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THE INDIVIDUAL DEPRIVATION MEASURE

A Gender-Sensitive Approach to Poverty Measurement

Updated Version - June 2016

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Individual Deprivation Measure

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This report was first published in November 2014. Subsequent work revealed some issues with the syntax used in the initial analysis of the Philippines data, and reanalysis of this trial data is now underway. This June 2016 update includes some changes to Chapter Six to reflect this. This report will be again updated when that analysis is complete.

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Financial and in-kind support for this project was generously provided by: The Australian Research Council Linkage Grant (LP0989385), The Australian National University, The International Women's Development Agency, Oxfam Great Britain Southern Africa, Philippines Health Social Science Association, Oxfam America, the University of Colorado at Boulder, and the Centre for the Study of Mind in Nature at the University of Oslo.

PREFACE

ALISON M. JAGGAR AND THOMAS W. POGGE

This project began in a conversation between the two of us about poverty and gender. Alison was very enthusiastic about Thomas's work on global poverty but asked why he had so not far addressed the so-called feminisation of poverty. Thomas asked for evidence supporting the familiar claim that "poverty wears a woman's face" and, when we looked into the matter more deeply, we found that the available evidence was quite unconvincing. Not only were the statistics sketchy and the term "feminisation of poverty" used equivocally; worse, the existing poverty metrics were arguably biased by culture and gender and also lacked explicit and plausible justifications. In order to investigate the gendered dimensions of global poverty, we needed a non-arbitrary metric supported by sound and open reasoning.

The Individual Deprivation Measure aims to offer such a metric. Designing it posed several formidable challenges. Most obviously, in order to measure poverty on a global scale, we needed a standard embodying a conception of poverty that is sufficiently uniform to permit transnational comparisons and yet also sufficiently flexible to incorporate diverse context-specific interpretations of what it means to be poor. Although many people in the developed world take poverty to be synonymous with lack of money, many people elsewhere understand poverty differently, assessing wealth in terms of land or cows or social relationships. We wanted to design a metric that would connect with official poverty statistics, yet would also be consistent with the understandings of poverty held by many poor people across the world. One way of putting this is that we wanted to avoid what has been called WEIRD bias. WEIRD people are: Western, Educated, Industrialised, Rich and Democratic. Cognitive scientists have found that the thinking of people who are demographically WEIRD is also, in a global context, often weird in the sense of being unusual or anomalous.

We were also very much concerned to develop a metric capable of revealing whether or in what ways global poverty might be gendered. For us, this meant more than disaggregating poverty data by sex; more fundamentally, it meant rethinking what the more relevant poverty data are. We asked whether existing metrics might involve gender bias as well as possible cultural bias, reflecting ideas about poverty that were better suited to assessing men's lives rather than women's.

Biased poverty standards are problematic for several reasons. Most obviously, they cannot enable us to assess accurately how various individuals and groups are faring relative to one another. We cannot rely on them in evaluating the consequences of policy interventions designed to alleviate poverty or in figuring out who the relative winners and losers are from the choice of some particular trade regime or other institutional arrangement. Biased metrics impede both effective policy development and fair appraisals of justice. Moreover, political and economic interventions undertaken in the name of poverty alleviation are authoritarian when they presuppose conceptions of wealth and poverty that are not shared by the people whose lives may be radically changed by those interventions.

Poverty, like wealth, is a value laden concept. It is tied inextricably to people's conceptions of the good life. Because poverty is something that people determine rather than discover, the goal of our project could not be to develop a poverty metric that would be value-free. Instead, it was to design a metric that would be as inclusive as possible of values held by many poor people, women as well as men, and to justify our conclusions by sound moal argument.

The collaborative partnership pursuing this project was formed under the auspices of the Australian Research Council's Linkage Grant program. It was led by Thomas Pogge, then of the Centre for Applied Philosophy and Public Ethics (CAPPE) at the Australian National University, and it included, as "industry" partners, the International Women's Development Agency (IWDA), Oxfam Great Britain (Southern Africa Region), the Philippine Health and Social Science Association, Oxfam America, the University of Colorado at Boulder, and the Center for the Study of Mind in Nature at the University of Oslo. In diverse ways, the project partners played crucial roles in the conception or execution of the field work. We also were extremely fortunate in regard to the research partners we recruited in our six field work countries, and the many fieldworkers they inspired and directed.

Seeking more inclusive understandings of poverty, our research team asked poor people in six countries what poverty meant to them. Within the resource constraints of our budget, we made conscious efforts to talk with people in diverse circumstances. Selecting communities categorised as urban, rural and highly marginalised, we

worked with people situated differently on a range of social dimensions such as ethnicity, religion and age. In investigating how people's social identities influence the ways in which they experienced poverty and shape their understandings of who is impoverished, who is not, how and why, we chose to give special attention to investigating the difference gender might make.

Gender was central in our investigation. We wanted to know whether and to what extent women and men might suffer poverty differently and whether they might systematically disagree about the priorities for creating a life free from poverty and hardship. We therefore interviewed not ungendered "poor people" but rather poor women and poor men, asking explicit questions about how the distribution of deprivation is, in their view, gendered. We employed female researchers to interview women and usually interviewed people in gender-separated groups, hoping that this would encourage women participants to speak more freely. We also incorporated explicit questions about possible aspects of poverty that other researchers had found to reveal gender disparities or to be especially important to women. For example, free time, sexual autonomy, family planning, freedom from violence and mobility are all areas found to be quite important to poor women but still remain under-represented in official data collection exercises. Finally, because it has often been asserted that women and girls are worse off than men and boys even within the same household, we took individuals rather than households as our unit of assessment.

Our project was thoroughly multi-disciplinary. For instance, although we used ethnographic methods, our research was not exclusively anthropological. Our goal was not simply to investigate what poor people in various cultures believe poverty to be, but instead to draw on poor people's ideas to inform the metrics used by academics and experts. Our research was also as democratic as possible within real-world constraints. For instance, our team did not treat lay participants simply as sources of experiential data, to be weighed and analysed by others. Instead, our methodology was designed deliberately to enable lay participants to reflect critically both on their own initial reports of their experience and on the reports provided by others.

The Individual Deprivation Measure (IDM) is certainly not the last word in poverty measurement; clearly, as with any initiative of this kind, use in a variety of contexts will lead to insights and ideas for refinement that will progressively improve the measure's performance. We offer our measure as a proposal that we intend to take forward, and invite others to do likewise. We think the distinctive value of our work lies in our conceptual, moral, and political approach to measuring poverty. Conceptually, we began by recognising that poverty is a moral as well as economic and sociological concept. All poverty metrics incorporate values, whether or not these are overtly recognised. Reliable poverty metrics therefore require explicit moral justification. Morally and politically, we began with the conviction that people's lives should not be subject to disruptive interventions when these interventions are rationalised by conceptions of poverty that disregard their values and were developed without their input. Although the IDM results from a research project that was relatively small in scale, it incorporates the ideas of many people, including many poor people. Our research aspired to inclusive and transparent justification and, although the realisation of these ideals was imperfect, we hope that our philosophical approach provides a model for further work on poverty measurement.

In developing the IDM, we aimed for a measure of poverty and gendered inequality that would be more inclusive, accurate, fair, and better justified than previous metrics by being participatory and gender-sensitive in its construction as well as individualised and multi-dimensional in its design. Learning how to develop better ways of measuring severe disadvantage is an essential step toward reducing and perhaps eventually ending gendered poverty and inequality.

EXECUTIVE SUMMARY

EXISTING APPROACHES TO MEASURING POVERTY AND GENDER DISPARITY SUFFER FROM A VARIETY OF FLAWS. THEY OFTEN EXCLUDE IMPORTANT DIMENSIONS OF DEPRIVATION, ARE DIFFICULT TO COMPARE ACROSS CONTEXTS AND OVER TIME, TAKE THE HOUSEHOLD RATHER THAN THE INDIVIDUAL AS THE UNIT OF ANALYSIS, AND ARE INCAPABLE OF REVEALING GENDER DISPARITIES. FURTHERMORE, MOST EXISTING MEASURES ARE NOT JUSTIFIED THROUGH PROCESSES OF PUBLIC REASON THAT INCLUDE POOR MEN AND WOMEN.

To develop a new, gender-sensitive measure of multidimensional poverty, we undertook participatory research in Angola, Fiji, Indonesia, Malawi, Mozambique, and the Philippines. Local research teams worked with men and women in poor communities to understand how they viewed poverty and related hardships, to what extent they saw these as gendered, and how they thought deprivation could best be measured.

After two phases of participatory research, we developed the Individual Deprivation Measure (IDM). The IDM improves upon existing measures of poverty and gender equity in several ways. It measures deprivation at the individual rather than household level, allowing for the investigation of the distribution of deprivation within the household and the construction of gender equity indices based on individual achievement. It is justified through a process of public reason, and takes account of previously excluded dimensions of deprivation, especially those important for revealing gender disparity. It uses interval rather than binary scoring, to allow for evaluating the different degrees of deprivation below a minimally acceptable threshold. Furthermore, the survey used to calculate the IDM is extremely easy to administer and financially less costly than its competitors. And the IDM makes poverty assessments that are comparable across contexts and over time.

The IDM measures deprivation in 15 dimensions of human life: food, water, shelter, sanitation, health care, education, energy/cooking fuel, sanitation, family relationships, clothing/personal care, violence, family planning, the environment, voice in the community, time-use, and respect and freedom from risk at work.

In each dimension, individuals are scored on an interval scale of one to five, with one representing the lowest possible achievement in a dimension, and five representing no deprivation, or a minimally acceptable level of achievement. The IDM employs a weighting scheme which gives greater weight to more severe deprivations, and greater weight to dimensions of more importance, as determined by participant evaluation.

The IDM is ready for use by governments, international development agencies, NGOs, and local communities interested in improving the measurement of poverty and gender disparity. Data is captured through a low cost, easy to administer survey that quickly generates gender-sensitive, multidimensional poverty assessments. While this report discusses possible future refinements to the IDM, e.g. fine-tuning dimensions and indicators, generating participatory weighting schemes, improving context sensitivity, and expanding to evaluate childhood deprivation, the improvements over previous forms of multidimensional poverty measurement are considerable, and deserve quick uptake in development practice.

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CHAPTER ONE PROJECT INTRODUCTION

SOCIAL EVALUATION IS NECESSARY FOR ASSESSING THE JUSTICE OF EXISTING INSTITUTIONAL ARRANGEMENTS AND DECIDING HOW TO CHANGE THEM. DETERMINING WHETHER A GIVEN SOCIETY OR SOCIAL SYSTEM IS BECOMING MORE OR LESS JUST DEPENDS IN LARGE PART ON THE MEASUREMENT OF SOCIAL PROGRESS.

A minimally adequate system of social evaluation should make morally justified and empirically reliable assessments of poverty and gender equity.[1] How many people are poor, or fall below a minimally acceptable level of deprivation, and how severe is their poverty? Is deprivation shared equally among different social groups, including men and women, or are some individuals disproportionately burdened as a result of their social location? These questions are central to the projects of social and global justice and the progress of society.

Consider two evaluations of global progress. First, is there less poverty in the world today than there was 20 years ago? According to the World Bank's International Poverty Line of 1.25 USD 2005 Purchasing Power Parity (PPP), the period 1990-2005 saw the most rapid poverty reduction in world history. But if one looks at the absolute number of poor people on the World Bank's higher $2.00 US 2005 PPP, there was no decline in poverty over this period. Has rapid poverty reduction occurred, or has the world failed to deliver on its promise to halve global poverty?

Second, are women disproportionately represented among the poor? Is poverty, as many people claim, feminised? UN Women proclaims that, 'according to some estimates, women represent 70% of the world's poor' (UN Women 2010, p.10). Claims about the feminisation of global poverty have been persistently made since the 1980s. If true, it would represent a manifest injustice that severe deprivation is so disproportionately experienced by women. However, the International Poverty Line and almost all existing national poverty lines measure poverty at the household level, using either consumption-expenditure or income. It is therefore simply not possible to determine whether women are disproportionately or increasingly represented among the poor.[2]

In both cases, resolving the question of whether the world has less poverty, or whether women number disproportionately and increasingly among the poor, requires answering a prior question: how should poverty be conceived and measured? This is the central question our project initially sought to address.

Our focus on this question, and with improving the measurement of deprivation, is animated by four major concerns:

1. Existing measures of poverty and gender disparity fail to reveal properly the extent and depth of individual deprivation.
2. The measurement of poverty and gender disparity should not be the exclusive purview of sequestered academic investigation—poor men and women must help determine how their lives are evaluated through a process of public reason.[3]
3. Gender (among other personal characteristics)[4] may be a determinant of whether a person is deprived, what their deprivation consists in, and how that deprivation is experienced.
4. Feminist methodology and research methods are necessary for the construction of a morally justifiable, gender-sensitive measure of deprivation.

In the pages that follow, we will show why new measurement is needed, explicate the work we have done in partnership with women and men in poor communities across 18 sites in Africa, Asia and the Pacific to develop better measures, and propose the Individual Deprivation Measure (IDM), a new tool which can measure poverty and gender disparity simultaneously.

1. These are certainly not the only important components of an adequate system of social evaluation. For a recent comprehensive discussion on the measurement of progress, see Stiglitz, J.E., Sen, A., Fitoussi, J.P, et al. (2009). *Report by the Commission on the Measurement of Economic Performance and Social Progress.* Commission on the Measurement of Economic Performance and Social Progress. Although our project will make evaluations of the gendered distribution of deprivation, it is focused on assessing deprivation and will not develop more comprehensive measures of social progress.

2. The claim that 70% of the poor are women has been widely shown to be unsubstantiated, and nearly all investigations of the topic show that official poverty statistics currently do not permit evaluations of the relative poverty of men versus women. See, among others, Chant, S. (2007) *Gender, Generation and Poverty: Exploring the 'Feminisation of Poverty' In Africa, Asia and Latin America.* Northampton: Edward Elgar.

3. 'Public reason requires that the moral or political rules that regulate our common life be, in some sense, justifiable or acceptable to all those persons over whom the rules purport to have authority.' http://plato.stanford.edu/entries/public-reason/ first published 20 May 2013. Amartya Sen is the most vocal proponent of using public reason to develop systems of social valuation. Among other statements, see Sen, A. (2004). Capabilities, lists, and public reason: continuing the conversation. *Feminist Economics*, 10(3), 77-80.

4. Although our project focuses on gender as an axis of oppression, we were also highly cognizant that race, ethnicity, religion, age, geographic location, and disability are likely to be interlocking features of personal identity that that also influence people's experiences and views of deprivation.

The remainder of **Chapter one** examines shortcomings in the World Bank's International Poverty Line, the United Nations Development Programme's (UNDP's) Multidimensional Poverty Index, and several composite indices of gender equity. It then lays out how, learning from these critiques, we have used a feminist methodology for developing a new measure.

Chapter two explores the first phase of qualitative, participatory fieldwork. It reviews the key methods involved in the first phase of research, and the cross-country results that emerged from this participatory work, including the general implications for poverty measurement, and the specific candidate dimensions that might be included a multidimensional measure of poverty.

Chapter three explores the second phase of quantitative, participatory fieldwork. It reviews the ranking exercise used to evaluate 25 candidate dimensions for inclusion in a multidimensional measure, and the findings related to these dimensions.

Chapter four describes the process of selecting dimensions and measures for populating a new multidimensional measure of deprivation. It describes the process of selecting dimensions and scoring them.

Chapter five describes the new Individual Deprivation Measure, the survey used to gather information about individuals to populate the IDM, and the scoring system used for each individual respondent. It outlines how this new measure is based on the input of poor men and women, and improves upon existing multidimensional indices in several ways. Improvements include: making the individual the unit of analysis; the IDM's ability to allow for interval assessment within a given dimension of deprivation (thus recognising different degrees of deprivation); aggregating indicators intra-personally before aggregating interpersonally (thus recognising the relationship between, for example, health and education); and the fact that it takes account of previously ignored dimensions of deprivation, including those that are especially important for poor women.

Chapter six reports on a pilot test of the IDM, in a nationally representative survey in the Philippines. We compare our results to the International Poverty Line, the Multidimensional Poverty Index, and the Philippines national poverty line. We explore the findings of the IDM as it relates to differences between men and women, urban and rural areas, and various sites within the Philippines where data was collected.

In **Chapter seven**, we conclude with recommendations for further development of the IDM. We identify possible strategies for generating participatory weights[5] for dimensions within the IDM. We suggest how measurements of child poverty can be integrated with the IDM. We consider possible refinements to the list of dimensions and indicators included in the IDM. Finally, we make recommendations on how the IDM can be used across diverse contexts.

The importance of gender-sensitive poverty measurement

Measures of poverty and gender equity are used for a variety of important purposes. They are used to advocate for scarce resources, to allocate those resources, to evaluate the impact of policies, projects, programs, and institutional designs, and to analyse the determinants of poverty and gender equity. Measurement plays a central role in our most important political and academic debates.

For example, in India, families that have a BPL (below the poverty line) card qualify for food entitlements and the right to rural employment (Ram, Mohanty & Ram, 2009). Federal budget allocations to Indian states depend on the poverty levels in those states. In the Unites States, people's access to health insurance subsidies is dependent on their incomes in relation to the poverty line. In Mexico, the success of the rapid expansion of PROGRESA, the much-touted conditional cash transfer program, has been in part dependent on the ability to identify poor people and measure progress in poverty reduction (Pritchett 2012). Globally, proponents and opponents of the current global economic order appeal to alleged successes or failures in poverty reduction as measured by international metrics (Wade 2004).

The degree to which gender differences can be measured will directly affect the programs' abilities to guide policy and resource allocation in ways that best address both men's and women's poverty. For example, if poverty measures are able only to capture gender differences in the poverty levels of male- versus female-headed households, this may lead to focusing anti-poverty work on female-headed households, to the relative neglect of the plight of deprived women in male-headed households (Chant 2007). Government-led stimulus programs designed to respond to financial crises that threaten to worsen poverty have often privileged public works programs that will employ men rather than women—which may be due in part to the fact that national information collection is insensitive to how such crises affect men and women differently (King & Sweetman 2010, p.12).

5. 'Participatory weights' refers to determining the emphasis to be given to a particular dimension through a participatory process. In the context of multidimensional poverty measurement, the aim is to reflect the relative importance attached to a particular dimension by those whose circumstances are being assessed.

What's wrong with existing measures of poverty and gender equity?

Existing systems of measurement fail to provide empirically reliable and morally justified assessments of poverty and gender equity. In this section we review the World Bank's International Poverty Line, the UNDP's Multidimensional Poverty Index, and three leading composite indices of gender equity: the Organisation for Economic Cooperation and Development's (OECD's) Social Institutions and Gender Index, the World Economic Forum's Global Gender Gap Index, and the UNDP's Gender Inequality Index.

The World Bank's International Poverty Line

The World Bank's International Poverty Line (IPL) is the most influential measure of global poverty. Colloquially known as the 'dollar a day' line, as at November 2014 it stands at USD 1.25 Purchasing Power Parity (PPP).[6] The IPL is meant to represent the purchasing power USD 1.25 had in the United States in 2005. Calculating the IPL in the currency of a developing country involves two conversions. First, it involves a purchasing power conversion between United States Dollars of 2005 and local currency units of that same year. Second, it requires a conversion between local currency units of the current year of expenditure to local currency units of the 2005 base year.

The IPL is subject to two sets of critiques: one internal and the other external. Internal critiques focus on the method of setting and updating the poverty line, converting it to the local currency, and gathering the data needed to populate the IPL.[7]

Because international comparison of monetary poverty requires conversions between currencies, calculations of the extent, depth, distribution and trend of global poverty are highly dependent upon methods of calculating purchasing power conversions. Purchasing power comparisons are based on price surveys of the goods and services in a given economy. The World Bank's reliance on PPPs and consumer price indices (CPIs) to calculate the extent and trend of global poverty is highly problematic.

These problems manifest in the reported results of the World Bank. First, revisions in the PPP base year used by the Bank have produced wildly divergent assessments of the extent, trend, and geographical composition of poverty prevalence in the world.[8] Second, even holding the PPP base year fixed, the evolution of poverty reported by the Bank is highly dependent on the specific level of the monetary poverty line which is used For example, the current IPL of USD 1.25 2005 PPP shows a rapid 32.5% reduction since 1990 in the number of poor people (from 1908.6 million in 1990 to 1289.0 million in 2008), while the higher line of USD 2.00 2005 PPP shows a much smaller 13.7% reduction (from 2864.1 million in 1990 to 2471.4 million in 2008) (Chen & Ravallion 2007).

The calculation of both PPPs and CPIs is:

1. Based on highly uncertain data collection, which, when revised, changes greatly the estimates of poverty and GDP in developing countries.
2. Insensitive to price variations within countries (or within urban and rural regions, when separate poverty lines are maintained for urban and rural areas).
3. Sensitive to the prices of all goods and services in an economy, although only a subset of these prices are relevant to poor people.
4. Sensitive to the composition of consumption expenditure by non-poor people, which is not relevant to the purchasing power of poor people.
5. Highly sensitive to the base year chosen for comparing the value of the various currencies, a choice that clearly should not have an impact on poverty estimates.

External critiques of the IPL focus on the underlying conception of poverty on which the IPL is based and the procedure by which the IPL is set. The World Bank does not specify a conception of poverty that underlies the IPL. Rather, it argues that the IPL represents, 'what poverty means in poor countries' (Chen & Ravallion 2012). The poverty line is therefore set by averaging the poverty lines of the world's poorest countries. The countries whose (PPP converted) poverty lines are averaged to create the IPL has varied over time: currently, Malawi, Mali, Ethiopia, Sierra Leone, Niger, Uganda, Gambia, Rwanda, Guinea-Bissau, Tanzania, Tajikistan, Mozambique, Chad, Nepal and Ghana are used (Ravallion, Chen & Sangraula, 2009). This commits the IPL to no particular conception of poverty, no standard against which to judge whether the IPL has correctly tracked the phenomenon in question. More importantly, it leaves the World Bank committed to the

6. For a recent assessment of the World Bank's methodology, see Chen, S. & Ravallion, M. (2010) The developing world is poorer than we thought, but no less successful in the fight against poverty. *The Quarterly Journal of Economics, 125*(4): 1577-1625.

