equally

badly off as another who is as seriously deprived in all dimensions. We also believe that data producers should make data freely available, so that calculations with alternative weighting schemes can be easily calculated to generate alternative IDM scores.<sup>28</sup>

Second, we believe there are good reasons against several prominent approaches. Data-driven attempts to generate multidimensional weights, such as principal component analysis, appear to face an obvious problem. The mere fact that two variables are statistically uncorrelated is no reason to devalue the importance of one of the variables. For example, in Klasen (2000), principal component analysis assigns a very low weight to being free from violence because it does not correlate with other measured indicators. But the fact that violence affects all socioeconomic groups is no reason to reduce its weight. We are similarly hesitant to generate weights from some independent standard of evaluation, such that the extent of persons' deprivation matches their subjective happiness or stated life satisfaction for example. We reject this approach because it is widely accepted that some sources of unhappiness do not ground claims to resources. What is needed is a procedure that sets weights based on plausible and shareable judgments about the claims that individuals should have to anti-poverty resources based on their status in recognized dimensions of deprivation.

Third, we recognize the problems with equal or otherwise arbitrary weighting schemes. Our weighting scheme is somewhat rudimentary and less participatory than the selection of the dimensions for the IDM, but it does attempt to reflect participant preferences (inter-dimension weighting) and prioritarian commitments (intra-dimension weighting). Given the burgeoning interest in multidimensional poverty measurement, we are optimistic that future research can generate morally justified multidimensional weighting schemes.

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<sup>28</sup> Our third phase data from the Philippines is freely available on our website and we will post any future data at <http://www.iwda.org.au/research/individual-deprivation-measure/>.



### **7.3 Child Poverty**

The IDM currently applies only to adults. Children were excluded due to our limited financial resources and the additional challenges of conducting research with children, which requires distinct research questions and methods accessible to children, researchers with relevant experience and unique ethics protocols due to children's additional vulnerabilities especially in poor communities. Children were excluded at the stages of designing the survey modules, indicator selection, scoring system and aggregation because measuring childhood poverty may require different dimensions, indicators, scoring, and weighting. Unique challenges arise as even within a single dimension, such as health or education, the way in which a child can be deprived varies greatly as she grows older. Future research should aim either to derive a suitable version of the IDM for use with children or to undertake new participatory research to generate child-specific multidimensional measurement. It is beyond the scope of this chapter to highlight challenges in existing approaches to child poverty measurement,

### **7.4 Context Sensitivity**

Further work needs to be done to allow the IDM to be made sensitive to local context. A tension arises between the data that is most relevant to local context and that which is most useful for international comparison. It may be that in a particular rural locale access to land ownership is an important indicator of deprivation. But since this indicator is not relevant in many other locations, it is difficult to include it in an internationally comparable measure of deprivation.<sup>29</sup> We propose that a core survey capture information to populate IDM scores at the

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<sup>29</sup> Of course, it is possible to vary both indicators and weighting schemes by context while in some sense preserving international comparability. While this is conceptually possible, it is practically inadvisable. For one thing, there may be genuine dispute about the comparability. For example, a country with low incomes but good health status may push for greater weighting of the low incomes, while a country with high incomes but low health status may push for the reverse. There is some sense in which these differently weighted schemes (or schemes using different indicators) would retain international comparability, but it would be an unwieldy and highly contentious enterprise, potentially jeopardizing the important function of guiding resource allocation across contexts.

individual level, and supplemental survey questions and modules be added in local contexts. Such new indicators or dimensions could replace, or be additions to, the IDM for unique local and national purposes, while still providing the information necessary for international comparison.

Once these steps have been taken, further research is needed to identify how the IDM can be integrated into existing policy making and institutional design. We are currently in the process of working with research partners to conduct further piloting and evaluation of the IDM so it is ready for official use in development programming and national and international social valuation.

## **8. Conclusion**

This chapter documents a joint effort to produce a new measure of deprivation that better serves the interests of those affected by severe deprivation. We recognize that this initial step requires further development, but hope to have demonstrated here how a process of public reason can help generate a gender-sensitive measure of deprivation that improves upon currently available tools. Even using deprivation thresholds set at a very modest level of human flourishing, several billion people on the planet are at least significantly deprived. We believe the effort to eradicate these deprivations requires better tools to guide anti-poverty work. We hope that the IDM will be further refined and then adopted by development agencies and national governments to better track progress in eliminating poverty.

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