7. For a review of debates over the IPL, see Anand, S., Segal, P. & Stiglitz, J.E. (2010) Debates on the measurement of global poverty. Oxford University Press. See also: Chapters 3-5 of Pogge, T.W. (2010a) *Politics as usual: What lies behind the pro-poor rhetoric.* Cambridge, UK: Polity Press.

8. The impact of these revisions is discussed in detail in Pogge 2010a.

adequacy of the national poverty lines which are averaged to set the IPL. But it is far from clear why this group of largely undemocratic countries which have provided little justification for their poverty lines should set the global standard for poverty.

Regardless of the procedure by which the IPL is set, several substantive flaws are inherent to the measure. First, the IPL is insensitive to differential needs and differential abilities to convert income into achievements.

The resources needed to reach a certain level of achievement vary from individual to individual. In the simple case of income to purchase food, two individuals may, by birth, have different metabolic rates and thus require different purchasing power to reach the same level of nourishment. Different caloric needs may also be generated by virtue of one's social and economic position. A person employed in manual subsistence farming, or who is breastfeeding, may need many more calories than her peers, again requiring greater resources to reach the same level of nourishment. And variations in the natural and social environment make it such that individual needs for clothing and heating must be met by greater consumption in some areas than others.

Second, and similarly problematic for assessing the gender-specific distribution of deprivation, the IPL uses the household as the unit of analysis. Income or consumption-expenditure is assessed at the household level, and sometimes (but not always) conversions are made to take account of economies of scale depending on the composition of the household. This makes it impossible to determine differences in deprivation within a household and allows the higher income or consumption of one family member to compensate for the low consumption or income of another.

Third, the IPL line appears to be set too low (Pogge 2010a, p.67). If we take the IPL to be valued as it claims to be valued—as the value that $1.25 had in the United States in 2005—we can determine whether this income is adequate to have an even minimally acceptable standard

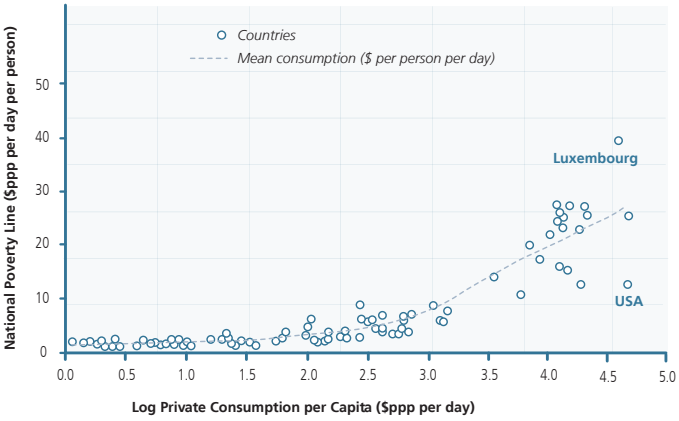


FIGURE 1A: POVERTY LINES ACROSS COUNTRIES OF THE WORLD. ALL COUNTRIES (N=95)

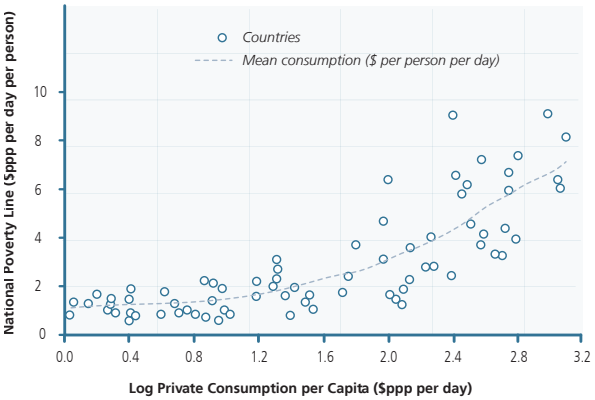


FIGURE 1B: POVERTY LINES ACROSS COUNTRIES OF THE WORLD. DEVELOPING COUNTRIES ONLY (N=75)

of living. The United States Department of Agriculture estimated in 2005 that a minimally sufficient food plan costs between $3.59 and $4.47 per day, clearly far in excess of the IPL, which is also meant to cover non-food necessary expenditures.[9]

Fourth, the IPL excludes important dimensions of deprivation. Although income can be used to purchase many goods and services, or prices can be imputed for the consumption of these goods and services, simply measuring income or consumption-expenditure tells us very little about whether a person is free from violence, has access to adequate leisure time, is able to control the important decisions that affect her life (including how income is spent), is able to secure contraception, has access to water and sanitation, or basic infrastructure such as roads, and so on.

The United Nations Development Programme's Multidimensional Poverty Index

In 2010 the UNDP added the Multidimensional Poverty Index (MPI) to its suite of metrics used for measuring human development. Developed by the Oxford Poverty and Human Development Initiative (OPHI), led by

Sabina Alkire, the MPI represents the first official effort to calculate the number of poor individuals globally through a multidimensional index. It also represents the only competitor to the World Bank's IPL for providing a headcount index of global poverty.[10]

The MPI is one instance of the broader class of Alkire-Foster multidimensional poverty measures (Foster, Greer

9. For a proposal for a $10 per day international poverty line, see: Pritchett, L. (2006) Who is not poor? Dreaming of a world truly free of poverty. *The World Bank Research Observer*, 21(1), 1-23. Also see: Woodward, D. & Abdallah, S. (2008) *How poor is 'poor'? Towards a rights based poverty line (technical version).* London: New Economics Foundation.

10. A headcount index of global poverty assesses the percentage of people globally who are defined as poor.

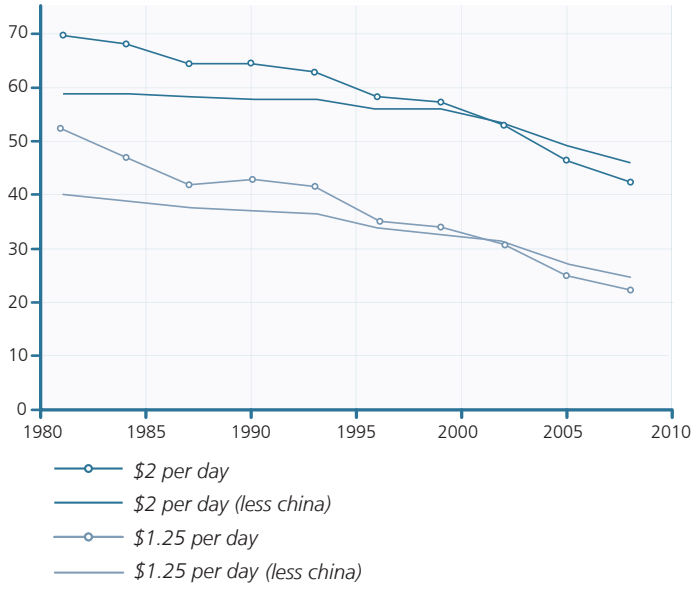


FIGURE 2: HEADCOUNT INDEX OF POVERTY (% BELOW POVERTY LINE)

& Thorbecke, 2010). It captures information in three areas of human life—education, health, and standard of living—at the household level. The MPI uses a binary approach for each indicator (there are two each for health and education and six for standard of living) in which the household is determined to either fall above or below a given threshold. For example, in the school attendance indicator for education, a household is deprived if any school aged child is not currently attending school up to year 8. A second cut-off is then used to determine whether a household should be identified as poor. If a household is deprived in more than 33.3% of the weighted dimensions, it is poor, and if not, it does not count as poor.[11]

Nevertheless, the MPI has several problems, which are largely a reflection of the need to work with existing datasets to calculate multidimensional poverty on a global scale. Because multi-topic surveys are not administered consistently across the world, the designers of the MPI were forced to find indicators and dimensions that would be comparable across the three household surveys it uses. This means that there is much room to improve upon the MPI, but doing so would require new data collection.

First, by taking the household as the unit of analysis, the MPI is incapable of measuring poverty at the individual level and hence of revealing intra-household differences in deprivation. All members of a household are assumed to suffer the same profile of deprivations. In reality, things may be quite different, of course: some members of a household may be undernourished even while others are not and some children may go to school while their siblings do not. In such cases, the MPI will often misclassify individuals on account of their household membership. Because of such misclassifications, whose extent is unknown, the MPI cannot be used to provide societal level assessments of the differences in the poverty of men and women.

DIMENSION	INDICATOR	DEPRIVED IF	WEIGHT (%)	DIMENSION TOTAL (%)
Health	Child mortality	*Any child has died in the family*	16.7	33.3
	Nutrition	*Any adult or child in the family is malnourished*	16.7	
Education	Years of schooling	*No household has no electricity*	16.7	33.3
	Child attendance	*Any school aged child is out of school in 1 to 8*	16.7	
Standard of living	Electricity	*The household has no electricity*	5.6	33.3
	Drinking water	*The household does not have access to clean drinking water within 30 minutes*	5.6	
	Sanitation	*The household sanitation is not improved, or is shared*	5.6	
	Flooring	*The floor is dirt/ sand/ dung*	5.6	
	Cooking fuel	*Wood, charcoal, dung are used*	5.6	
	Assets	*The household does not own more than one of: radio, TV, telephone, bike, motorbike, car or tractor*	5.6	

TABLE 1: MULTIDIMENSIONAL POVERTY INDEX–DIMENSIONS AND WEIGHTING

Second, the MPI is insensitive to deprivations both above and below the first cut-off, that is the cut-off between counting as deprived or not, within each indicator. For example, a household counts as deprived if no adult household member has completed five years of schooling. This means that if a single member has had five years of schooling, the household is not deprived in this indicator. But of course there is a significant difference between an individual who has completed five years of schooling and an individual who has completed 12 years of schooling—and a significant difference also between one person who has had 4.5 years of schooling and another who has had no schooling at all.[11a] It also matters whether many members of the household have been educated or only a few. The MPI is thus insensitive to these two kinds of achievements—both the extent of achievement for

11. For the latest on the MPI see United Nations Development Programme (2014) Multidimensional Poverty Index (MPI). Retrieved from http://hdr.undp.org/en/statistics/mpi. See also http://www.ophi.org.uk/multidimensional-poverty-index/mpi-data

11a. To see the impact of selecting alternative cut-offs, see Alkire, S., Conconi, A. & Seth, S. (2014) 'Measuring destitution in developing countries. An ordinal approach for identifying linked subset of multidimensionally poor'. *OPHI Research in Progress 42a.* Oxford Poverty and Human Development Inmitiative, University of Oxford.

individuals above the threshold level and to the number of individuals within the household who have exceeded the deprivation level.

Third, like the IPL, the MPI excludes important dimensions of deprivation. While there is no doubt that education, health, and standard of living are important dimensions of deprivation, there are other important dimensions that should be included in multidimensional poverty measurement. This is recognised by the creators of the MPI, who are constrained by existing data collection. For example, freedom from violence or labour burden/access to leisure time are arguably as important as some other areas included in the MPI. Furthermore, within a given dimension, selected indicators ignore important components of deprivation. For example, both educational indicators are about enrolment, but these do not provide any information on the quality of that schooling, or a person's actual education achievements.[12]

Fourth, the MPI is not grounded in the stated views and preferences of poor men and women. Although the creators claim that the MPI finds support in various participatory assessments, the three categories—health, education, and standards of living—were not selected over other potential dimensions on the basis of such participatory assessments but rather, selected based on the contingencies of data availability. We believe our participatory research offers an alternative method of selecting dimensions that is grounded in participation.

Composite gender equity indices: the GII, GGGI, and SIGI

One might think that, although both multidimensional and uni-dimensional poverty measures suffer from a variety of flaws, including those that make difficult the tracking of gender-specific deprivations, these flaws are compensated in the broader system of measuring global progress by composite indices of gender equity. The IPL and MPI may not tell us much about how women are doing, but surely this can be remedied by the existence of multiple indices of gender equity.

The UNDP maintains several composite indices of human development. In 2010, the UNDP debuted the new Gender Inequality Index (GII), replacing the Gender Related Development Index and the Gender Empowerment Measure. The GII purports to measure the loss in human development (as measured through the Human Development Index (HDI)) that results from gender inequity. The GII tracks three dimensions with five indicators: reproductive health (maternal mortality and adolescent fertility), empowerment (educational attainment and parliamentary representation), and the labour market (labour force participation).[13]

The World Economic Forum produces the Global Gender Gap Index (GGGI), which measures gaps in performance between men and women, but is insensitive to overall achievement in well-being. That is, a country that has equitable outcomes between men and women but low levels of human development will be ranked highly on the GGGI. The GGGI measures achievement gaps in economic participation, educational attainment, health and survival, and political empowerment.

The OECD recently developed the Social Institutions Gender Index (SIGI). The SIGI measures national level institutions that influence gender equality/inequality, rather than individual outcomes. It scores a country from 0 to 1 according to the country's performance on a range of indicators in five categories: family code, civil liberties, physical integrity, son preference, and ownership rights. The SIGI usefully complements other composite gender equity indices by focusing on dimensions not covered elsewhere (such as family codes and son preference) and by assessing directly some social institutions. This allows policy makers and advocates to focus directly on institutional changes that could be made to improve their rankings in the SIGI.[14] However, it does not provide information about how institutional developments translate into outcomes for particular individuals or groups.

While we agree that these composite indices of gender equity can reveal important components of gender disparity, there are several reasons why they must be accompanied by gender sensitive poverty measures to explore gender disparities among the worse off.

First, the composite gender indices are often insensitive to the distribution of achievements across a population. When using literacy rates or rates of access to reproductive rights, these indices are insensitive to when multiple deprivations are visited upon a single woman. Furthermore, gains by women at the top can compensate for losses by women at the bottom.

Second, composite gender equity indices are also often populated by indicators that favour gains by better-off women over those that are relevant for worse-off women. For example, parliamentary representation may be a useful indicator of gender equity, but it does not tell us whether a woman is able to speak out and participate in her local council.[15]

12. For a review of the huge disparities between educational achievement and educational enrolment, see Pritchett, L. (2013) *The rebirth of education: Schooling ain't learning*. CGD Books.

13. The Gender Inequality Index, and associated notes, are available at http://hdr.undp.org/en/statistics/gii

14. The SIGI is available at http://genderindex.org

15. Decision-making opportunities closer to home can be easier for women to fit into their lives and may be a pathway to other elected roles or the spaces where women can express leadership in situations where life circumstances or cultural expectations limit their engagement in national parliament. Women's involvement at this level may be more accepted as an extension of their involvement in their communities. See, for example Quay, I. (2012) *Pacific Women's Leadership: Scoping Study*. Pacific Women's Leadership Program and International Women's Development Agency.

Third, composite gender equity indices provide no guidance on the allocation of resources within a country, or within subpopulations within a country. These composite indices cannot tell one whether, for example, women who are the heads of their households are worse off than women who are not the heads of their households, or whether women in rural areas are more deprived in a particular dimension than are women in urban areas. This considerably limits the usefulness of some composite gender equity indices.

Fourth, composite indices of gender equity often exclude important dimensions of deprivation. As they rely on information that is collected across a population, they are often constrained by existing data collection efforts, and thus cannot take account of, for example, control over decision-making, freedom from violence, or a person's labour burden.[16]

Composite gender equity indices therefore must be complemented by multidimensional measures of deprivation that are most relevant for the worst-off women and men, and can guide the allocation of resources and evaluation of projects amongst men and women who suffer varying levels of deprivation.

Participatory poverty assessments

An alternative approach to poverty measurement eschews setting objective, external standards for determining whether an individual is poor and rather provides a forum for community members to decide what indicators are best for determining a household's poverty status. Participatory poverty assessments are part of a broader movement of participatory development in which citizens are engaged in a range of development activities—identifying priorities for poverty reduction, specifying causes of economic and social problems, designing and evaluating anti-poverty programs, and generally strengthening the demand side of poverty-alleviating activities.

Participatory poverty assessments (PPAs) are capable of generating rigorous, quantitative measures of deprivation that can guide anti-poverty work (Chambers 2007). Although our project is premised upon the importance of the participation of poor men and women in designing measures of poverty and gender disparity, we do not believe that a mere proliferation of PPAs would be enough to adequately improve existing systems of poverty measurement. PPAs can be difficult to compare across contexts. If a community in Ethiopia identifies not having working livestock as an indicator of poverty, and a group in Peru identifies not owning land for farming, it is not clear how these two indicators can be used to make comparative assessments between the two groups. Furthermore, over time, community members may identify different indicators of poverty. This makes any assessment of the poverty trend in a given community difficult to determine and highly dependent on the indicators that are identified at any given time. Importantly, most PPAs take the household as the unit of analysis, thereby making it difficult to reveal disparities between men and women (although the process does allow for disparities between male and female headed households to be revealed). And PPAs are rarely scaled up. While often used to measure poverty at the local or district level, they rarely are used to generate national or supra-national poverty assessments.

New data is needed for better measures

Dissatisfaction with existing measures of poverty and gender disparity may lead one back to the range of surveys that are carried out across the developing world with varying frequency and reliability, to seek a new set of indicators that can be used to create a multidimensional, individual level measure of deprivation. Unfortunately, it simply is not the case that such a measure can be composed from existing data collection. If this were the case, participatory research would have simply guided the selection of indicators from already available information. Our participatory research revealed many dimensions considered by poor women and men to be important for poverty measurement but for which information is not currently collected at the individual level. The new measure we have developed will therefore require the collection of new data through either new multi-topic surveys or modification of existing multi-topic surveys.

Public reason: a joint approach to a new measure

We believe that improved measurement of poverty and gender equity can build on the strengths of existing measures of poverty and gender equity while responding to the flaws and limitations identified in this chapter. But the design of new and better measurement is not merely a matter of isolated academic discussion. Rather, our project is committed to the idea that important tools of social valuation must be developed through a process of public reason. The measurement of deprivation among the worst off must be particularly sensitive to the stated views and preferences of poor men and women.

Therefore, over two phases, across 18 sites in six countries (Angola, Fiji, Indonesia, Malawi, Mozambique and the

16. The UNDP noted the limitations in data as the primary reason for excluding other dimensions from its gender inequality index. See *Human Development Report 2010: The real wealth of nations: pathways to human development*. Palgrave Macmillan.

Philippines) we undertook participatory research with men and women in poor communities to identify how they view poverty and related hardships and the extent to which these views are gendered. We recognise that the selection of countries leaves some important geographic areas excluded. Our country selection was largely determined by the capacity and interests of our partner organisations, whose participation has been invaluable. Further insights would certainly be gained from running this exercise in Latin America, in South or East Asia, in Eastern Europe, or high income countries where significant pockets of deprivation persist. Nonetheless, the countries and sites involved in the fieldwork comprise a highly diverse group: our participants come from very low income, low human development countries and from slightly better off countries; from post-conflict countries; from a wide range of religious and ethnic backgrounds; from diverse social and familial structures; and from diverse political systems and histories.[17]

We sought participants from a wide range of life experiences and social locations, and aimed for equal representation for men and women across three age groups (youth and young adults, middle aged people, and older people) to allow for gender and age disaggregation. Young children were not included in the research for ethical and methodological reasons. First, participatory exercises with children raise distinct ethical concerns in the structuring of methods, the training of fieldworkers, and the publicising of research (both in the community of investigation and more generally), which generate new constraints on how the research should be conducted. Second, the best participatory methods for working with adults to construct a new measure of poverty are not the same methods that one would need to use with young children. The selection of sites and participants is discussed in more detail in the next chapter. The potential for future research involving children is explored in Chapter 7.

Our methodological approach[18]

We understand our project to be one not of discovery but of gaining insight from which to develop a just and justifiable measure. We do not seek to find out what the core of the concept of poverty is through simple analytic reflection or empirical investigation. Rather, we seek to develop a conception that is morally justifiable, useful as a public standard of deprivation, and capable of serving various purposes (such as being comparable across contexts, revealing gender disparity, and guiding anti-poverty policy and programs). This means that we will not simply adopt or inherit a received understanding, but will rather seek to develop a conception through participatory research. These processes will be in part justificatory: seeking to explain, in reasons that are shareable with others, why it is that certain areas of life should be relevant for assessing an individual's deprivation, in what space that deprivation should be measured, and why certain levels of achievement make an individual's position no longer of concern for anti-poverty policy.

The epistemological approach that underpins this project is shaped by an explicit recognition that existing measures of poverty suffer from two problems. First, they are insensitive to gender and second, they reflect the values and priorities of experts rather than those of women and men who have experienced poverty (Bessell 2010). To directly address these dual problems, our methodology was shaped by feminist principles and principles of participatory research.

Our methodology was underpinned by feminist insights that illuminate both the ways in which the gendered division of labour, gendered power hierarchies and social values interact to shape women's and men's experiences of poverty and the ways in which research must be sensitive to the gendered nature of power and social position among participants. Our starting point, and consistent principle throughout the research, has been that any just and justifiable measure of poverty must be able to reveal the ways in which poverty impacts differently on women and men.[19]

We sought to make gender central to the question of poverty measurement. Our methods were designed to explore with participants the ways in which gender is related to poverty and hardship and to ensure that men and women were able to discuss issues separately. Our analysis explicitly examined whether and how men and women differed in their responses to the same questions. By using a research model that involved local research teams in each country conducting the research in phase one and two, the project prioritised contextual knowledge.

Our methodology was also guided by principles of participatory research, whereby spaces are created so that women and men can confidently engage in a process of identifying problems and ways forward (Cornwall & Jewkes 1995, p.1669). Through phase one, in particular, we sought to recognise and value the knowledge of participants, and ensure that knowledge informed the development of the measure. While participatory principles underpin our methodology, this research does not claim to be fully participatory as participants were not involved in the conceptualisation of the project or in the analysis. However, phase two of the project, sought to ensure that our analysis and interpretations were in-line with the priorities of participants.

17. Further details on the countries, sites, and participants involved in the project can be found in the reports of the qualitative research undertaken in each country in phase 1, available at www.genderpovertymeasure.org.

18. For an extended discussion of the feminist methodology related to this project, see Jaggar, A., & Wisor, S. (2013) Feminist methodology in practice: Lessons from a research program. In Jaggar, A. (Ed) *Just Methods: An Interdisciplinary Feminist Reader*. 2nd Edition. Boulder: Paradigm Publishers.

19. See Jaggar & Wisor (2013).

In bringing together principles of feminist and participatory research, we have taken seriously the stated views, preferences, and experiences of poor men and women. We recognise that these views have been systematically excluded from past efforts to establish official measures of poverty. We also take seriously that individual views are shaped by context and experience, and that further interpretation is required to make sense of the stated views and preferences of participants. The entire exercise is value laden, and we attempt to make explicit our value commitments and our disagreements where they arise.

In many cases, we have worked with researchers with previous experience working on gender and deprivation. Importantly, all research teams had a large number of women involved. More than half of the researchers on all research teams were women with a commitment to and understanding of gender equality and feminist principles, and all but one research team was led by a woman with experience in researching issues related to gender equality and poverty.

We are committed to transparency and reflexivity. Whenever possible we have made (or will make) publicly available information collected during research. We recognise that the analysis of both qualitative and quantitative data is a matter of interpretation and others may interpret our research differently. We are also committed to supporting the further development of gender sensitive poverty measurement and have made the data collection and analysis tools developed through this research available for others to use and build on.

CHAPTER TWO PHASE ONE METHODS AND FINDINGS

THE MORAL AND EPISTEMOLOGICAL UNDERPINNING OF THIS RESEARCH IS THE PRINCIPLE THAT MEASURES OF POVERTY CANNOT BE JUST OR JUSTIFIABLE UNLESS THE VIEWS OF THOSE WHO ARE EXPERIENCING POVERTY ARE UNDERSTOOD AND TAKEN INTO ACCOUNT. THIS IS NOT TO SUGGEST THAT THE SUBSTANTIAL BODY OF EXPERT LITERATURE AND EXPERIENCE IN POVERTY MEASUREMENT SHOULD BE DISCARDED, BUT TO ARGUE FOR THE IMPORTANCE OF GROUNDING MEASURES IN PARTICIPATORY APPROACHES.

This research was not fully participatory in that the aims of the research were driven by our 'expert' and 'outsider' assessment of the shortcomings of existing measures of poverty and gender disparity. The research questions were determined by the research team, which included people working with organisations directly working to combat poverty and secure rights, but did not involve consultation with participants. However, participatory principles shaped our overall methodology and were central to the methods chosen in phase one.

In the first phase of research, research teams used participatory methods to explore how men and women across the life cycle conceived of poverty and related hardships, to gain insight into what aspects of poverty they considered should be the subject of a poverty measure, and to establish the extent to which their view of these things varied according to their age and/or gender.

A research protocol was developed early in the project, in dialogue with local teams, not to act as a rigid set of requirements to be imposed on local research teams in the field, but to make explicit the methodological and ethical approaches that guided the research. The research protocol set out both the methods to be used by local research teams and the processes for engaging with and seeking support from community leaders, seeking informed consent from participants, and ensuring the confidentiality of participants to the extent possible and appropriate within the diverse research settings.[20] Central to the ethical approach of the research was to ensure that participants were not placed in situations that made them uncomfortable or exposed them to censure, exclusion or violence from community members during or after the research. A key methodological strategy to promote a safe research environment was to ensure that group methods placed participants with people of the same sex and at the same phase of the life cycle.

The research question

We did not begin the research free from thoughts about how poverty and gender equity should be measured, and did not seek to undertake purely inductive research, allowing the questions to emerge as the fieldwork progressed. Rather, we undertook a critical review of existing poverty measures and the relevant literature and engaged in dialogue with others engaged in the field and with the research teams who would carry out the field research in each country. A workshop was held in Oslo in March 2009, which involved leading researchers in the areas of poverty measurement and gender, with the aim of challenging our own thinking, and building on or complementing other research efforts.

The overall research question that our project sought to answer is:

What is a just and justifiable measure of poverty that is genuinely gender sensitive and capable of revealing gender disparities?

This question guided the project through all three phases. For the purposes of the first phase, we broke this question down into three sub-questions:

1. How is poverty best measured?
2. How is poverty gendered?
3. For poor men and women, what are the other most important gender inequities? That is, are there some individual deprivations that affect females and males differentially that poor people identify as very important but do not characterise as part of poverty?[21]

20. The research (Protocol: 2010/020) was approved by the ANU Human Research Ethics Committee on 18 May 2010.

21. These questions draw in part from distinctions made by Simon Maxwell in *The Meaning and Measurement of Poverty*, Overseas Development Institute, 2009.

We were interested in participants' views and whether these corresponded with a range of distinctions that are made in the extant literature on poverty measurement:

1. Do participants believe there are different categories of poverty? For example, do they distinguish between (i) the amount of time someone has been poor (chronic poverty from transitory poverty), (ii) different levels of poverty (say, the ultra poor from the somewhat poor), or (iii) those who are not at risk of poverty, those who are at risk, and those who are poor?

2. What dimensions, or areas of life, do participants think are part of poverty? Is poverty exclusively monetary, or does it include non-monetary goods? Is poverty best thought of as including time use and labour burden (particularly the total amount of time spent working to survive), or social and communal resources?

3. What standards do participants use for the evaluation for poverty (absolute poverty or relative poverty)?

4. Is poverty just about access to resources, or are factors like control over resources or the availability of opportunities also relevant?

5. Do participants take account only of current consumption or do they also consider the overall stock of assets when making poverty determinations?

6. Do participants distinguish between the relevance of 'inputs' and 'outcomes' in poverty assessment? For example, do they make a distinction between those who do not have enough and those who are not able to achieve enough?

7. Do participants take account of the length of time and the amount of work needed to do to acquire the resources they have in making determinations about poverty?

The participatory nature of the research, particularly in the first phase, called for local knowledge and understanding of each context in which the field research was to be carried out. Research teams were established in each country, who were crucial not only to the gathering of data, but also to the development of the methodological approach and methods to be used. Workshops involving the project team and the local research teams were held in Canberra in March 2010 (with researchers from Fiji, the Philippines, and Indonesia) and Pretoria in May 2010 (with researchers from Angola, Malawi, and Mozambique).

Site selection

In each country, we aimed to have one urban community, one rural community, and one community where the participants were marginalised people—that is, subject to systematic discrimination or exclusion—such as a squatter settlement, or a community without a clear administrative boundary, a group of internally displaced people, or an ethnic or religious minority.[22] Local research teams, with their detailed knowledge of the country context, were central in identifying sites within the broad criteria discussed above. By conducting participatory research in a wide range of social contexts, we sought to ensure that the investigation was open to various conceptions of poverty and various contexts of deprivation.

In Angola, research was conducted in Viana, a semi-urban area in Luanda province, in Kilamba-Kiaxi, an urban municipality in Luanda (the capital city), and in Lunda Sul, a rural area in the northeast of the country. In Fiji, research was conducted in Naleba, a rural largely Indian settlement, in Nausouri, an urban, largely Fijian settlement, and in Nanuku, a mixed urban squatter settlement. In Indonesia, research was conducted in the rural area of Sampang District on Madura Island in East Java province, in the urban area of Surabaya City, East Java, and the marginalised area of China Benteng, in Tangerang City, West Java. In Malawi, research was conducted in Somo Village, a rural area in the south of Balaka district, in Mtopwa village, a squatter settlement near Blantyre City, and in Mkwanda Village, on the border of Blantyre and Chiradzulu districts. In Mozambique, site selection did not strictly follow the urban, rural, marginalised categories, as it was deemed to be too difficult by the local research team to identify selected sites that matched these categories. The research was conducted in Inhambane province, Zavala district, Zambezia province, Namacurra district and Nampula province, Ribaue district. In the Philippines, research was conducted in the municipality of Paracelis in Mountain Province (the rural site), in Sitio Tulungan in the capital Manila (an urban community based near a major landfill), and Iligan City in Northern Mindanao with the Bajau, a displaced and marginalised community.[23]

Participant selection

Any feminist research project undertaking participatory work must be conscious of the possibility of deliberative exercises being dominated and distorted by pre-existing

22. We recognise that many communities will not easily fit into one of these three categories. All communities will have many distinguishing features and some communities fall somewhere on a continuum between urban and rural. All marginalised communities will also be characterised by their urban-rural status. Furthermore, identifying a marginalised community can be difficult in countries where most communities face systematic deprivation in a variety of ways.

23. See the national reports at www.iwda.org.au for more detailed information.

inequalities that shape the interactions between researchers and participants, and amongst participants themselves.[24]

Several steps were taken to attempt to mitigate the effect of a person's social location on his or her ability to participate in and freely express and explore ideas during group activities. Participants, once invited, were divided by gender and age, resulting in groupings of young men, young women, middle aged men, middle aged women, and older men and older women. The age at which participants were divided between young, middle-aged, and older depended on the country of research, as both life expectancies and life cycles vary considerably across countries. Life expectancy is highest in Fiji and Indonesia (70 years) and lowest in Mozambique (49 years).[25] Within the context, country research teams determined what age ranges best demarcated key life stages of youth/without major responsibilities, adulthood, where productive and reproductive roles structure the lives of many women and men, and older age.

The project deliberately aimed for a diverse selection of participants, and attempted to take account of intersecting axes of oppression. We encouraged research teams to include participants from a wide range of social locations with diverse life experiences. We hoped that people living with disabilities, people from sexual minorities, people from marginalised religious and ethnic groups, as well as people at all stages of the life cycle would be included in the research. In practice, it was occasionally challenging to include all of the groups that might have helped to provide further insight into our main research question. For example, it was not possible in some communities to identify sexual minorities to participate. It is important to note here, that this research did not involve long-term, ethnographic research and interaction between researchers and the communities was limited in terms of time and the nature of engagement. As a consequence, it was not always possible for local research teams to build levels of trust and local knowledge necessary to identify and engage with the most marginalised and discriminated against groups or individuals. Nevertheless, as is evident from the country reports, a highly diverse group of individuals participated in phases one and two of this research.

Research methods

Six research methods were used in the first phase of research. These methods were designed to examine and elicit participant responses to a number of key issues. Methods were designed, and later revised and adapted, to ensure that they were appropriate for participants with low or no literacy skills.

1. Informant interviews

The first method was key informant interviews. Researchers met with members of the community deemed by the local research team to have special insight into the functioning of the community and the nature of poverty in that community (such as local civil society leaders). The discussions helped to introduce (or in many cases reintroduce) the researcher to the community, its recent history, and the specific forms of deprivation that might be salient at the moment.

2. Guided group discussions

The second method involved guided group discussions. These groups were divided by age and gender, so there were groupings of young women, young men, middle aged women, middle aged men, and older women, and older men. The guided group discussions addressed three different issues.

First issue: What are the main features of the socio-economic context in which the participants live? Are there particular factors or events that the project team should know about when analysing the data?

Questions for participants

1. How would you describe your community?
2. Are any current or recent events having a big impact on life here?

Second issue: What do poor people think constitutes poverty? Do poor people think that what constitutes poverty differs according to (i) gender; (ii) age; (iii) any other general factor such as ethnicity?

Questions for participants

1. When you think about whether someone is poor or not, what sorts of things do you take into consideration?
2. (Having made a list of the responses, ask) Are any of these things more significant for women than men? If so, which things in particular? Why do you think they are more significant for women?
3. Are any of these things more significant for men than women? If so, which things? Why do you think they are more significant for men?

24. For a critical perspective on participation see Cooke, B., & Kothari, U. (2001) *Participation: The new tyranny?* UK: Zed Books.

25. These estimates are from World Development Indicators, retrieved in the year of the first phase of research http://data.worldbank.org/indicator/SP.DYN.LE00.IN

4. Are any of these things more significant for children than for older people? If so, which things? Why do you think they are more significant for children?

5. Are any of these things more significant for older than for younger people? If so, which things? Why do you think they are more significant for older people?

Third issue: Is poverty the main thing that makes life hard? Are there important hardships not related to poverty?

Questions for participants

1. What makes life hard for women?
2. Do the same things make life hard for men, or are there differences?
3. What makes life hard for girls?
4. Are these the same things that make life hard for boys, or are there differences?
5. Can people who are not poor be affected by any of these hardships? If yes, which ones? Are people who are not poor affected to the same extent as those who are poor?
6. What hardships do poor people in particular face?
7. What opportunities do poor people in your community have to improve their lives? Are there differences in these opportunities between men and women; girls and boys? Between people at your stage of life and those at other stages of life? (If yes), what are these differences?
8. What strengths or resources help you get through the hardships? Are there differences in the resources, both private and communal, that are accessible to men and women; girls and boys? Between people at your stage of life and those at other stages of life? If the strengths or resources are communal, how are they provided and how are they acquired? Is there different access for men and women? If participants say that communal resources are important, ask whether they take access to communal resources into account when assessing someone's poverty.

3. Brainstorming—poverty ladder

The third method used in the first phase involved asking a threshold question about whether participants thought there were different levels of poverty. If the response was positive, a brainstorming session regarding features of poverty was followed by the creation of a poverty ladder. Participants were asked to design a ladder and to identify the features that would mark a person's deprivation at each point along the ladder. Participants were free to identify the number of steps the ladder should include, and the defining features of each step.

Fourth issue: Do participants think that there are distinct levels of poverty? If yes, what are the defining features of each level?

Question for participants

1. Are there different levels of poverty? If so, what makes up (constitutes) poverty at each level?

4. Brainstorming—ranking of dimensions needed to live free from poverty

The fourth method involved a brainstorming and ranking of dimensions that are needed to live a life free from poverty. Our aim was that the exercise required participants to generate a list of areas of life that are relevant to identifying a person as poor.

Fifth issue: What does a poor person need to make them no longer poor? Is more money the answer, or are there some things that are needed to get out of poverty that money can't buy?

Questions and method

1. Group brainstorm. List all the things that are needed to stop an individual being poor.
2. Group ranking activity Prioritise the list from most to least important in stopping an individual being poor.
3. Work through the list, asking of each item whether it is (i) equally important for all people or is more important for some (for example men, women, boys, girls, people with disabilities, members of ethnic or religious minorities); and (ii) equally attainable for some as against others.
4. Again work through the list, asking of each item: would more income or wealth mean that an individual is able to buy or otherwise get access to this item? If money can't buy this item, why not?

5. Household mapping

The fifth method involved a household mapping exercise in which participants considered hypothetical homes and discussed whether poverty is different for different members of the household, or whether some members are more likely to be poor than others.

Sixth issue: Is poverty different for different members of a household? This question includes two aspects: (i) is what constitutes poverty different for different members of the household? and (ii) are different members of the household more or less likely to be poor?

Questions and method

1. Ask participants to list the kinds of goods, services and other resources that each member of a typical poor household in their community receives/has/has access to. Examples would include food, clothing, schooling, medical care, free time, and money.

2. Ask whether family members (in general, not necessarily their family) receive the same amounts and/or the same quality. If some receive less and others more (or some better quality and others poorer quality), why is this? What do you think of this distribution? Should it stay as it is, or should it change?

3. When there isn't enough to go around, how is allocation decided? Do particular household members usually go without or receive less than others? If so, why? What do you think of this? Would allocation be different if there were different household members? (Here the researcher could suggest adding or subtracting members and ask what difference the change would make. If participants have been assuming a male-headed household, it would be particularly important to ask what difference it would make if the household head were a woman. Researchers could also ask whether there are additional members that are often part of the household who have been missed, such as in-laws, grandparents, family members from other households who they often care for, other spouses, etc. What would their presence mean for distribution?)

4. Ask whether some members of the household have to work (paid or unpaid, inside or outside the home) harder than others. Does this affect the way the household's resources are distributed? Does having to work more or harder make someone more or less poor?

5. (If participants' responses suggest that resources are distributed unequally within the household, ask): Does unequal distribution of resources mean that different household members suffer different levels of poverty?

6. In-depth individual interviews

The sixth and final method was a series of in-depth individual interviews. The individual interviews provided two opportunities for our research teams. The first was to include participants who might have been excluded from group discussions, either because of various social barriers or pressures or because of previous obligations. The second opportunity was to follow up on any questions that had been raised through the various group methods but required greater exploration.

Findings and analysis

Within qualitative, participatory methodologies, data collection and data analysis are not clearly distinguishable stages of the research process. Analysis begins in the field and includes not only the 'data' provided by participants, but also the researchers' observations. Among the tools used by researchers were standard observation sheets and researcher diaries. Standard observation sheets enabled researchers to record their impressions, including of any factors that impacted on the research, immediately after each session. Diaries enabled researchers to record unstructured impressions and ideas, including early analysis, while in the field. Each of these tools is essential to qualitative research and an important part of analysis.

Analysis of rich qualitative data requires that researchers be intimately familiar with not only the data but also the context within which data were collected. Thus, initial analysis of phase one was conducted by local research teams, who were able to mine the data for meaning, while illuminating the local context within which data were collected and should be interpreted. As discussed, phase one involved six research methods, each of which was used with several groups of participants: in most countries six groups (older women, older men, middle aged women, middle aged men, younger women and younger men). Data gathered from each method were analysed for each group, identifying both themes and topics and the frequency with which particular themes and topics were raised by each sex/age group. This process ensured that findings reflected both the research question being addressed by the method and illuminated the differences based on both gender and age. Having analysed data from each method, analysis was undertaken across methods in order to compare and contrast themes and topics arising from each research question and across age and sex groups. Local research teams then compared

and contrasted findings across national sites, drawing out commonalities and differences according to geographic and social location and combining these findings with findings from each sex and age group. Each research team subjected the initial analysis to scrutiny within the team to validate the findings. In the case of the Philippines team, this was done in a systematic manner by randomly selecting ten per cent of coded transcripts for review by other team members.

An analysis workshop, held in Canberra in March 2011, brought together local research teams, project researchers, and project staff to review the findings of phase one, identify commonalities and differences across sites, and begin to identify common themes across sites. This workshop provided an opportunity for a level of validation and reflexiveness among all those engaged in the research in different capacities.

Each country's research team produced a synthesis report of their findings for each method in each community. In one case, the Philippines, a national report and specific site reports were produced. The reports were then developed by the local research teams through a process of iterative dialogue with, and requests for clarification and editing suggestions from, project staff and partner and chief investigators. The result is a rich set of reports across eighteen sites in six countries, reflecting a wide range of diversity among participants. Each research report discusses the analysis process in greater detail. The reports capture some of the challenges of carrying out this kind of research, particularly in remote and very poor sites. They also reveal the great richness that comes from qualitative, participatory research. Full reports are available at www.iwda.org.au.

Capturing the wealth of information provided by the country synthesis reports in a single document such as this is a challenging task, and inevitably some of the richness of country reports and subtle nuances of the participants' views are lost. Our readers are encouraged to spend time with the country synthesis reports. While the reports provided crucial input to subsequent stages of the research, they are important research outputs in their own right, documenting the views of poor women and men about poverty and hardship.

Common findings

At every site, participants identify different levels of poverty. However, the number of levels of poverty varies. At some sites, as few as two categories of poverty were identified. At other sites, up to five or more levels of poverty were identified in group discussions. A common finding across many sites was that there existed at the very bottom a group of people deeply deprived in a variety of dimensions: people who are constantly hungry, have poor clothes and shelter (if they have any at all), are excluded from community support, have no capital to build from, and have little access to services. This group is perceived to be extremely vulnerable to a wide range of risks and shocks, and to subjectively have little hope for future improvement. This categorisation seems to overlap with those identified in the literature as the 'ultra-poor', 'extreme-poor', or 'poorest of the poor'. The categorisation might suggest that this is not just a difference of degree but of kind. At many sites there was a unique word in the local language for this group of the very worst off, and they were described as utterly deprived in many ways.

In almost all cases, participants easily marked various steps between poor and rich. This finding confirms critiques of binary poverty lines (used in headcount index exercises) that only count people as poor or not poor and are insensitive to a person's distance from the poverty line. It suggests that an adequate measure of poverty would be sensitive to degrees of deprivation for individuals, rather than using binary categorisations of deprived or not deprived.

At every site, unsurprisingly, participants' assessments of poverty and hardship are reflective of the circumstances in which they find themselves. The level and kind of deprivation required to categorise an individual as very poor is in part determined by the context they are in and the deprivations they face.

Participants did not directly reflect on the difference between relative and absolute poverty. But responses provide support for both conceptions: on the one hand, constructed poverty ladders and identified dimensions and cut-offs were placed on an independent scale that did not refer to the status of others (that is, people who were poor were said to have no mat to sleep on, rather than comparing their sleeping arrangements to their neighbours'). On the other hand, standards of assessment both implicitly and explicitly referred to the lives others are leading—clothing had to be suitable in one's community, while the quality of one's shelter or health care was often assessed in comparison with those who had better. Participants' standards of assessment are also highly sensitive to social location, including age, gender, geographic location, form of employment, social role, responsibilities and obligations, and so on (more on this below).

In every site, common dimensions of poverty include:

MOST COMMON DIMENSIONS OF POVERTY

Nearly every participant mentioned these categories.	Other very common dimensions included:
1. A lack of employment and income earning opportunities.	5. Inadequate and low quality shelter, with low quality household assets.
2. A lack of quality education, for oneself or one's children.	6. Inadequate clothing, especially by the standards of one's community.
3. A lack of adequate health care, for oneself and one's household, or frequently falling ill.	7. Inadequate sanitation.
4. Insufficient or low quality food.	8. A lack of adequate, clean, or easily accessible water.

TABLE 2: THE MOST COMMON DIMENSIONS OF POVERTY

LESS COMMON DIMENSIONS OF POVERTY	
1. Inadequate transportation and roads. 2. Begging and other degrading or dangerous work. 3. A lack of support from friends and family. 4. A lack of access to social services or other basic services. 5. An inability to access financial services and productive capital or being heavily indebted. 6. An inability to contribute to others or to participate in community functions. 7. A lack of electricity. 8. A lack of voice and recognition in community and government. 9. Being displaced. 10. Being near or having survived armed conflict. 11. Humiliation and shame.	12. Being subject to violence. 13. Being subject to economic exploitation. 14. Being subject to sexual exploitation. 15. Lacking the ability to present oneself in a way that meets the standard of one's society (such as not having cosmetics). 16. Lacking a cell phone or other forms of communication. 17. Lacking official identification and citizenship. 18. Not having secure access to contraception and/or sanitary pads. 19. A lack of ownership of assets and secure property rights to those assets.

TABLE 3: COMMON BUT LESS FREQUENTLY MENTIONED DIMENSIONS OF POVERTY

A common theme across sites is not just the availability (or lack) of certain goods and services, but the quality and price of these goods and services and the regularity and security of access. For example, many participants have children in school but they often believe that the quality of schools is quite poor. Similarly, most participants believe that poor people access some forms of health care, but this often involves traditional healers or poorly staffed or equipped clinics. In Naleba, Fiji, youth participants contend that it is the lack of quality and variety of food that allows one to identify others as poor. Uncertainty surrounding the security of one's home and possessions, or access to goods and services, is central to the experience of poverty for many participants.

In many cases, the term 'hardship' captured the gendered distribution of deprivation better than poverty. Many participants, though certainly not all, associated 'poverty' with material poverty, and viewed that as something shared widely, and often evenly, between men and women. But participants were much more likely to identify gender differences in hardships that men and women face. There are three general areas in which these are revealed. First, the burdens that participants face are highly gendered. Nearly all participants recognised socialised roles and responsibilities which are highly gendered. These roles and responsibilities affect the burdens participants face when deprived. For example, women in Indonesia reported that they bear greater responsibility for child care when resources are scarce and feel worse when they are unable to provide for their children.[26] Differential burdens are also present in relationships and reproduction. In Malawi, women and girls reported facing greater pressure to marry, especially when in economic need, and face physical, emotional, and financial difficulties when carrying unwanted pregnancy. Second, both men and women often identified different opportunities for responding to deprivation. For example, in Malawi a female participant noted that, when times are difficult, men can find short term casual labour, but women are limited in their options (for reasons such as mobility, education or social constraints) and often must turn to prostitution. Third, participants seemed to identify gender differences in the ability to control their lives. All participants who addressed this subject expressed frustration at the way in which outside forces determine how well their lives go—from government interference and bribery to droughts and hurricanes to economic downturns. But men and women tended to identify different kinds and levels of control over the decisions that affect their lives—in public political discussions, in household decision-making and in social interactions.

Importantly, almost all of the first phase fieldwork rejected a simple view of how gender, age, and generation function in the distribution of goods and services. The simple view might hold that women, children and the elderly are always disadvantaged at the expense of men. But many participants, from a variety of sites and social locations, rejected these views, at least in a simple formulation. First, many, though not all, participants initially identified members of all gender and age groups as equally poor (though some later revised their opinions). Second, participants suggested that, in times of scarcity, distribution was based on need or function—for example, many reported that children would eat first when there was not enough food. Some participants said that more food tended to go to male adults only when this was needed for their workload. However, it is important to note that different participants in the same site disagreed on household priorities. For example, at one site in Angola, middle aged men said children were prioritised in household distribution, while middle aged women said men were prioritised.[27]

Biological and social needs

Participants identified many dimensions that are at least partially related to biological needs: adequate food, clothing, shelter, water, sanitation, and health care all directly relate to biological needs. Of course many other dimensions, such as physical security, employment, income, and assets, can be used to fulfil individual biological needs, but these dimensions serve many other functions as well.

However, there is an irreducibly social aspect to both poverty and hardship as identified by participants.[28] Some of the social aspects are highlighted in the dimensions

26. This can be read in two ways. It might mean that because women bear responsibility for child care and rearing, they feel worse when this task is not completed. Alternatively, it might mean that women are generally more empathetic, especially towards children, and therefore care more when children suffer, irrespective of their social responsibilities.

27. See Angola Phase One report.

28. This echoes the views of Adam Smith and more recently Peter Townsend that poverty is in part about the inability to participate in the social life of the community. See: Smith, A. (1863) *An inquiry into the nature and causes of the wealth of nations*. A. and C. Black. Also see: Townsend, P. (1979) *Poverty in the United Kingdom: a survey of household resources and standards of living*. University of California Press.

that participants identify as constituting poverty. For example, clothing and smell are ubiquitous in the reports as indicators of poverty. Another social aspect was revealed when participants said that poor people are characterised by not having anyone they can depend on. Participants of all ages said of elderly individuals in particular that they had no spouses or children who could provide support and that this either caused or constituted their poverty. Multiple groups of participants identified shame from activities undertaken as a result of poverty (such as begging), living situations (such as in or near garbage dumps), or their treatment by others (such as insults and abuse by other communities), or from their need to borrow from neighbours, as being primary hardships they face.

Many participants said that one characteristic of being in poverty is being unable to contribute to others both in formal community functions such as weddings and funerals and also through informal mechanisms. Conversely, those who are not poor are not hampered from participating fully in community functions or supporting friends and community members when needed.

Vulnerability and exploitation

One common theme from a range of participants was a concern not just with immediate material need, but with individual, household, and community vulnerability. In some cases, individuals are vulnerable to exploitation by others. In other cases, they may be vulnerable as a result of other potential risks and threats. For example, many participants access electricity through informal arrangements. Participants viewed these arrangements to be problematic not only because it was difficult to procure the necessary energy, but also because such arrangements made participants vulnerable to the whims of the provider, who might turn the electricity off without notice, charge higher rates than expected, or deny requests for access.

Differences across sites

There is an unsurprising difference between the responses of participants in rural and urban areas, although it only appears in a few dimensions. Most prominently, rural participants are more likely to highlight the importance of ownership of and access to land. Urban participants may discuss property and property rights, but it is much less common than in rural sites. Rural participants are also more likely than their urban counterparts to emphasise the distance of services, the quality and cost of transportation as well as the lack of employment opportunities, although some urban participants do address the cost and quality of transportation. Urban participants are most likely to discuss noise, pollution, and exposure to vices.

The level of deprivation that is associated with poverty in a given site is also sensitive to expectations, which are shaped at least in part by one's location. For example, in Malawi the poor are identified as not having even a mat to sleep on, while in other sites they are identified as not having a bed to sleep on. The relevant dimension of deprivation appears the same but thresholds may vary based upon the prevailing standards in the community.

In some sites, especially urban and marginalised, participants were much more likely to discuss issues not present in other sites—the dangerous, degraded, and polluted environment, for example, or social exclusion and a lack of citizenship, disrespect, and threats to property.

Differences across participants

Many dimensions of deprivation were common to all participants. But some participants were more likely to mention or prioritise certain dimensions, and these were linked to gendered roles, responsibilities and experiences. Men were more likely to identify productive capital (farm implements, ability to borrow), formal employment, and access to electricity as dimensions of deprivation. Female participants were more likely to discuss education, health care, and an inability to care for their families. Female participants were also more likely to identify the lack of small assets, being subject to sexual exploitation, and the lack of children or productive partners as constitutive of poverty. Female participants more commonly identified sanitation, access to sanitary pads/products and access to adequate contraception as important.

Sometimes when discussing the same dimension of deprivation, men and women would identify it for different reasons. For example, bad roads and infrastructure were identified by men as obstacles to market access and productive economic activity, while women were more likely to highlight limits on their mobility and safety that resulted from bad, unlit roads.

Elderly participants appear slightly more likely to highlight the importance of social relations, and in particular the existence of others who can be depended on to provide support, as dimensions of deprivation. They are also less able to cope when immediate infrastructure, including shelter and roads, are not adequate, whereas younger participants are less affected by these deprivations.

Middle-aged participants appear most affected by the burdens of caring for and supporting others for whom they have responsibility. Women and men both note the difficulty in providing food for their families, finding adequate work and income, protecting the family from hardship and deprivation. But, as noted above, their responsibilities differ, with women more commonly responsible for education, health and work in the home.

Young participants are the most likely to express concern over education, especially its quality and availability. They also highlight concern with a lack of decent employment

opportunities, and the risks and likelihood of being exposed to crime, sex work or sexual exploitation, especially for women, if such opportunities are not available.

Similarly situated participants did not speak with one voice. While on some points there was considerable agreement, participants often disagreed in their responses to key questions. It is not as though all members of a single age and gender group share the same views, which differ greatly from those of other groups. Rather, we can at most detect different points of emphasis and different priorities based on age, gender and other features of personal identity.

Striking findings

In many but not all sites, participants viewed the household as an appropriate unit of analysis in assessing poverty. For example, in the Indonesian site Gunung Rancak, one male participant summed up a common belief among participants, that "if one is poor, the whole family is poor". However, despite many participants stating that 'poverty' is commonly shared among household members, participants nearly universally noted that the content of deprivation can differ by age and gender. The differential content of this deprivation was largely determined by differentiated social roles and individual needs. For example, in some sites participants reported that men bore a disproportionate burden from unemployment because they were expected to provide for the family. In other sites participants suggested that women bore a disproportionate burden when food or water was scarce because they were responsible for feeding and cleaning the children. It is important to note that these social roles bring an important affective component to the deprivation: it is not just that the woman is frequently expected to care for the children, and thus bears greater burdens when resources are scarce. She will feel much worse if her children are deprived.

Several dimensions of poverty or hardship were identified that are rarely addressed in the literature about poverty, gender and measurement. One dimension, which we provisionally called vice, tracks exposure to drug use, alcoholism, large groups of inactive and unemployed people, prostitution and crime.[29] Many participants clearly identified clothing, physical appearance, and smell as components of poverty—this was partially about biological need (for example, a lack of footwear can lead to pain and illness) but mostly about social standing. Being able to dress, present oneself and appear in a way that permitted one an acceptable level of standing in the community. Participants forcefully highlighted the importance of infrastructure, especially roads and transportation, and the importance of reliable access to it at a reasonable cost. Interestingly, many participants, and especially women in Angola, identified a lack of official identification as a very important deprivation in its own right, which also instrumentally affected their ability to access important goods and services. Finally, many female participants raised issues of sexual exploitation. The concern was not only about sexual violence per se (an issue which has received more significant treatment in public discourse) but about coercive sexual arrangements—women having to take older partners to receive economic support, or being pressured into early marriages. In some cases women also noted the hardship of being deprived of sexual relations because partners were having sex with prostitutes or other partners.

Implications for measurement

The first phase research has a number of direct implications for measurement.

First, measurement should, insofar as possible, be scalar, reflecting the variety of levels of deprivation that can occur.

Second, measurement should, insofar as possible, take account of the cost, quality, and reliability of access to goods and services.

Third, insofar as possible, measurement should be multidimensional.

Fourth, insofar as possible, it should be context-sensitive. To maintain comparability across contexts, this could be done in two ways. Evaluation of deprivation in a given dimension should be made contingent on context. For example, whether one has adequate shelter should be sensitive in part to local weather conditions. Additional survey modules, and thus indicators, should be added in regions where the dimension under consideration is important.

Fifth, insofar as possible, measurement should be agent-sensitive—that is, measurement should take into account, insofar as possible, the different needs of individuals. For example, income poverty lines might be sensitive to the cost of contraception and sanitary pads for those individuals who need them. Measurements of deprivations in health, income, nutrition etc. could be outcome based, so as to account for differential human needs. For example, indicators of nutrition might look at outcomes, such as weight, height, iron in blood, etc. rather than caloric intake.

Given these initial implications for how deprivation should be measured, the second phase of research sought to identify those dimensions of deprivation which should be included in a multidimensional measure. The next chapter reviews this process.

29. In the second phase ranking exercise, we moved to the language of "freedom from the disruptive behaviours of others" to clarify that the vice to be avoided was not one's own and to avoid stigmatising language that might skew participant evaluation.

CHAPTER THREE PHASE TWO METHODS AND FINDINGS

THE RICH INFORMATION FROM THE FIRST PHASE OF RESEARCH HELPED TO BEGIN THE CONSTRUCTION OF A CONCEPTION THAT SHOULD UNDERLIE A NEW MEASURE OF POVERTY—THAT IT SHOULD BE MULTIDIMENSIONAL, THAT IT SHOULD BE SCALAR, THAT IT SHOULD BE CAPABLE OF REVEALING GENDER DISPARITIES AT THE INDIVIDUAL LEVEL, AND THAT, IN SO FAR AS POSSIBLE, IT SHOULD BE SENSITIVE TO DIFFERENTIAL NEEDS AND UNIQUE CONTEXTS OF DEPRIVATION.

The first phase of research also generated a long list of candidate dimensions that could collectively define the bounds of what should be included in this new measure—counting permissively, 30 or 40 dimensions would be under consideration. But there is a great risk to including all possible dimensions within an individual measure. The conception can become too expansive. The more dimensions that are included in an understanding of multidimensional poverty, the less weight that will be assigned to each. The conception can become too far removed from common understandings of poverty and/or deprivation, and thus unlikely to be taken up in anti-poverty work or have political salience in guiding the allocation of scarce resources. And it can become more expensive and difficult to gather reliable information in a multi-topic survey as the list of included dimensions expands. Furthermore, individuals and institutions in anti-poverty work may have difficulty attending to such a wide array of dimensions.

Purpose

The second phase of research was thus designed to help select from the candidate dimensions generated by Phase 1 those dimensions that should be included in the final measure and to give some sense of the relative priority those dimensions should have in a composite multidimensional measure of poverty. We planned the second phase to be quantitative, to supplement the qualitative information from the first phase and to provide further guidance on what should be included in and excluded from the measure.

Structure

In the second phase, the same research teams returned to the same sites across all six countries involved in the first phase and conducted individual surveys with participants. There were roughly 100 participants per site, 300 per country, and 1800 across the six countries. In some sites the participants were the same as in the first phase, and in other sites they were not. As in the first phase, participants were informed of the nature of the research and the methods involved, and formally consented to participate.

The second phase survey involved three parts. The first part of the survey collected information about the respondents: their age and ethnic status, the composition of their household and the nature of their work as well as their position in several dimensions, including education, nutrition, and access to water and sanitation. This first section of the survey was designed to allow us to determine whether participant preferences and views varied with respect to their individual achievements or personal characteristics.

The second part of the survey asked participants to evaluate whether a dimension was essential, very important, not very important, or not at all important to determining whether a life was free from poverty or hardship. Before the dimension was evaluated, the interviewer provided a brief description of each dimension, reproduced in the table below. There were two reasons for providing dimension descriptions. First, doing so allowed for standardisation across contexts of the definition that participants would have in mind when evaluating any given dimension. Second, it allowed for a definition of the possible scale of achievement within a dimension and of the range of circumstances encompassed by a dimension, given that some participants may have had limited exposure to others' experiences in particular dimensions of life. Two participants considering food, for example, might have in mind very different deprivations—one considering almost never having a square meal in a day, the other imagining missing one or two meals a week. Therefore, all dimension descriptions include both a sense of what life is like for those who are very deprived in a given dimension and for those who are not deprived in the dimension. The dimensions were described as in the chart below. Then, the researcher asked the participant to decide whether the dimension was essential, very important, not very important, or not at all important to a life free from

poverty and hardship. The candidate list of 25 dimensions was distilled from the first phase reports and the joint analysis workshop, which began the work of drawing out common themes across sites. To be included in the second phase, a dimension had to be considered important by a non-negligible portion of the first round participants, be a plausible candidate for inclusion in a multidimensional measure of deprivation and avoid extensive overlap with other dimensions under consideration.

On the next two pages is the list of the 25 candidate dimensions and their accompanying descriptions.

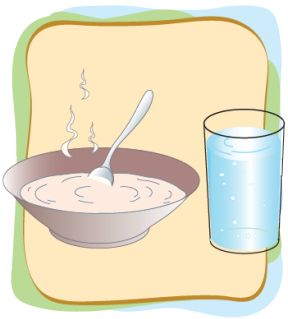
1. FOOD	Some people always have enough to eat and are never hungry or malnourished. They also have variety in the food they eat so that eating is enjoyable. Other people are constantly hungry and malnourished, which often leads to sickness and an inability to work or to learn in school.
2. CLOTHING	Some people have many changes of clothes, including plenty of clothes for special occasions. Others don't have enough clothes (including shoes) to protect them from the weather or from hazards in the environment, and when they go out they often feel that others look down on them because they are not properly dressed.
3. WATER (personal and household use)	Some people have plenty of good quality water for all their needs including drinking, cooking, and washing. Others never have enough water, so they're often thirsty, unable to cook or to wash. Whatever water they do have is dirty and unhealthy, often causing sickness.
4. SHELTER	Some people have a large house that provides good protection from the weather, has a floor that is easy to keep clean, separate kitchen and living/sleeping areas and privacy for all household members. Other people have shelter which provides little or no privacy or protection from the weather or they have no place to live at all and are forced to sleep on the street.
5. TOILET FACILITIES	Some people have a private flushing toilet in the home. Others don't have any toilet facilities and often have to go to the toilet in the open and may have to wait until dark for privacy. The existence of human waste in their environment is a constant problem.
6. COOKING FUEL	Some people use gas or electricity to cook. This is quick and doesn't cause smoke inside the house. Others have to buy or collect coal, dung or wood, and when these fuels are burned they cause lots of smoke inside the house, resulting in breathing difficulties and other health problems.
7. ELECTRICITY	Some homes have safe and permanent access to electricity, for multiple purposes including cooking, heating and cooling, lighting, and running appliances such as a television set. Other homes have no electricity at all, or occasional unreliable access through unsafe connections.
8. HEALTH CARE	Some people, when they or their children fall sick, get health care that is provided by well-trained health professionals with access to medical equipment and support services in a clean and safe environment. These people can get the medicine they need to treat their illness. The chances of being cured of serious illness are good. During pregnancy and childbirth women can call on excellent professional care. Other people either can't afford health care or it isn't available of where they live. Medicines they need are too expensive or aren't available. If they get sick, they have to rely on traditional forms of health care or poorly trained health care providers in under-resourced facilities. Their chances of recovering from serious illness are poor. Pregnancy and childbirth carry major risks for both mothers and babies.
9. EDUCATION	Some people can read, write and do number calculations at a level adequate for employment in an office. And they can send their children up to whatever education level they think is desirable, with good teachers and facilities. Others can't read and write at all, and they are not able to do simple number calculations. They don't send their children to school, either because schools are not available, or because they are too expensive, or because they think the quality is too low to make schooling worthwhile.
10. PROPERTY OWNERSHIP & INHERITANCE RIGHTS	Some people have customary or legal rights to own, inherit or control housing, land and other significant property, and they have these rights on a basis of full equality regardless of gender, marital status, family relationships and related issues. There are customary or legal channels open to them to protect these rights if they are threatened. Other people have no such customary or legal rights. They are completely at the mercy of others when it comes to ownership and control of property.
11. SEXUAL AUTONOMY	Some people are free to choose when and with whom they have sexual relations with. They never feel pressured to engage in unwanted sexual relations to ensure social acceptance or to meet economic need. Others are constantly under pressure to have unwanted sexual relations for social or economic reasons. They have little or no control over when, where, with whom and what form they have sexual relations.
12. FAMILY PLANNING	Some people have unrestricted access to multiple forms of contraception and full freedom of choice in their use. They can call on a full range of professional advice on options for dealing with unwanted pregnancy and get professional medical assistance to safely terminate unwanted pregnancy. Others have no access to any form of contraception. They are not able to get professional medical and other advice on options in respect of unwanted pregnancy, nor can they get professional medical assistance to terminate an unwanted pregnancy.

13. FREEDOM FROM VIOLENCE	Some people are never subject to physical, sexual or emotional violence, either in the home or outside it, and have no reason to fear violence. Others are often subject to violence and are constantly and justifiably fearful of it.
14. FREEDOM FROM THE DISRUPTIVE BEHAVIOUR OF OTHER PEOPLE	Some people are seldom or never exposed to behaviours such as gambling, drug use, alcohol abuse, and prostitution in their community, and these things have no impact on their lives. Others are frequently exposed to these sorts of behaviours, and find that they have major negative effects on the quality of their lives.
15. PERSONAL CARE	Some people are always in a position to keep clean and presentable given the standards of their community. They have reliable access to all needed products, such as soap, toothbrush and toothpaste and sanitary products. Others don't have access to these products and therefore often feel uncomfortable in their bodies. They often worry when they go out that others will avoid them or look down on them.
16. FREE TIME	For some people every day comprises work, either for pay or unpaid work such as housework or looking after their children, eating and sleeping. If they have any free time at all, they are too tired to make any use of it. Others have plenty of free time each day, and they have the resources to make this free time enjoyable, for example by pursuing a hobby, relaxing with family and friends or enjoying entertainment.
17. LOCATION OF NECESSARY SERVICES & RESOURCES	For some people all of the major services or resources they need, such as schools and medical centres are within easy reach. For other people, major services and resources are often a long way from their home, and they have to take long and uncomfortable journeys to reach them. This means that they can't use these services at all, or they use them much less than they would like, or using them means that they have to give up doing other important things.
18. FREEDOM OF MOVEMENT	Some people rarely travel outside the home, village or local community because of social norms or because there is no safe or affordable transport. They have very limited freedom of movement. Others are able to travel regularly outside their local community using comfortable, safe and efficient means of transport.
19. INFORMATION & COMMUNICATION	Some people regularly listen to the radio, watch television and have access to other sources of information. They often use the telephone and the internet. They are well-informed about worldly matters. If they need information about any subject, they know how to use modern means of communication to find it. Others have no access to radio and television, and rarely use a telephone. They have little contact with the world outside their own community, and have very limited access to new information.
20. DISCRETIONARY ITEMS (items that are not necessary)	Some people are never able to purchase personal discretionary items such as occasional sweets for themselves or their children, a few soft drinks or alcoholic drinks per week or cigarettes per day, cosmetics, or occasional visits to places of entertainment such as movie theatres. All their money goes on things that are essential. Others can regularly afford these non-essential things that make life more enjoyable.
21. DEBT/ASSETS/ ACCESS TO CREDIT	Some people have little or no debt. They have sufficient assets, access to credit or social support networks to offer long-term protection against economic shocks such as illness, loss of employment, or natural disasters. Other people struggle to repay the debts they have. They have few if any assets they can pawn or sell if they need cash urgently, and their social support networks are weak or lack the resources to help. People in this situation are extremely vulnerable to any situation which reduces their income or increases their expenditure.
22. PARTICIPATION IN COMMUNITY FUNCTIONS	Some people are able to participate on equal terms with others in all major community functions such as weddings, funerals, and religious festivals. Other people are never able to participate in these functions, either because of low social standing, lack of suitable clothes or lack of means to purchase gifts or other requirements.
23. VOICE IN THE COMMUNITY	Some people are always consulted about decisions that have a major impact on their community, and they are able to exercise some influence on these decisions. They feel that their voice counts. Other people are never consulted about important public decisions, and they feel they have no voice at all in these decisions. They feel totally disempowered when it comes to public issues.
24. FAMILY RELATIONSHIPS	Some people live in families in which all the members cooperate and support each other. Major decisions, for example about the household budget, are made jointly and equally by husband and wife. Other people live in families that offer little or no support to individual members when problems arise, and where major decisions are always made by the same person without discussion with other family members.
25. ENVIRONMENT	Some people live in a healthy, attractive and safe physical environment with no significant pollution, waste, or dangerous hazards. For other people, the physical environment is dangerous and unpleasant, with some or all of the following: rubbish lying around, open sewers, constant noise, heavily polluted air and water, and a constant danger of traffic or other accidents.

TABLE 4: CANDIDATE LIST OF 25 DIMENSIONS

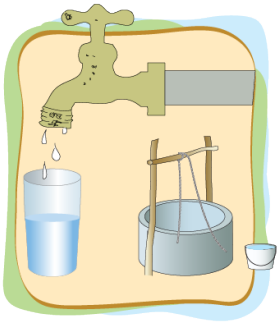
In the third part of the survey, participants were asked to rank the 15 dimensions most relevant for determining whether an individual's life is free from poverty and hardship. The interviewer presented the participants with visual representations of each of the dimensions (for example, a picture of a classroom for education, a picture of a health clinic for health care, a picture of a community discussion for participation in the community, and so on). With these 25 pictures in front of the participants, participants identified the first most important dimension, then the second most important dimension, then the third, until 15 dimensions had been ranked. After ranking 15 dimensions, participants were asked if they wanted to rearrange any of the pictures to adjust their stated rankings. Finally, participants were asked whether any additional dimension not included in the pre-selected set of 25 candidate dimensions should be included in the top 15 and to state where this dimension (had it been included) would fall in the top 15.

Here we show the pictures used by the research team in Mozambique:

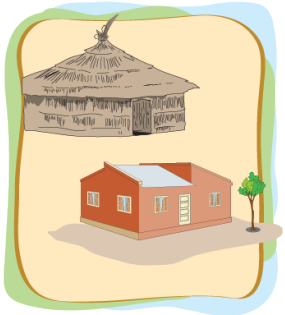


1. FOOD

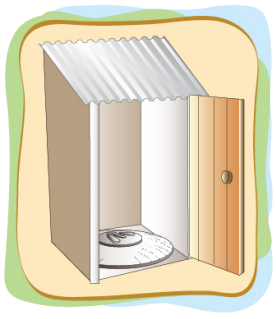
2. CLOTHING



3. WATER (PERSONAL AND HOUSEHOLD USE)

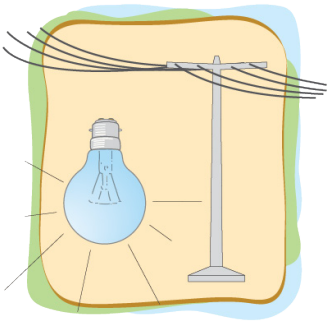


4. SHELTER



5. TOILET FACILITY

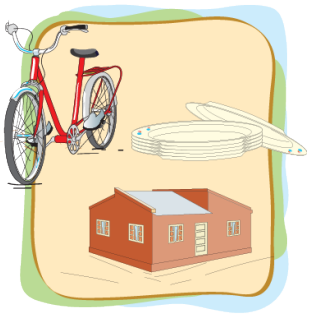
6. COOKING FUEL



7. ELECTRICITY

8. HEALTH CARE

9. EDUCATION



10. PROPERTY OWNERSHIP AND INHERITANCE RIGHTS

11. SEXUAL AUTONOMY

12. FAMIILY PLANNING

13. FREEDOM FROM VIOLENCE

14. FREEDOM FROM DISRUPTIVE BEHAVIOUR OF OTHER PEOPLE

15. PERSONAL CARE

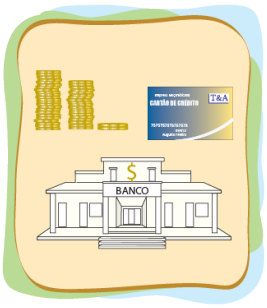
16. FREE TIME

17. LOCATION OF NECESSARY SERVICES AND RESOURCES

18. FREEDOM OF MOVEMENT

19. INFORMATION AND COMMUNICATION

20. DISCRETIONARY ITEMS (ITEMS THAT ARE NOT NECESARY)



21. DEBT /ASSETS /ACCESS TO CREDIT

22. PARTICIPATION IN COMMUNITY FUNCTIONS

23. VOICE IN COMMUNITY

24. FAMILY RELATIONSHIPS

25. ENVIRONMENT

Summary dimension rankings: overall and by gender

Summary rankings of the dimensions are provided below.[30] For the purposes of this table, dimensions that were not ranked by participants were counted as being ranked 20th. This builds in a 'penalty' for those dimensions that were not ranked by a given participant.[31] Clearly, adjusting the size of the penalty, or eliminating it altogether, modifies the overall performance of the dimension.

	Ranked in top 15 by x proportion of participants (percentage)	Average rank: female participants	Average rank: male participants	Average rank: gender difference	Average rank: all participants	Statistically significant difference between female and male rankings
Food	95.2	3.43	3.67	0.24	3.55	
Water	94.8	4.75	4.81	0.06	4.78	
Shelter	92.3	5.07	5.94	0.87	5.51	*
Health Care	90.1	7.57	7.82	0.25	7.70	
Education	88.5	8.22	7.74	-0.48	7.98	
Toilet	79.4	9.28	10.34	1.06	9.81	*
Clothing	74.3	10.33	9.48	-0.85	9.91	* *
Cooking Fuel	71.5	11.01	11.79	0.78	11.40	*
Electricity	71.3	11.26	10.99	-0.27	11.13	
Family Relationships	78.7	11.96	11.92	-0.04	11.94	
Personal Care	64.5	3.07	13.64	0.57	13.36	*
Environment	65.4	14.24	13.65	-0.59	13.95	* *
Family Planning	55	14.25	14.55	0.30	14.40	
Infomation & Communication	54.8	14.67	14.96	0.29	14.82	
Freedom & Violence	49.5	14.84	15.29	0.45	15.07	
Location of Services	50.7	15.22	14.58	-0.64	14.90	* *
Voice in the Community	48.7	15.75	15.70	-0.05	15.73	
Free Time	46.6	15.66	15.91	0.25	15.79	
Freedom of Movement	47.1	15.92	15.59	-0.33	15.76	
Participation	48.1	15.99	15.40	-0.59	15.70	* *
Property	39.1	16.28	15.39	-0.89	15.84	* *
Debts/Assets/ Credit	36.2	16.65	16.22	-0.43	16.44	
Sexual Autonomy	24.7	17.71	17.65	-0.06	17.68	
Disruptive Behavior	23.1	17.96	17.64	-0.32	17.80	
Discretionary Items	8.4	19.29	19.26	-0.03	19.28	

* ranked higher by females
* * ranked higher by males

TABLE 5: SUMMARY RANKINGS BY DIMENSION

30. Data is available to enable more detailed analysis, for example, by country, age, gender and rural/urban location.

31. To avoid this problem, we could have asked participants to rank all 25 dimensions. However, it became clear through pre-testing that participants did not have strong preferences on the relative priority of dimensions near the end of the list. This is an entirely sensible view. While one might have strong thoughts on whether food or water should top the list of relevant dimensions, it is more difficult to come up with reasons as to whether entertainment or freedom from disruptive behaviour should be ranked last since neither is considered to be of great importance.

A few initial remarks are in order regarding the ranking of dimensions by participants before explaining in the next chapter the selection of dimensions that will constitute our recommended measure of deprivation.

There are two important limitations to the ranking exercise that are worth noting here. When an individual provides an ordinal ranking of dimensions (1st, 2nd 3rd etc.), this provides no information on how much more important one dimension is compared to another. We know that participants tended to rank food higher than water, but we do not know how much more important food was than water. Furthermore, when participants are asked to rank dimensions they had in mind, through a description provided by the researcher, we gained a sense of the very low end and rather high end of the dimension. But because we did not ask the participants to rank particular increments within each dimension, such as ranking the increment between the first and second meal of the day as compared to the difference between a private flushing and public flushing toilet, we do not know whether participant rankings might change if they considered particular increments as opposed to the whole dimension. Freedom from violence, for example, might have scored much higher if participants were considering an increment at the low end of the spectrum, where very badly off people are subject to regular, severe physical and sexual violence. We will discuss the issue of increment weighting in more detail in the final chapter.[32]

There was considerable consistency across sites and participants in the ranking of dimensions. Familiar dimensions of deprivation, including food, water, shelter, and sanitation, all scored relatively highly across sites and participants. While some dimensions were more highly ranked in some sites or by some participants, there was no radical variation in rankings in most sites for most participants.

There were fewer gendered differences in ranked dimensions than we might have expected. Although there are statistically significant differences in the ranking of 9 of the 25 candidate dimensions, these differences were still modest. No dimension exceeded more than a one position difference between men and women. Of course, as noted above, a ranking exercise does not provide information on the cardinal significance participants might attach to a particular dimension. This fact may mask where greater differences between men and women do occur.

Those dimensions which registered statistically significant differences between men and women do not necessarily track common perceptions about what would be important to women and men. Men gave higher rankings than women to property rights, participation in the community, the location of services, the environment, and clothing. Women gave higher rankings to personal care, cooking fuel, education, and shelter. We do not have information from participants about why they ranked the dimensions as they did. One might speculate that men, generally as heads of households and more likely to have socially prescribed responsibilities for home and land ownership, market participation and community governance, would prioritise property rights, participation in the community and the location of services. Alternatively, women, with socially prescribed responsibilities for caring for the family and meeting certain social standards in public appearance, might prioritise education, cooking fuel, shelter and personal care. However, such speculation cannot account for why men had ranked slightly higher the environment and clothing, while women had ranked higher shelter.

In the next chapter, we explain how we moved from the information generated in the first and second phases to our construction of a multidimensional measure of poverty that would be piloted in the third phase.

32. The research team put considerable energy into attempting to devise a ranking exercise that would ask participants to compare particular increments of achievement within a given dimension, as opposed to comparing entire dimensions. In the end given the large number of candidate increments and the challenges of doing fieldwork, practical and cognitive constraints prevented such an exercise from going forward.

CHAPTER FOUR
THE INDIVIDUAL DEPRIVATION MEASURE: A NEW TOOL FOR MEASURING POVERTY AND GENDER DISPARITY

BASED ON THE FIRST TWO PHASES OF RESEARCH AND REVIEWS OF EXISTING APPROACHES TO POVERTY MEASUREMENT, WE DEVELOPED AN INDIVIDUAL LEVEL MEASURE OF MULTIDIMENSIONAL DEPRIVATION. THIS INDIVIDUAL LEVEL MEASURE OF DEPRIVATION, WHICH WE CALL THE INDIVIDUAL DEPRIVATION MEASURE (IDM), IS TO BE USED FOR TWO PURPOSES.

The first is to identify those who should be categorised as deprived and to provide a picture of the nature and severity of their deprivation. The second is to construct population-level indices that reflect the level of poverty and gender inequality in that population. The majority of this chapter focuses on the first task—using measurement to identify individuals as deprived and to determine the extent of their deprivation. We describe the process by which information from the first two phases was used to develop the IDM and explain the various difficult choices and trade-offs involved in that process.

Dimension selection and description

For reasons briefly touched on in chapter one and explained in much more depth elsewhere (Pogge 2010b, pp. 199-221), we believe that a multidimensional, individual-level measure of deprivation is an indispensable tool for measuring social progress. We take "multidimensional" to mean that measurement should occur in a range of different dimensions or areas of human life and that indicators should be appropriate to those dimensions. In other words, we reject approaches that would measure achievement or deprivation (such as freedom from violence, education, sanitation, health care, etc.) simply in terms of actual expenditure or an expenditure value imputing the income value to these dimensions.[33] In order to meaningfully capture information in these dimensions, measurement must use indicators appropriate to the dimension—such as whether you have been subject to violence, how long you have been in school and what has been learned, the kind of sanitation you use, the kind of health care you use or have access to, and so on. If it is correct that multidimensional poverty measurement in this sense is desirable, then we must have reasons for including dimensions or excluding them from a multidimensional measure.

Our participatory research and other research in development studies generated a long list of candidate dimensions that deserved consideration for inclusion in a multidimensional poverty measure. One might think that we could simply select the most important dimensions as ranked by our participants in the second phase. But there are other considerations that should bear on the construction of a multidimensional measure. Below are six desiderata that we have used to select dimensions for inclusion in the Individual Deprivation Measure.

1. Conceptual plausibility: is the dimension plausibly considered part of the concept under consideration? Can it plausibly be included as part of the ideas of poverty and hardship?

This desideratum is intended to maintain conceptual coherence and plausibility among the selected dimensions. Our measure intends to capture dimensions of deprivation that both participants and common linguistic usage identify as constitutive of poverty and its closely related hardships. This bundle of core deprivations certainly permits of different reasonable interpretations. But we think that some dimensions of life are clearly beyond the scope of this concept. Happiness and religious experience are two examples. Happiness is clearly central to a life that is going well, and many people place great importance on their relationship with God.[34] Nonetheless, because our measure focuses on poverty and closely related hardships, measures of subjective states of well-being or the quality and kind of religious experience a person has are best considered beyond the scope of our inquiry and ought not be the basis for evaluating progress in

33. Equivalent income approaches modify a person's actual income by attributing to that income their consumption of non-income sources of welfare gains. For example, if a person uses health care or education without having to pay, this can be counted as 'income' gains in proportion to the monetary value of the services provided.

34. And happiness has rightfully been included in some approaches to assessing overall social progress. See, for example, McGregor, J. A., and Sumner, A. (2009) *After 2015:'3D Human Wellbeing'* IDS In Focus Policy Briefing 9. Institute of Development Studies.

poverty eradication.[35] This does not exclude the possibility that happiness or religious experience might be part of broader systems of social valuation.[36] But it does mean that anti-poverty programming cannot count as successful in reducing deprivation if a person remains hungry or at risk of violence but becomes happier or strengthens her religious belief.

2. Moral importance: is the dimension morally significant for people?

Selected dimensions ought to be morally significant and of a certain fundamental importance relating to basic human interests. Failure to have adequate achievements in these dimensions is of normative concern, and public policy and individual action should be directed toward reducing these shortfalls. Our measure will not capture all morally important features of a person's life, but we aim to exclude dimensions that are not of moral significance. Any identified dimension should be such that it is not merely unfortunate but morally objectionable that a person fails to have adequate achievement in it.[37]

3. Ease and reliability of measurement: are there good indicators for the dimension? Can information on these indicators be easily and reliably gathered for a particular individual?[38]

Feasibility constraints play a significant role in the design of a multidimensional measure. If reliable and easily gathered information cannot be collected at the individual level, particularly in the difficult contexts in which severe deprivation exists, then these dimensions ought not be included in the measure. Adequate surveys of consumption expenditure and many multi-topic surveys are very expensive and time consuming to administer and often require significant capacity from the administering organisation. We have therefore selected dimensions and indicators that can be measured reasonably well at a reasonable cost even in the most difficult circumstances.

4. Suitability for institutional response: to what extent is the dimension something that can and should be directly or indirectly addressed through governmental or non-governmental action?

We intend our measure to be deployed in assessing the progress in eradicating poverty and gender inequity. The measure should be able to provide guidance in developing and assessing programs, policies and institutional designs. Therefore, any dimension that is included in the measure should properly be the subject of action by governments, NGOs and civil society. In other words, if governments and NGOs ought not be involved in improving achievements in dimension X, X should be excluded from the measure. For example, strong religious faith or romantic relationships might be important for how well a person's life is going, but if governments and NGOs ought not be in the business of making people believe in God or fall in love with each other, then these dimensions should not be included in the measure.

5. Comprehensiveness: does the set of selected dimensions ensure that the concept being measured is adequately covered? Do individual dimensions help avoid any major or obvious 'blind spots' in the measure and do they avoid duplicating other included dimensions?

If we think of the measure as focusing on a core set of deprivations that constitute poverty and its closely related hardships, the selected dimensions should adequately cover the conception in hand, while avoiding unnecessary overlap. If the measure should cover biological and social needs, then it would be a mistake to have nearly all dimensions covering social needs and very few covering biological needs.

6. Usefulness and purpose: does the dimension serve the explicit purposes the project takes as fundamental?

Our project has several explicit purposes that the designed measure is expected to serve. For example, does the dimension help reveal important gender disparities? Does the dimension allow for comparison across context and over time? Does it allow for revealing other group disparities?

Fieldwork is relevant for (at least) desiderata 1, 2, 5, and 6. It tells us how participants view their deprivations, what they think is important, what range of dimensions covers

35. Many participants did raise religious faith as a centrally important dimension that should be used to evaluate whether a person's life is free from poverty and hardship.

36. For example, we think it is important that women have apparently made little progress on self-reported happiness as compared with men in the United States, and public policy should be responsive to this finding. However, we do not think that an individual's subjective state should be the source of her claim for anti-poverty resources. Rather, we think other measures, including the IDM, better serve this purpose. It is harder to justify including measures of the strength of one's religious commitment or experience in official measures of progress, though some countries have gone in this direction, for example Nepal.

37. This deprivation is morally objectionable in the standard case in which deprivation is unchosen. However, if a person voluntarily chooses not to work, or becomes deprived through freely chosen illegal activities for which he is eventually prosecuted, then his deprivation may not be objectionable.

38. More on indicator selection below.

the relevant conception they have in mind and (perhaps to a lesser extent) how a measure of deprivation can serve our explicit purposes, including revealing gender disparity.

Selected dimensions

Based on the above listed desiderata, we have assembled a list of dimensions to be included in our measure of deprivation. By way of review, phase one played an important role in determining the dimensions that were included in the second phase exercise and the range of achievements included in the dimension description. But it also influenced our thinking on the final construction of the measure. The second phase exercise helped refine the dimensions that should be included in a composite measure and also helped in setting the relative weights those dimensions should have.

All of the dimensions ranked highly in phase two should be included. Among these are food, water, shelter, health care, education and sanitation.

Because of the potential overlap between cooking fuel and electricity, we combined these dimensions into a single dimension of energy (consistent with global efforts in this sphere[39]). Similarly, there is considerable overlap between personal care and clothing (both reflect a person's ability to present herself decently according to the standards of her society), suggesting these two dimensions should be combined. Family relations and the environment are the next highest ranked dimensions on our list and deserve inclusion in the measure based on participant preferences. Because single individuals may be free from deprivation but have no direct family relations, for the purposes of the third phase we refer to this category as 'Decision-Making and Personal Support', reflecting the two components of family relations that are of concern but may be evaluated for single individuals as well as those living with family members.

Of the remaining middle ranked dimensions, some may be excluded for other reasons. Location of services is very important, but can be reflected by assessing individual use of particular services and/or the time spent in accessing those services. It need not stand alone as an independent dimension. Property rights may be very important for people in some communities (such as rural landowners) but much less important for people in other communities (such as renters in urban areas). Treatment of property rights is also complicated in cultures where communal or clan rights are recognised and where traditional property rights might be linked with one group (for example women in traditional matrilineal areas in Solomon Islands) but, in practice, decision-making control sits elsewhere. For these reasons, we determined that property rights were not as useful given the need for making comparisons across context and over time. Furthermore, it can be quite difficult to evaluate property rights at the individual level. In many cases the strength of a person's property rights can only be evaluated once they are challenged and the institutional environment is relied upon to protect one's property. Therefore, while property rights could be included in a multi-topic survey as an additional module in contexts where it is quite important, it is probably best excluded from an internationally comparable composite measure of deprivation.

Freedom from violence, family planning, voice in the community and time-use were all ranked slightly lower in Phase 2, and could be included or excluded based on the second phase data alone. We have chosen to include these dimensions because each, in different and important ways, is capable of revealing gender disparity. From existing data collection efforts, we know that these are areas in which significant gender disparities can occur,[40] and that deprivations in these areas can have significant impacts not only in their own right (the immediate harm of being subject to violence) but also instrumental impacts (for example, the economic, social, and psychological costs to the victim of being subject to violence).

Discretionary items, sexual autonomy, freedom from debt and access to financial services, freedom from the disruptive behaviour of others and freedom of movement have all been excluded from the measure, though we still recognise that important deprivations may occur in each of these dimensions.[41] Access to information and communication has also been excluded, although we capture information about the household ownership of a TV, phone and radio through a survey question on asset ownership.[42]

Financial and work status

In the first phase, participants identified employment and income as important components of a life free from poverty and hardship. Some participants also identified freedom from debt and access to financial services. Some of these dimensions (employment and income) were deliberately excluded from the second phase ranking exercise because they are instrumentally related to most other dimensions. A participant might plausibly think that with secure employment and reasonable income, all (or at least many) of their other deprivations would go away. We therefore include these two dimensions based on first phase participatory input but do so on a separate axis of deprivation.

39. Available at www.sustainableenergyforall.org

40. Among many other sources, see Revenga, A. & Shetty, S. (2011). *World Development Report 2012: Gender Equality and Development.* Washington D.C: World Bank.

41. The survey also captures to a more limited extent a person's access to information and communication by determining whether the family owns a cell phone, radio, or TV, though we do not use this for purposes of developing an indicator of access to information and communication.

42. This information on access to information and communication technologies does not inform the final score.

To capture a person's financial situation, we propose that information be collected for a second 'axis' of information. We follow the recently released Mexican multidimensional poverty measure,[43] which (at the household level) identifies on one axis income well-being and on a second axis the person's status according to seven social deprivations.

In the IDM we use a household asset index to estimate individual financial status, as income and consumption-expenditure are difficult to measure reliably in a short survey.[44] See page 37 for more infomation.

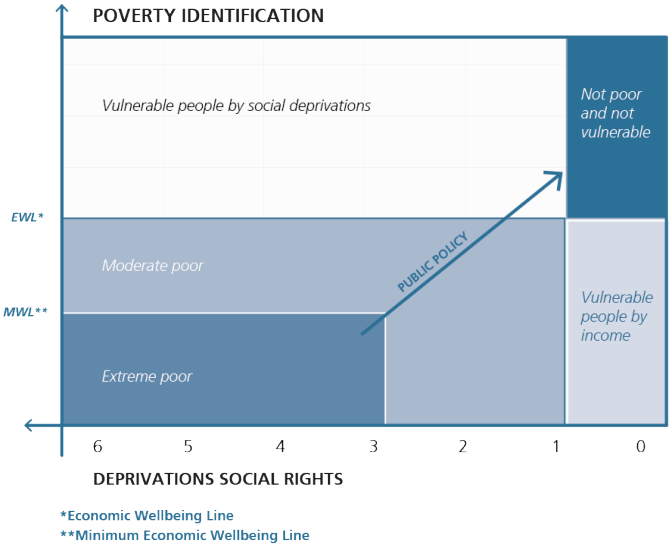


FIGURE 3: ILLUSTRATION OF THE MEXICAN MULTIDIMENSIONAL POVERTY MEASURE

The issue of employment and work is difficult to handle in a multidimensional measure of deprivation. Many participants, unsurprisingly, noted the importance of employment and jobs for living a life free from poverty and hardship. Most poor people don't have secure, formal employment, but are rather involved in a mix of non-cash economic activity, subsistence production and economic activity in the informal sector. Even aside from income generating activities, much informal work helps satisfy needs (care work, house work, subsistence agriculture, etc.). Further challenges arise in that the work opportunities of a single family member may generate welfare gains for all other members. It may therefore be misleading to count as deprived in the dimension of work a person who could find suitable employment but instead chooses to rely on the employment of a family member. We therefore leave some work-related welfare gains to be reflected in the asset index.

However, there is another component of a person's work that is also important—quality work may be in part about a person's status, identity and empowerment, in addition to financial gain. Many people in the communities where our research has been conducted are involved in dangerous, degrading, and gruelling work whose disutility extends beyond the limited financial return the work provides. We have attempted to address these deprivations through a module on the nature (safety and status) of a person's paid and unpaid work as part of the multi-topic survey, which is reflected on the axis measuring multidimensional deprivation. Considering both paid and unpaid work reflects our commitment to develop a gender-sensitive measure[45] and recognises the anomaly of excluding unpaid housework and care work from calculations of Gross Domestic Product.[46]

Indicator selection

Just as one needs to carefully reflect on dimension selection, so too one needs to reflect on the reasons for selecting indicators that measure a person's achievement or deprivation in each dimension to be included in the measure.

Participant dimension description

In selecting indicators we have tried, insofar as possible, to be faithful to the descriptions participants provided of key dimensions in phase one. For every dimension, descriptions provided by participants and recorded in country reports are far richer and deeper than the indicators selected. Considerations of feasibility and usefulness thus require narrowing our focus for the purposes of measurement. But anti-poverty policies, programs and institutional designs need not be insensitive to the range of important considerations involved in the dimensions investigated here that are not captured by our recommended indicators. For example, even though our recommended measure does not capture information on the diversity of food sources, anti-hunger programs should be properly concerned with monotonous and nutritionally deficient diets. We encourage readers of our work to investigate the greater detail provided by country and site reports as well as other published work from the project.

43. Available at www.coneval.gob.mx/Paginas/principal_EN.aspx.

44. The individual portion of our survey can be completed in under an hour.

45. Across the world, women continue to spend more time on unpaid household and care work than men, ranging from twice as much time in Sweden to 4.6 times more in Ghana to 6 times as much in Pakistan (Revenga & Shetty 2011, p.297). This is so even when women earn most of the income (Wisor 2012b). This has lifelong implications for their economic circumstances.

46. The System of National Accounts (SNA) distinguishes production that should be included in calculations of GDP and production that should be excluded. SNA work includes the production of all goods (whether or not they are sold on the market). In contrast, only services that are sold on the market are included. Extended SNA refers to work that is excluded from the calculation of GDP; this includes housework in one's own home, and unpaid care for children, elderly people, the ill and people with disability. United Nations Research Institute for Social Development, *Why care matters for social development,* UNRISD Research and Policy Brief 9; citing Budlender, D. (2008). *The statistical evidence on care and non-care work across six countries.* Gender and Development Programme, Paper No. 4, UNRISD, Geneva.

The space of measurement

Once dimensions have been selected, indicators must be identified that can capture desired information within the dimension. But this step also requires critical reflection, as there are many different indicators that could be chosen for any given dimension.

For any given dimension, one could measure:

1. The availability of resources in that dimension (how much food is around in, say, your village)
2. A person's access to resources in that dimension (how much food do you have)[47]
3. A person's use of resources in that dimension (how much food do you eat)
4. A person's achievement in that dimension (how well-nourished you are)
5. A person's subjective state of happiness or preference satisfaction within that dimension (how pleased or satisfied you are with your nutritional situation); and
6. The importance the person assigns to their current or possible position in that dimension (how important your nutrition is to you).[48]

The table below details each of these spaces of assessment for four candidate dimensions.

DIMENSION	FAMILY PLANNING	EDUCATION	ENERGY	FOOD
AVAILABILITY	What family planning methods are available in your locale?	What educational resources (schools, books, teachers) are around?	How much energy is around?	How much food is around?
ACCESS	*What family planning methods do you have access to?*	*What educational opportunities do you have access to?*	*How much energy do you have access to?*	*How much food do you have access to, that is, have it in your power to eat?*
USE	*What family planning methods do you use?*	*How much education do you use (days in school, teacher time, etc.)?*	*How much energy do you use?*	*How much food do you consume?*
ACHIEVEMENT	*Have you been able to have children at the pace you desire and avoid STDs?*	*How well educated are you (can you read and write, do math, critically reason, etc.)?*	*How well "energised" (food heated and cooked, lights lit, phone charged, etc.) are you?*	*How well-nourished are you as a result of your food consumption?*
HAPPINESS/ SATISFACTION	How satisfied are you with your family planning?	How satisfied are you with your level of education?	How satisfied/ happy are you with your energy consumption?	How satisfied/ happy are you with your food consumption?
IMPORTANCE	How important to you is your current achievement/ deprivation in family planning?	How important to you is your achievement/ deprivation in education?	How important to you is your achievement/ deprivation in energy?	How important to you is your achievement/ deprivation in food?

TABLE 6: ASSESSMENT FOR FOUR CANDIDATE DIMENSIONS

Rejecting availability, happiness and importance

Availability (one) is not a suitable space for measuring individual deprivation. The existence of ample food in one's district does nothing toward helping a person avoid deprivation, for example, so long as this person cannot get any of the available food (Sen 1982).

Happiness, or a person's subjective pleasure or displeasure with his or her achievement in a given dimension (five) is also inappropriate as an indicator of deprivation or poverty. First, subjective assessments of a person's status within a dimension raise challenges of comparability: does an Afghani woman saying she is pleased with her nourishment really mean the same thing as an Australian woman saying she is pleased with her nourishment? Second, assessments of happiness or subjective pleasure in a given dimension face the problem of adaptation—a person's satisfaction or pleasure with a given dimension may be a response to a lack of opportunity or to unjust circumstances (Sen 1999, p.62). A person may be satisfied with low-quality sanitation or very little education merely because she lives in circumstances in which access to education or adequate sanitation is denied. Third, participants did not place much weight on the 'subjectivist' metric of assessment in our participatory exercises.[49] That is, participants largely discussed the actual situation of individuals living in deprivation, such as having bad housing or inadequate clothing, as opposed to discussing whether individuals were unhappy with their housing or clothing. And fourth, given the purposes of our proposed new measure—to guide resource allocation and the evaluation of projects and institutional designs—it seems inappropriate that governments and other organisations may improve persons' deprivation score merely by changing their subjective pleasure with their dimensional status rather than changing the objective circumstances in which they find themselves.

A related problem for resource allocation is that a person with objectively better achievements in a given dimension may appear more deprived if she is subjectively unhappy

47. The question of accessibility is best assessed in terms of a person's access to all relevant dimensions, rather than any individual dimension. Given a limited budget, a person might be able to afford food, water, or sanitation, but not be able to afford all three together.

48. The space of importance might have several different meanings, depending on how it is specified. It may mean: how important is this dimension to you, irrespective of your current status in that dimension; how important is this to you, given your current status in this dimension; or how important is this dimension to you, given a certain incremental gain that you might have in the dimension, as compared to similar incremental gains in other dimensions. Regardless, we reject the relevance of subjective importance of a dimension to the participant for the purposes of indicator selection, while recognising that importance might play a role in the subsequent process of weighting dimensions.

49. That said, we did not actually prompt people to respond to this direct question.

50. Arguably, while variable satisfaction should not matter, general satisfaction does matter. For example, when the question is whether having to share a toilet with the members of another family adds to deprivation, then it's plausible to say that this depends on how people generally feel about such toilet sharing. If they generally dislike it, then it should count as adding to deprivation even in the case of those individuals who don't mind.

with her status in that dimension—again, a person with moderate access to clean water who is very displeased with this situation will appear worse off than a person with bad access to clean water who is not displeased with the situation. It is surely mistaken for governments to allocate resources to the person with moderate clean water access at the expense of the person with little or no access on the grounds that the former is more displeased with her situation than the latter.[50]

For similar reasons, we reject using indicators that reflect the importance an individual assigns to a dimension or their status within that dimension. Whether a person finds education really important or not at all important is irrelevant to identifying how badly off she is in that dimension.

It may be possible to develop an weighting scheme that is sensitive to individual or group-based preferences, which is sensitive to the importance placed on a given dimension, but the question of weighting individual deprivations is different from determining the objective status of a person's deprivation. Weighting schemes may be varied by users of data for different purposes, based upon different rationales. But initial measurement must provide data users a morally plausible and empirically adequate set of indicators from which to work. We believe these indicators cannot be found in subjective assessments of achievement within given dimensions.

At this point one might object: how can you argue that people's perceptions (either at the individual or group level) are not important in determining how badly off they are? Isn't that the whole point of the project? Are you not committed to participation after all? This objection can be resisted. For the purposes of guiding resource allocation and the measurement of progress, we can reject happiness or importance as relevant to determining how badly off a person is in a given dimension, while still recognising, and indeed embracing, that the same person can (and did) contribute to an interpersonal conversation about what objective dimensions of life should be central to measuring how badly off someone is. The existence of preference adaptation and the problem of comparability provide decisive reasons to reject measuring dimensions in the space of happiness or importance, but don't weigh against using participation and public reason to construct a multidimensional measure of deprivation. This is in part because worries about preference adaptation are mitigated when participation is deliberative, and includes large numbers of participants from diverse social locations. And worries about comparability in using deliberative participation are mitigated particularly when the conversation focuses on objective states of affairs (such as third party evaluations of deprivation) rather than internal subjective assessments (such as what it is like to be poor).

Endorsing access, use and achievement

Having rejected availability, happiness and importance, we endorse using indicators regarding 3) access, 4) use and 5) achievement. We find good reasons to measure a person's deprivation in some or all of these spaces for each of the 15 dimensions we sought to measure. For some dimensions, we have multiple indicators in multiple spaces. In other dimensions, we have a single indicator.

There are two ways to understand the spreading of indicators across these three spaces, as opposed to a principled commitment to only measure in a single space. One might hold that it just is the case that to determine how badly off a person is one must assess her access, use, and achievement in various dimensions. If we learn that a person has plenty of food, eats plenty, but is nonetheless malnourished (for example, because she has contracted a disease that depletes her consumed calories), it is hard to deny that the malnourishment should affect our assessment of how badly off she is. Alternatively, one might hold that all we actually care about (for moral or philosophical reasons) is, for example, access to resources. But a proponent of this view might think that indicators in use and achievement are decent proxies for a person's access to resources. It would then be an empirical matter to determine whether indicators of use and achievement are close proxies for access.

It is important to note here that we have taken feasibility considerations very seriously in constructing the new measure. We have designed a multi-topic survey that can be administered in roughly an hour in diverse circumstances with enumerators who do not require any special training or expertise.[51] Longer and more technically advanced surveys, such as the Demographic and Health Surveys, can generate rich information on individuals in developing contexts. These surveys are indispensable for much important information collection, but they are also costly and difficult to administer and do not currently generate composite measures of individual deprivation. Therefore, one consideration in the selection of indicators is whether we could easily and reliably collect the needed information. As one example, in the dimension of food, one might measure the micronutrients in a person's blood as an indicator of achievement. But given the added cost and difficulty of including this in our survey, we have no such indicator. We only include a series of questions on the hunger that a person has faced in the last month.

51. The individual portion of the survey can be completed in under an hour. The participant in each household who is most knowledgeable about the age, completed education and other characteristics of household members will also be asked to complete a short household survey. For the respondent completing both surveys, the full interview can be completed in around 90 minutes.

Objective and perceived status

In some dimensions we use an individual's perception of their objective status within a particular dimension. For example, in violence we ask about whether a person believes they will be subject to violence in the next year. In water, we ask about whether a person has enough water to meet her daily needs. These perceptions are needed to assist in measuring an individual's access, use, or achievement in a particular dimension. Perceptions of objective status are used in particular when we think this provides needed information to portray an adequate picture of individual deprivation. This should not be confused with measuring in the space of happiness or importance. We are not relying on subjective assessments, but rather, making objective assessments on the basis of subjective reports. If it were possible to avoid such subjective reports, we would have done so, but in many cases this is simply not possible. For example, in measuring the degree to which a person has control over decision-making in their household, we must rely on the participant's assessment of their control. Absent the time to conduct experimental studies which might generate a more objective account of a person's situation, this is the only option. In chapter 6 we will return to examining this method and will, in particular, explore whether it systematically biases the objective assessments we make toward understating women's deprivation.

Households and individuals

A fundamental commitment of the project is that individuals ought to be the unit of analysis in poverty measurement. This is necessary to be able to reveal intra-household distribution and any gender disparities within the household. Individuals are also, in our view, the ultimate unit of moral concern, and morality requires that social valuation be sensitive to the multiple deprivations they suffer. Therefore, whenever possible, we select indicators at the individual level. However, some dimensions are about resources that are difficult to measure at the individual level. For example, we attribute to individuals the financial status of their household, through a simple asset index. We attribute to all household members the materials of their dwelling, absent reason to believe (or time to investigate) whether individual members have differential experiences of housing quality under the same roof. While recognising that this will fail to reveal individual-level differences in financial status, the IDM includes a sufficient number of individual-level indicators to reveal intra-household difference in deprivation.

An ecumenical approach

Data collection has improved markedly in recent years as a result of multiple efforts to improve the quantity, quality, reliability, and availability of information on human progress.[52] There is still much more work to be done to improve information collection. We are conscious that our recommendations for data collection join many calls for new and better information. We have therefore aimed for our survey design to be consistent with a range of information collection exercises underway. That is, we believe that with minor modifications to survey questions and modules, all of the information needed to populate the measure we recommend can be gathered by means of commonly used survey instruments, including the Demographic and Health Surveys, the Living Standards Measurement Surveys, the Core Welfare Indicator Questionnaires, the Multiple Indicator Cluster Surveys and other multi-topic nationally representative survey efforts. Our recommendations do not necessarily require entirely new surveys and information collection. Needed information could be gathered through relatively minor modifications to these widely adopted surveys. Of course, the survey we have designed and administered can also be used to populate our recommended measure. To be ecumenical, where possible we drew indicators and survey questions from existing data collection efforts. We have also attempted to draw on the latest comparative research regarding the most robust indicators and survey questions, particularly for the purpose of comparison across contexts and over time.

What makes good indicators?

In selecting indicators for our dimensions, we have aimed for indicators to have the following features:

Validity: The indicator should measure the event or condition it is intended to measure.

Reliability: The indicator should produce the same results when used more than once to measure the same condition or event.

Specificity: Indicators should only measure the condition or event they are intended to measure.

Feasibility: Indicators should be selected that can feasibly be included in measurement exercises, given foreseeable constraints of limited finances and technical capacity.

Comparability: Indicators should be comparable across contexts and over time.

52. The Marrakech Action Plan for Statistics, the Partnership for Statistics for Development in the 21st Century, the Millennium Development Goals, and multiple initiatives from international and national institutions have improved the frequency and quality of data collection in developing countries.

These are general criteria that make for good indicators. We should note that it would require much more extended study to determine how well our indicators fare according to these criteria in comparison to alternative indicators. When possible, we have drawn on comparative studies that already exist to select the best indicators. In other cases, we have used untested or relatively new indicators and so are less certain of their performance against these criteria.

Scoring individual deprivation

While this survey provides useful information on individual deprivation, this information will be usable in evaluating an individual's poverty status only if it can be converted into a quantitative assessment of deprivation. Doing so requires several steps.

First, categorical information about a person's deprivation in a given dimension is recorded, for example, the kind of toilet they use.

Second, this categorical information is translated into an ordinal ranking of the categorical information. For example, we assume that a personal flushing toilet is better than a shared flushing toilet, which is better than a shared improved latrine, which is better than a shared unimproved pit toilet, which is better than no improved sanitation. In most cases we think the ordinal ranking of categorical information is uncontroversial.

Third, and perhaps most controversially, the ordinal ranking of a person's achievements is placed onto an interval scale, from one to five, reflecting a person's overall achievement.[53] Roughly, a score of one is intended to reflect extreme deprivation and a score of five is intended to reflect when an individual is not deprived. This is not to deny that welfare gains above a score of five are significant and may need to be tracked and captured for purposes of overall social valuation and measurement of gender equity, but simply to note that our measure focuses on deprivation and that gains above a certain level (which we designate with a score of five) can no longer plausibly be counted as reducing deprivation. This decision respects what is known in the literature as the deprivation focus axiom, which requires that a person's achievements above some minimally adequate level of achievement in one or more dimensions cannot compensate for shortfalls below such a minimally adequate level in other dimensions.

Fourth, once individual deprivations have been placed on a one to five interval scale, they are then weighted both within and across dimensions. Within a dimension, each step between intervals is adjusted to give greater significance to lower increments. Thus, an individual moving from level one to level two is deemed a greater gain than an individual moving from level four to level

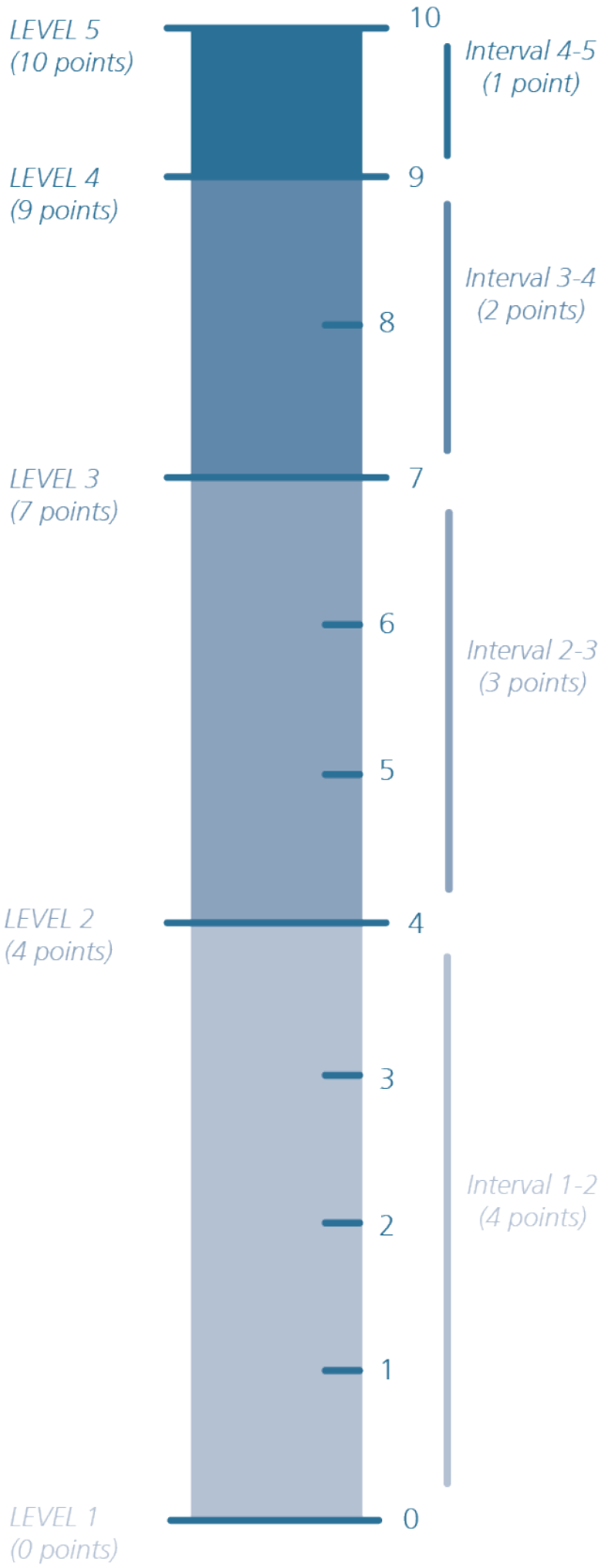


FIGURE 4: SCORING INDIVIDUAL DEPRIVATION

53. The reader may find the survey questions used to gather information for the IDM illuminating, but reject that individuals should be scored on an interval scale, or that these interval positions should be aggregated into a single composite figure. In what follows we attempt to explain why we think this is valuable. However, it is important to note that if one rejects the scoring and aggregation methods we recommend, one might still endorse our recommendations for dimensions, indicators, and survey questions.

five; and, conversely, a person falling from level two to level one is deemed a greater loss than a person falling from level five to level four. This prioritarian weighting within each dimension is justified by a range of considerations: there is greater moral marginal benefit to increasing the position of the worst off; more severe deprivations can have longer lasting negative impacts on individuals; and more severe deprivations tend to be more difficult to escape.

In other words, a person receives no points for being fully deprived. Moving from the first level to the second counts for four points, moving from the second to the third counts for three points, moving from the third to the fourth counts for two points, and moving from the fourth to the fifth counts for one point. This makes the lowest increment four times as important as the highest. This scoring reflects the decreasing importance assigned to less deprived individuals, but we recognise that alternative intra-dimensional weighting schemes could also preserve this feature.

A further adjustment is made in the weighting of dimensions when the dimension scores are aggregated into a composite, multidimensional deprivation score. This dimension weighting is intended to reflect the differential importance of some dimensions of deprivation over others. Deprivations of food and leisure time are both important—but, everything else being equal, deprivations of food are more important than deprivations of leisure time. Absent further investigation into the relative weights of different dimensions (to be discussed in Chapter 6), we have adopted a simple three-tiered weighting scheme based on the rankings participants provided in the second phase.

Each dimension is initially scored out of 10. The most important dimensions (dimensions one to five) are multiplied by 1.5. The second most important cluster of dimensions (dimensions six to 10) are not adjusted. And the third most important dimensions (dimensions 11 to 15) are multiplied by 0.5.

DIMENSION	INDICATORS	WEIGHTING
1. Food/ nutrition	Hunger in last 4 weeks	*X 1.5*
2. Water	Water source, water quantity	*X 1.5*
3. Shelter	Durable housing, homelessness	*X 1.5*
4. Health care/ health	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 1.5*
5. Education	Years of schooling completed, literacy and numeracy	*X 1.5*
6. Energy/ cooking fuel	Source of cooking fuel, any health impacts, access to electricity	*X 1.0*
7. Sanitation	Primary toilet, secondary toilet	*X 1.0*
8. Family relationships	Control of decision-making in household, supportive relationships	*X 1.0*
9. Clothing/ personal care	Protection from elements, ability to present oneself in a way that is socially acceptable	*X 1.0*
10. Violence	Violence (including sexual and physical assault) experienced in the last 12 months, perceived risk of violence in the next 12 months	*X 1.0*
11. Family planning	Access to reliable, safe contraception, control over its use	*X 0.5*
12. Environment	Exposure to various environmental harms that can affect health, wellbeing, income and livelihood prospects	*X 0.5*
13. Voice	Ability to participate in public decision-making in the community, ability to influence change at community level	*X 0.5*
14. Time-use	24 hour clock (labour burden, leisure time)	*X 0.5*
15. Work	Status of/ respect in/ for paid and unpaid work; safety/risk in relation to paid and unpaid work	*X 0.5*

TABLE 7: IDM WEIGHTING: SOME DIMENSIONS ARE MORE IMPORTANT THAN OTHERS

The table below illustrates the impact of this weighting scheme on the scoring of various levels of achievement within each dimension, from fully deprived to not deprived, across the 15 dimensions.

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	TOTAL POVERTY DIMENSION SCORE
Dimensions 1-5	*0*	*6*	*4.5*	*3*	*1.5*	*15*
Dimensions 6-10	*0*	*4*	*3*	*2*	*1*	*10*
Dimensions 11-15	*0*	*2*	*1.5*	*1*	*0.5*	*5*

TABLE 8: WEIGHTING WITHIN AND ACROSS DIMENSIONS

Therefore, across all 15 dimensions, there are a possible 150 points that can be accumulated. A person who is not deprived in any of the 15 dimensions will score 150. A person fully deprived in all 15 dimensions receives a 0, (it is unlikely that any human beings could survive for much time at this level).

As a final step, we place these scores on a scale from 0 to 100. This allows for ease of interpretation, and allows for calculating scores for respondents who did not receive a score in every dimension, by dividing the participant's actual score by their potential score, (the potential score is 150 if the respondent answers all questions, and less if she does not answer some questions).

In some dimensions, we have collected multiple indicators. In other dimensions we have only one. As discussed elsewhere (in the section on indicator selection), multiple

indicators were chosen when adequate coverage of a given dimension required gathering information on more than one indicator, and this information could be feasibly and reliably gathered in a brief multi-topic survey. We apply dimension weights to the average of (prioritarian adjusted) indicator scores. Of course, alternative weighting schemes across indicators could be applied, just as different weighting schemes within and across dimensions could be applied. We adopt equal weighting for multiple indicators within a dimension in the absence of reasons to prefer an alternative scheme.

Missing variables

In calculating a person's composite deprivation score, many of which include multiple indicators, we quickly encounter the problem of missing variables. Respondents may choose not to answer some questions, or provide answers that cannot be scored. Incorrect or incomplete answers may also arrive through errors involving data enumerators and data entry.[54] We therefore calculate composite deprivation scores for all individuals who have scores in 12 or more dimensions. When an individual is missing scores, we calculate her score as a fraction of her received points over her possible points, thereby maintaining comparability with other individuals who have recorded answers for more or fewer dimensions.

Categories of poverty

Once an individual's composite quantitative deprivation score has been calculated, the final stage is to organise by levels of individual deprivation. Rather than simply being above or below the poverty line, individuals may usefully be assigned to different categories of deprivation. Our participatory research, in which participants made scalar assessments of deprivation in their communities and reflected these assessments in different categories of deprivation, identifying different defining features for each, confirms this intuition. A series of thresholds designating moves between categories of deprivation helps to focus anti-poverty policy on the various stages of progress in poverty reduction rather than simply on moving people above a single threshold. It also helps to preserve a prioritarian commitment to the worst off. By identifying some individuals as extremely poor, this designation helps to emphasise that the most deprived are more deserving of consideration in anti-poverty policy and may be facing deprivation that is different not just in degree but in kind compared to other individuals.[55]

For the purposes of the IDM, which is calculated on a 0 to 100 scale, we have established the following thresholds for assessing the deprivation of individuals.

FROM 90-100, WE CATEGORISE INDIVIDUALS AS NOT DEPRIVED.	While these individuals do fall below what is meant to be a threshold deemed sufficient for a minimally decent life in some dimensions, we think it is fair to categorise them as not deprived as these individuals' shortfalls must be of moderate depth and few in number to stay above 90. For example, an individual could be at level five in most dimensions, but have a score of four because they believe it is difficult to effect change in their community or a score of three because they feel they do not have a lot of control over decisions that affect their life. Such a person could be slightly deprived; but given their achievements in all other dimensions they ought not to count as deprived.
FROM 80-89.9, WE CATEGORISE INDIVIDUALS AS SOMEWHAT DEPRIVED.	Falling in this category indicates that an individual suffers from non-negligible deprivations, but is still relatively well off. n our experience many individuals who have received a score in the 80s may suffer from several important deprivations, but reach the minimal thresholds in most other deprivations.
FROM 70-79.9, WE CATEGORISE INDIVIDUALS AS DEPRIVED.	These individuals fall below the minimum threshold in a range of deprivations and some of their shortfalls are significant. They might occasionally be hungry, have a house that is made of some rudimentary materials, share a toilet with members of another household rather than have their own, and lack some control over decision-making in their household.
FROM 60-69.9, WE CATEGORISE INDIVIDUALS AS VERY DEPRIVED.	These individuals are deprived in a larger number of dimensions or are more severely deprived in the dimensions where they fall short. A person who is sometimes hungry, has low quality shelter, lacks running water and is subject to violence may be typical of this range.
BELOW 60, WE CATEGORISE INDIVIDUALS AS EXTREMELY DEPRIVED.	These people will be deprived in a large number of dimensions, and be very deprived in at least some subset of those dimensions. A person who is regularly hungry, who lacks any sturdy materials for housing, uses no improved sanitation, cooks with dirty fuel, has little influence over the community, is subject to violence and perhaps suffers several other deprivations is typical of this category.

TABLE 9: THRESHOLDS FOR ASSESSING THE DEPRIVATION OF INDIVIDUALS

54. The third phase survey undertaken in the Philippines to gather data to populate the IDM had a very low level of missing data. In only four of the 15 dimensions was there missing data (freedom from violence; family planning; voice; and respect at/for paid and unpaid work), and in most of these cases the missing data was because respondents chose not to answer a particular module (freedom from violence) or because the module was not relevant (for example family planning for females 50 and over and for other respondents who did not consider it relevant to their current life circumstances). For more details, see Chapter 6.

55. On the definition of chronic poverty, see Moore, K., & Grant, U. (2008).*Very poor, for a very long time, in many ways... Defining 'the poorest' for policymakers.* Working paper No 124. Chronic Poverty Research Centre. Brookes Worlds Poverty Institute, University of Manchester, UK.

These thresholds need to be validated against the perceptions of individuals in poor communities and the scores that are calculated in a range of different contexts. It is our hope that future tests of the IDM can compare the IDM categorical designations to participants' perceptions of people in their community.

Two axes of achievement

The composite figure of deprivation tracks an individual's status in 15 dimensions of material and social importance. However, these dimensions do not capture a person's financial status. As discussed earlier in this chapter (in the section on work and financial status), monetary poverty is an undeniably important component of poverty, and the lack of income and wealth was heavily emphasised by participants in the first phase. We therefore recommend that tracking individual deprivation take account of both financial deprivation and deprivation in other dimensions of life. We follow the recently debuted Mexican multidimensional poverty measure in tracking material deprivation on one axis and multidimensional deprivation on another. Doing so allows anti-poverty policy makers to track when multidimensional deprivation is related to financial deprivation, and when it is not. Furthermore, it recognises that financial deprivation is an important component of poverty, independent of its relationship to multidimensional deprivation.

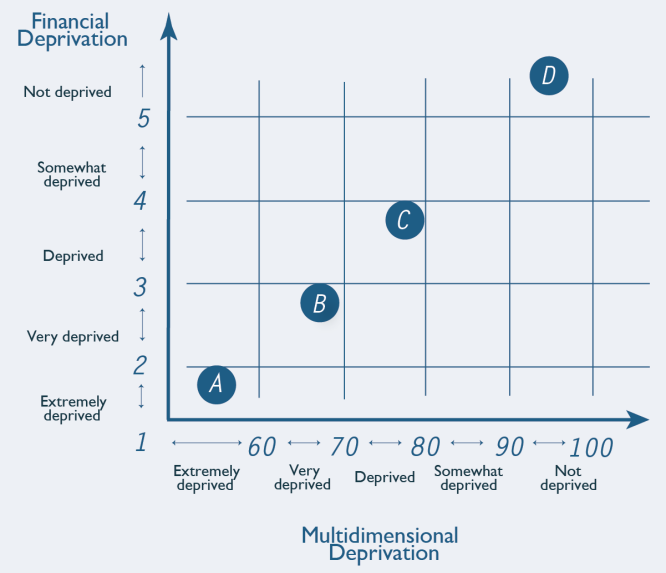


FIGURE 5: THE TWO AXES OF ACHIEVEMENT

In the graph above, the person A has very few assets (level one) and many multidimensional deprivations (falling in the extremely deprived category). Person B has a few assets (level two) and still a considerable number of multidimensional deprivations (falling in the very deprived category). Person C has some assets (level three) and some multidimensional deprivations (counting as deprived). Person D has many modern assets (level five) 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, i.e., 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.[56] 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.

Initial objections and responses

Some authors have objected to the use of scoring systems that require cardinal or interval interpretation of ordinal information in multidimensional poverty measurement. This is in part because the underlying data—for example, the materials used to build a person's house, or the likelihood that they will be subject to violence in the next year—is not cardinal. However, we believe it is both possible and valuable to give a fair cardinal interpretation of the underlying achievements. This is of course an imprecise effort, and is more plausible in some dimensions than in others. But these imprecisions are necessary if we seek to improve upon the obvious limitations of binary data.

One prominent approach to multidimensional poverty measurement is the Alkire-Foster method. Alkire-Foster use a dual-cut-off method for identifying a person or household as poor. First, within each dimension, Alkire-Foster identify a line below which a household is identified as poor. For example, in health care (in the Multidimensional Poverty Index), if a child has died in the family, the household is identified as deprived. Second, a minimum number of weighted indicators[57] is identified such that, if a household is deprived in more than that number of indicators, it counts as poor.

On one version of this approach (used in the recently released MPI), only binary information is needed—whether a person achieved 5 years of schooling or not, whether a person has died or not, whether a household has an adequate number of assets or not, and so on. While this approach does avoid forcing non-cardinal data onto a cardinal scale, it has a considerable drawback. Namely, the first cut-off requires insensitivity to the degree of achievement either below or above the cut-off if the

56. Alternatively to the two axes approach, a single composite figure including the financial scores and achievement scores can be calculated. This overall composite figure would then include information both about a person's financial situation and her achievements in a range of deprivations. However, we prefer treating financial status as a separate category, by which one can crudely evaluate whether a household is converting their financial status into deprivation reduction in the 15 dimensions we investigate. This also helps to highlight where deprivations exist that cannot be easily addressed primarily through financial transfers, such as violence, poor governance or voice.

57. Extensive information on the MPI is available at www.ophi.org.uk/policy/multidimensional-poverty-index/.

underlying data are ordinal. For example, Alkire-Foster can be sensitive to achievements below the dimensional cut off when using cardinal data, such as years of schooling, and thus reflect the difference between a person who has achieved one year of school and four years of schooling, by using a poverty gap index or squared poverty gap index. However, this method is not able to be sensitive to the difference between a person who often goes hungry and one who sometimes goes hungry.

Because it is important to reveal the range of achievements or deprivations within various non-monetary dimensions—such as the quality of a person's housing or the adequacy of their health care or the frequency with which they go hungry—we believe it is valuable to score indicators for these dimensions on an interval scale even if the underlying data is ordinal. Therefore, for each indicator, we use the admittedly crude 1 to 5 scale so as to be able to reveal a person's progress away from deprivation.[58] In fact, we cannot see how sensitivity to these important deprivations can be built into a multidimensional measure without attributing cardinal values to this data.

It is important to note that by anchoring the score of 5 as the top end of a dimension, and making it mean that any achievements above this level are beyond what is required for a minimally decent life, we ensure that the measure remains deprivation focused. The deprivation focus axiom requires that any change in a dimension in which a person is non-deprived leaves this person's overall deprivation level unchanged. For example, consider a person with ample leisure time (six hours per day) and not enough food (1200 calories per day). Should her calories fall further, this should count as rendering her more deprived even if she also gains in leisure time. To preserve the deprivation focus, we define the top end of the dimension as that which represents a sufficient level of achievement for a decent life, such that achievements above it do not change poverty identification, but deprivations below it do.

A controversial step is to aggregate this information into a composite figure for an individual person. Again, some authors have objected to multidimensional aggregation.[59] Their complaints are, first, that this requires comparing incomparable information, such as health care and access to educational achievement, and, second, that the implicit weighting system implies implausible terms of trade among dimensions.

Our responses are two-fold. First, without aggregation into a single composite figure, it is not possible to identify individuals as multi-dimensionally poor. One could of course assert that this is acceptable and the only plausible form of poverty identification is income or consumption-expenditure based. But we would reject this out of (widely shared) dissatisfaction with income or consumption based measures. If one agrees that it is valuable to identify individuals as poor in a multidimensional space, it is necessary to engage in multidimensional aggregation. By having a single figure that takes account of a person's achievements and deprivations across a range of dimensions, they can be adequately categorised or identified. Without aggregation, identification is impossible.

Second, it is true that aggregation across dimensions requires comparing information that is in some strict sense incomparable.[60] It requires, implicitly or explicitly, specifying terms of trade among health, education, sanitation and so on. This is a difficult and imperfect exercise to be sure. But we do not find such index construction inherently invalid. Composite multidimensional indices can provide useful information which reveal different, more comprehensive and more morally plausible patterns of deprivation than their uni-dimensional (consumption or income) peers.[61] Furthermore, it is a basic fact of life for people living with and struggling against deprivations, and for those working on anti-poverty policies and projects, that comparisons across dimensions must be frequently made. NGOs, for example, must decide how much of their limited budgets should go to each of a range of sectors.[62] We therefore accept, as everyone else must, that some terms of trade must be specified across very different dimensions. We do not claim that the weighting of each dimension we use is the moral fact of the matter about how significant health care is versus how significant education is versus how significant food is and so on. We more modestly claim that some weighting scheme which allows for aggregation is a useful tool that helps illuminate the multiple deprivations people face, and that linking this weighting scheme to the views of participants enhances its moral legitimacy and avoids charges of arbitrariness. We make the weighting scheme transparent and the data easily accessible to data users, so that they can vary the 'terms of trade' among dimensions and examine what impact this has on overall evaluations of poverty and gender equity.

58. A similar 5 point interval scale is used to construct indices measuring social and economic conditions by Dulani, B., Mattes, R., & Logan, C. (2013). *After a Decade of Growth, Little Change in Poverty at the Grassroots.* Afrobarometer. Policy Brief No. 1. Available at www.afrobarometer.org/files/documents/policy_brief/ab_r5_policybriefno1.pdf.

59. See, for example, M. (2011). On multidimensional indices of poverty. *Journal of Economic Inequality.* 9(2): 235-248.

60. For a philosophical discussion of the meanings and significance of incomparability and incommensurability, see Chang, R. (1997). *Incommensurability, incomparability, and practical reasoning.* Harvard University Press, 1997.

61. On the very large differences in identification that result from different poverty conceptions and measures, see: Laderchi, C.R., Ruhi, S & Stewart, F. (2003). Does it matter that we do not agree on the definition of poverty? A comparison of four approaches. *Oxford Development Studies.* 31(3):243-274.

62. On the trade-offs involved in NGO resource allocation, see Wisor, S. (2012a). How should INGOs allocate resources? *Ethics & Global Politics.* 5 (1): 27-48. DOI: 10.3402/egp.v5i1.828 and Pogge, T. (2007) Moral Priorities for International Human Rights NGOs. In Bell, D.A. & Coicaud, J.M. (Eds.). *Ethics in action: the ethical challenges of international human rights nongovernmental organisations.* Cambridge University Press, 2007.

Poverty and gender equity indices

From the composite deprivation score, we can construct population level indices of poverty, and one measure of gender disparity across the population. For example, the Foster, Greer, Thoerbecke (FGT) class of poverty measures provide a method for assessing the overall level of poverty in a given population. The first measure, the headcount index, provides the portion of the population who are poor. The second measure, the average poverty gap, is the total amount of shortfall from the poverty line. That is, it reveals not just how many people are poor but, on average, how far they are from the poverty line. Graphically, it is the total space between the individuals' achievements in the space measured (monetary or otherwise) below the poverty line and the poverty line. The third measure, the squared poverty gap, is the average of the square of the distance below the poverty line. This has the effect of 'penalising' inequality below the poverty line. The squared poverty gap gives greater weight to those who are farther from the line. All three measures may be calculated using the composite IDM score.

Because the IDM measures deprivation at the individual level, the composite figure can also be used to calculate gender equity. For example, the gap between men's achievements and women's achievements overall in relation to the 15 dimensions captured in the IDM can be easily measured across a population. Alternatively, gender gaps can be investigated by subgroups, for example within particular wealth quintiles or within individual households. By collecting information on linguistic group, geographic region, disability and more, we can also measure horizontal inequalities among other groups.

Because the composite figure can be decomposed into its constituent parts, it is also possible to produce dimension specific calculations of gender equity, complementing existing composite measures, the limitations of which were noted in chapter one.

The focus of our project has been the construction of the IDM. We will not enter extensively into debates about how population level indices should be constructed.[63] However, we note that data collection along the lines we support for the IDM can generate many of the indices that should be in a country's or agency's suite of measures of social progress.

63. For recent discussion on the construction of the world's most prominent multidimensional index, the UNDP's Human Development Index, see Ravallion, M. (2012). Troubling tradeoffs in the Human Development Index. *Journal of Development Economics.* 99(2): 201-209. Also Klugman, J., Rodríguez, F., & Choi, H.J. (2011). The HDI 2010: new controversies, old critiques. *The Journal of Economic Inequality.* 9(2): 249-288.

CHAPTER FIVE
SURVEY AND SCORING THE INDIVIDUAL DEPRIVATION MEASURE

IN THIS CHAPTER, WE PRESENT THE SET OF DIMENSIONS AND INDICATORS THAT COMPRISE OUR INDIVIDUAL LEVEL MULTIDIMENSIONAL MEASURE OF POVERTY AS WELL AS THE SURVEY QUESTIONS AND METHODS THAT CAPTURE INFORMATION NEEDED TO GATHER THESE INDICATORS AT AN INDIVIDUAL LEVEL.

In order to measure deprivation at the individual level and to be able to reveal intra-household variation, we needed to design a system to survey multiple individuals within a household. We believe that this information should be collected for adults only, as different questions and indicators would be needed for children, and the measurement of child poverty was not the focus of our first two phases.[64] After extensive discussion with our data collection partners and external consultants, we determined the best method of sampling individuals was to randomise the selection of households and then to attempt to interview every adult member of the household. This method allowed for investigating in depth the intra-household distribution of deprivation, although it may have introduced a small amount of bias if some household members were systematically less willing or available to participate (such as men in employment away from the household). From each individual survey we were able to calculate an individual level IDM score to be used for the purposes of identifying:

1. Whether an individual is deprived
2. How deprived an individual is
3. The components of the individual's deprivation

In addition to capturing information necessary for the identification stage of poverty measurement, the survey captures additional information about the individual's life circumstances that might be relevant for the purposes of poverty analysis. For example, the enumerator records the participant's age, religion, language most commonly spoken, schooling completed and whether s/he is affected by disability.[65] This will allow for an investigation of whether and how poverty varies according to these variables. Personal information is also gathered about each member of participating households who are not themselves respondents (this includes children), which would allow investigation of potential correlations between individual deprivation levels and specific features (such as disability) of other household members.

The survey below includes a scoring system for the indicators in each dimension. As outlined in the previous chapter, the survey generates categorical information for one or more indicators for each of 15 dimensions. This categorical information is then placed in an ordinal ranking and placed on an interval scale from 1 to 5. This 1 to 5 interval scale is then re-weighted both within and across dimensions and aggregated to produce a composite score of deprivation. Some dimensions contain more indicators than others. Multiple indicators are aggregated within the dimension by averaging them before aggregation occurs across dimensions. Therefore, having more indicators does not mean that a dimension receives greater weight in a composite figure.

Survey dimensions, indicators, questions

Many of the survey questions are drawn from existing or recently developed multi-topic surveys. The table oppisite provides the module name, the source of the survey questions, and the indicators the module will generate.

We have included in the survey a number of questions that were not used in scoring. These have been included for one of two reasons: either we considered that the information might be useful aside from the scoring; or we thought that the information might be useful for scoring purposes but had some reservations and therefore took the opportunity of the trial to test it. For example, we asked about water treatment, because this

64. For the third phase we defined adults as age 18 and older. The reasons for not focusing on children in this research were noted in chapter one. Our initial thinking re extending the IDM to measure child poverty which we consider a priority is outlined in chapter seven.

65. The survey incorporates a brief set of questions on disability to screen for limitations in basic activity functioning. The questions were developed for use in census or similar multi-topic survey contexts where only brief information can be sought on any one topic 'to provide comparable data cross-nationally for populations living in a great variety of cultures with varying economic resources. The objective was to identify persons with similar types and levels of limitations in basic activity functioning regardless of nationality or culture.' (United Nations Statistical Commission. (2007). Report of the Washington Group on Disability Statistics: Note by the Secretary-General. Thirty-eighth session, 27 February-2 March 2007, E/CN.3/2007/4. Available at http://unstats.un.org/unsd/statcom/doc07/2007-4e-Disability.pdf) United Nations Statistical Commission, Thirty-eighth session, 27 February-2 March 2007, Report of the Washington Group on Disability Statistics: Note by the Secretary-General E/CN.3/2007/4. Available at http://unstats.un.org/unsd/statcom/doc07/2007-4e-Disability.pdf). Use of these questions also recognises that in contexts where disability is associated with significant discrimination and stigma, simply asking respondents whether they have a disability may result in significant under-reporting of functional limitations.

is recommended in UNICEF guidelines, but we did not include it in the scoring, in part because we have reason to think that survey questions evaluating water treatment are not a reliable guide to whether water is in fact suitable for use, and in part because we prefer to focus on access to clean water. In the case of hunger, we include a question on hunger in the last 12 months to check if we get seasonal differences, but we don't think that recall over 12 months will be reliable enough for scoring purposes.

MODULE **household characteristics** **A. financial status**	**SOIRCE** **multiple** **DHS**	**INDICATORS** **n/a** **Asset Index**
1. Food/ Nutrition	FANTA	Hunger in the last 4 weeks
2. Water	WHO, UNICEF, new	Water source, water quantity
3. Shelter	DHS, new	Durable housing, homelessness
4. Health Care/ Health	CWIQ, WHS	Health status, health care access
5. Education	IHSN, DHS, new	schooling completed, literacy and numeracy
6. Energy/ Cooking Fuel	DHS, new	Source of cooking fuel, access to electricity
7. Sanitation	UNICEF, WHO	Primary toilet, secondary toilet
8. Family Relationships	OPHI / WEAI, new	Control of decision-making in household, supportive relationships
9. Clothing/ Personal Care	New	Protection from elements, ability to present oneself in a way that is socially acceptable
10. Violence	OPHI missing dimentions	Violence experienced in the last 12 months, percieved risk in the next 12 months
11. Family Planning	DHS, new	Access to contraception, control over use
12. Environment	New	Exposure to environmental harms
13. Voice	WEAI / OPHI	Ability to participate in public decision-making, ability to change community
14. Time-use	Various time-use surveys, WEAI	24 clock (labour burden, leisure time)
15. Work	OPHI	Status, safety (paid and unpaid work)

CWIQ Core Welfare Indicators Questionnaire
DHS Demographic and Health Survey
FANTA Food and Nutrition Technical Assistance project
IHSN International Household Survey Network
OPHI Oxford Poverty and Human Development Initiative
UNICEF United Nations Children's Fund
WEAI Women's Empowerment in Agriculture Index
WHO World Health Organisation
WHS World Health Survey

TABLE 10: SURVEY DIMENSIONS AND INDICATORS

Asset index as a measure of financial status

In theory, a measure of an individual's financial status should be sensitive to some or all of the following areas of her financial life: the income (and other cash transfers) she receives, her consumption (or consumption expenditure), her assets, her debts and her access to suitable financial products (such as credit, savings accounts, insurance and money transfer). In developing country contexts, it is difficult and time consuming to gather much of this information. As noted elsewhere in this report, we considered it important to develop a manageable survey that is feasible to administer in a variety of contexts, in both technical and cost terms. This influenced our decisions about how to measure various dimensions, including financial status.

For the purposes of our survey, we use a simple asset index as an approximate measure of financial status. The index is absolute, and meant to be comparable across contexts. It is captured at the household level, as many assets are commonly shared by household members. We follow Hohmann and Garenne (2003, 2009) who calculate an absolute asset index based on the number of 'modern' goods owned in a household.[66]

Question: Does your household, or any member of your household, possess: a radio; a television; a refrigerator; a bicycle; a motorcycle; a car or truck?[67]

From other parts of the survey, we also determined whether participants have electricity, adequate floor, wall, and roofing material, whether they have piped drinking water, how far away their source of drinking water is and whether they have a flushing toilet. This information is used for scoring in relation to the relevant dimension.

For each asset, the household receives either a 0 (no possession) or 1 (possession). The assets are then summed, with a lowest possible score of 0, and a highest possible score of 12.

Scoring:

1 = Extremely poor (0 or 1)
2 = very poor (2 or 3)
3 = Poor (4 or 5)
4 = At risk (6 or 7)
5 = Not poor (8 or more)

66. This is in contrast to the DHS asset index, which is relative to the country in which the survey is being conducted and verified against consumption data and therefore does not weight equally all modern assets.

67. This question is used to calculate the Garenne and Hohmann asset index. We also asked about possession of a tractor, a computer, an internet connection and land, but didn't include responses in the scoring.

Dimensions and indicators of multidimensional deprivation

Below are the survey questions, indicators and scoring guides for all 15 dimensions.[68] As previously mentioned, some dimensions have multiple indicators, while other dimensions have a single indicator. In the case of multiple indicators, indicator scores are averaged. In some dimensions, having a score at each possible interval is unfeasible. This is because the underlying categorical information does not easily fit into 5 categories. In those cases, an individual is still scored on the 1 to 5 scale but may be ineligible for one or more levels (for example, an individual cannot receive a score of 3 in the health status indicator—only a 1, 2, 4, or 5).

1. Dimension: Food/Nutrition

Indicator: Hunger

Questions

In the past 4 weeks, was there ever no food for you to eat because of lack of resources to get food? (If 'yes') How often did this happen? (Rarely, Sometimes, Frequently)

In the past 4 weeks, did you go to sleep at night hungry because there was not enough food? (If 'yes') How often did this happen? (Rarely, Sometimes, Frequently)

In the past 4 weeks, did you go a whole day and night without eating because there was not enough food? (If 'yes') How often did this happen in the past 4 weeks? (Rarely, Sometimes, Frequently)[69]

(Rarely = once or twice, Sometimes = 3-10 times, Frequently = more than ten times)

Scoring

A respondent's initial responses receive a score of 0 for never, 1 for rarely or sometimes and 2 for frequently. A continuous scale score is calculated by summing the scores for each of the three questions.

1 = Severe hunger (cumulative score of 5 or 6)

2 = Moderate hunger (cumulative score of 3 or 4)

3 = Some hunger (cumulative score of 2)

4 = Little hunger (cumulative score of 1)

5 = No hunger (cumulative score of 0)

Additional question: The previous questions about hunger focussed on the last four weeks. I'm now going to ask you to think back about a longer period. In the past twelve months, was there ever no food for you to eat because of lack of resources to get food? (Yes/No)

This question was designed to identify if seasons impact hunger. However, at this point it is not used for scoring because of concerns about the reliability of recall over such a long period of time.

2. Dimension: Water

Indicator 1: Water source—distance and improvement

Question

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

Scoring

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

Indicator 2: Water quantity

Questions

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

Scoring

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

Additional question

Do you treat your water in any way to make it safer to drink? (If 'yes') What do you usually do to the water to make it safer? (Filter, Iodine, chlorine or other mineral treatment, Solar water disinfection technique (SODIS), Boil, Other)

68. The household and individual surveys as used for the trial in the Philippines are available at www.genderpovertymeasure.org (in English and Filipino).

69. Available at: http://www.fantaproject.org/downloads/pdfs/HHS_Indicator_Guide_Aug2011.pdf. We do not follow FANTA's recommended scoring system at this time, as they provide a scoring scale of 0-6. This is a continuous variable scale, which we have modified to fit our 1 to 5 scoring model. We also shift from measuring hunger at the household level to measuring it at the individual level; but we preserve the question sequence.

3. Dimension: Shelter

Indicator 1: Housing materials and condition of the dwelling

The enumerator records the material used to construct the dwelling, including the wall material, roof material, flooring material, and the overall condition of the dwelling.

Scoring

0 = Natural

1 = Rudimentary

2 = Finished

(Descriptions of Natural, Rudimentary, and Finished follow DHS guidelines.)

A score is calculated for each of walls, floor, and ceiling, giving a possible total score of 6 points.

The condition of the dwelling is scored as follows:

1 = Very bad condition

2 = Poor condition, a lot of damage

3 = Moderate condition

4 = Good condition, minor wear and tear

5 = Excellent condition

Scoring of the overall dimension:

1 = Materials 0 to 2

2 = Materials 3-4, or 5, dwelling is in poor or very poor condition

3 = Materials 5, and dwelling is in moderate condition, or materials 6 and dwelling is in poor or very poor condition

4 = Materials 6, and state of dwelling is moderate

5 = Materials 6, and dwelling is in good condition

Indicator 2: Homelessness

Questions

In the last year, did you ever sleep outdoors, in public places such as bus or railway stations, or in temporary shelters provided by government or non-government organisations, because you did not have access to suitable shelter of your own?

Approximately how many nights in the last year did you sleep in the conditions described in the previous question? (Approximate number of nights)

It is difficult to measure homelessness through household surveys, given the nature of the phenomenon. The response to the question on homelessness does not affect an individual's scoring on shelter, unless she has been homeless for at least seven days in the last year. In this case, homelessness counts as a substitute indicator, replacing housing materials/condition, and the respondent scores 1 out of 5 for this dimension.

Additional question

With how many other people did you share the room in which you slept last night?

This question was not scored due to uncertainty about the size of the room in which people were sleeping, and a view that many small poor families that have little crowding are living with very poor quality housing materials and/or a dwelling in very poor condition. They should not be 'compensated' for their small size in scoring shelter just because they are not as overcrowded as families in some larger dwellings.

4. Dimension: Health/health care

Indicator 1: Health status

Questions

When was the last time you had a significant illness or injury?

Did this illness or injury make it impossible or very difficult to perform your usual paid or unpaid activity?

How long was it difficult or impossible for you to perform your usual paid or unpaid activity because of your illness or injury?

Scoring

1 = More than 2 weeks

2 = 1-2 weeks

4 = Less than 1 week

5 = No problems (last illness more than one year ago or last illness did not make it difficult or impossible to perform usual activity)

Indicator 2: Health care access

Questions

The last time you had an illness or injury that needed health care, did you receive this care?

From whom did you receive health care?

Scoring

1 = No treatment or treatment from a traditional healer

3 = treatment from a community health worker, nurse or midwife

5 = Treatment from a doctor, dentist, physiotherapist or chiropractor

Indicator 3: Health care quality

Question

Were there any significant problems with any of the following: The skill of the practitioner, the cleanliness of the treatment facilities, the availability of prescribed drugs, the level of respect with which you were treated, including the way in which issues were explained to you, the waiting time, the location of the health care provider? (Answers are yes/no)

Scoring:

1 = Three or more significant problems
2 = Two significant problems
3 = One significant problem
5 = No problems

Additional question

(For respondents who did not seek medical care even though their illness required it) What was the main reason that you did not seek medical care?

A simple average of the heath care access and health care quality scores is calculated to provide a health care access/ quality score.

For all males and for females who were neither pregnant at the time of the survey nor pregnant within the last three years, the health dimension score is the average of their health status score and their health care access/ quality score.

Women who are pregnant at the time of the survey or who were pregnant within the previous three years are asked a series of questions about the number of pre-natal visits (made and/or planned), the provider of pre-natal care (traditional birth attendant, nurse, midwife, doctor) and where they gave birth or plan to give birth (hospital, community health facility, at home). Women who gave birth as a result of a pregnancy within the last three years are also asked who attended them during the birth.

Pregnancy scoring:

Pre-natal:
1 = No visits
2 = One or two visits to a traditional birth attendant
3 = Three or more visits to a traditional birth attendant or one visit to a nurse, midwife or doctor
4 = Two visits to a nurse, midwife or doctor
5 = Three or more visits to a nurse, midwife or doctor

Birth—currently pregnant (intended place of birth):
1 = At home
3 = In a community health facility
5 = In hospital

Birth—pregnant within last three years:
1 = No birth attendant
2 = Traditional birth attendant
3 = Attended by a nurse, midwife or doctor at home
4 = Attended by a nurse, midwife or doctor in a community health facility
5 = Attended by a nurse, midwife or doctor in hospital

For women currently pregnant or pregnant within the last three years, a score for pre-natal care and birth attendance is calculated by averaging the two scores. This score substitutes for general health care access for this group of respondents. The overall health dimension score for these respondents is then calculated by averaging the health status and the pregnancy pre-natal care/birth attendance scores.

Additional questions

All women are asked whether they have given birth and, if so, how often. Women pregnant at the time of interview or within the previous three years who are not seeking/ did not seek pre-natal care are asked why they did not. Answers to these questions do not affect the scoring.[70]

Our approach to the dimension of health/ health care is one way in which the IDM seeks to be gender sensitive. Pregnancy and maternal health care and access are significant sources of mortality and morbidity for women and their families in developing-country contexts, and among the most significant and risky health-related events that women experience in their lifetimes. Access to appropriate care during pregnancy and whether birth is attended by a health care professional are closely linked to pregnancy outcomes and the burden of ill health, injury and disability experienced by women and their families. It could be argued that assessing health care access and health status as part of multidimensional poverty measurement in a way that excludes pregnancy and birth-related care (because it is not something that can be experienced by and measured for both women and men) builds in gender bias given the overall significance of pregnancy and birth as health events. However, there are challenges in incorporating pregnancy and birth-related care in a multidimensional poverty measure given that it is not something that is experienced by both women and men.

The research team considered a number of potential ways of incorporating pregnancy and birth-related care into the IDM, including by adding it as an additional indicator in the health dimension and then summing and averaging for relevant women. We felt that this could give insufficient weight to pregnancy and birth-related health care, and that it was simpler to substitute pregnancy-related health care and access for general health care and access for all women currently pregnant or pregnant in

70. Part of the reason for the inclusion of this question was to have a stand-alone indicator of infant mortality.

the last three years. The approach is spelled out below.

For males, and for females who are not currently pregnant and have not been pregnant in the last three years, the indicators of access to health care and quality of health care come into play, although quality of health care only counts if the health care provider was a community health worker or above. If someone was treated by a traditional healer, her score for health care access and health care quality is 1. Someone who did not receive health care also scores 1. For all others, their score is the average of their health care access and health care quality scores. The overall health dimension score is the average of access/quality and health status scores.

For women who are currently pregnant, their pregnancy score is a function of the number of pre-natal visits already made or planned, and the qualifications of the health care provider. If the sum of visits already made and planned is zero, they score a 1. If the provider is a traditional birth attendant, they score 2, regardless of the number of visits.[71] If the sum of made and planned visits to a trained practitioner is 1 or 2, they score a 3. If the sum of visits already made and planned to a trained practitioner is at least 3, they get a 5. Their health dimension score is the average of health status and pre-natal care.

For women pregnant within the last three years, their pregnancy/birth score is a function of pre-natal care and attendance at the birth. Pre-natal care is treated as for women who are currently pregnant. Attendance at birth recognises that risk is reduced when a birth is attended by a traditional birth attendant, compared with birthing without assistance. Births attended by qualified personnel score higher than other births, with scoring reflecting the evidence that the location of the birth, particularly if it is in a hospital, significantly improves outcomes. The overall dimension score for these women is the average of health status and pregnancy/birth attendance.

5. Dimension: Education

Indicator 1: Completed schooling

Questions

Have you ever attended school?

How many years were you in formal schooling?

What is the highest education level you completed?[72]

Scoring

1 = Little or no school

2 = Partial primary

3 = Completed primary

4 = Some secondary

5 = Completed secondary or higher[73]

Indicator 2: Competence: Reading, writing, and arithmetic

Questions

Are you able to read at all? (If 'yes') Please read the following sentences aloud to me.

Are you able to write at all? (If 'yes') Please write two sentences about what you did yesterday.

Are you able to do some arithmetic? (If 'yes' Please perform the following calculations (addition & subtraction; multiplication & division).

For the reading exercise, the respondent was asked to read a short paragraph and then the enumerator marked down the respondent's reading level. For the writing exercise, the respondent wrote two sentences about what she did yesterday. For the numeracy exercise, the respondent was asked to write the answer for a simple math problem (e.g., 3+7-2+5=?) and a more difficult problem (e.g. (14x5) ÷2 = ?).

Reading scores

1 = Not able to read (says can't read, or reading competence is very limited)

3 = Basic skills (able to read only parts of the sentences)

5 = Advanced skills (able to read both sentences competently)

Writing scores

1 = Not able to write (either does not write sentence, or sentence is illegible or does not make sense)

3 = Basic writing skills (legible and makes sense, but poor grammar and spelling)

5 = Advanced writing skills (legible, makes sense, good grammar and spelling)

Arithmetic scores

1 = Not able to do math, or both answers incorrect

3 = Correctly answers one of the two problems

5 = Correctly answers both problems

71. This assumes that engaging with a traditional birth attendant pre-natally increases the likelihood of identifying a problem with the pregnancy compared with no engagement but to a lesser extent than engagement with a formally qualified practitioner (nurse, midwife or doctor), and that more engagement with trained professionals over the course of a pregnancy is better.

72. These questions are recommended as the best set of three to capture information on a person's schooling See the International Household Survey Network. (2009). *How (well) is Education Measured in Household Surveys? A Comparative Analysis of the Education Modules in 30 Household Surveys from 1996-2005.* IHSN Working Paper 2. Available at www.ihsn.org/home/sites/default/files/resources/IHSN-WP002.pdf. This review also recommends our second set of questions, testing literacy and numeracy, as preferable to self-reporting on literacy and numeracy.

73. The scoring of the highest grade completed may need to vary across contexts depending on the number of years of formal schooling expected in the country to complete secondary school. There is tension here between accommodating diverse educational requirements and ensuring comparability across context. Additionally, scoring may need to recognise variation in the grade level that marks the transition between primary and secondary school. For example, in most of Australia, secondary school starts at grade 7.

The reading, writing and arithmetic scores are summed and divided by three to produce a reading/writing/arithmetic score.

The education dimension score is the average of the schooling and reading/writing/arithmetic scores.

6. Dimension: Energy

Indicator 1: Cooking fuel/smoke exposure

Questions

What is the primary source of cooking fuel in this household? Do you have a secondary source of cooking fuel that you use regularly?

(If 'yes') What is your secondary source of cooking fuel?

How much time on average do you spend each day exposed to smoke and fumes from the burning of cooking and/or heating fuel?

Do you experience any health problems, such as headaches, dizziness or difficulty in breathing from exposure to the smoke and fumes from your cooking and/or heating fuel? (If 'yes') How would you rate these problems (severe, moderate, minor)?

Where a secondary cooking fuel is regularly used, scores are generated for both primary and secondary cooking fuels. An overall cooking fuel/ smoke exposure score is calculated by averaging the two scores.

Scoring

1 = Dirty fuel (charcoal, firewood, animal dung, crop residue)
3 = Clean fuel (kerosene, gas, electricity), but health problems from smoke exposure
5 = Clean fuel (kerosene, gas, or electricity), and no health problems from smoke exposure

Additional questions

What type of cooking stove is usually used in your house?

Where is cooking usually done?

Indicator 2: Electricity (household indicator)

Questions

Does your dwelling have access to electricity?

Approximately how many hours per day on average does your dwelling have electricity?

Scoring:

1 = No access
2 = Up to 4.9 hours
3 = -9.9 hours
4 = 10-19.9 hours
5 = 20 or more hours per day

Additional question

Not used for scoring: How reliable is your dwelling's access to electricity? (very unreliable, somewhat unreliable, quite reliable, very reliable)

The energy dimension score is calculated by adding the cooking fuel/smoke exposure and the electricity access scores and dividing by two.

7. Dimension: Toilet

Indicator 1: Primary toilet use[74]

Question

What toilet facilities do you normally use when you are at home?

1 = Bush, field or river
2 = Bucket or other container, periodically removed from dwelling
3 = Pit latrine without slab
4 = Pit latrine with slab
5 = Ventilated improved pit latrine
6 = Public flush toilet
7 = Private flush toilet

Scoring

1 = Not improved (1 and 2 above)
2 = Pit latrine without slab (3 above)
3 = Improved shared pit or latrine (4, 5 above)
4 = Public flushing toilet (6 above)
5 = Private flushing toilet (7 above)

Indicator 2: Secondary toilet use

Question

Do you regularly use a second toilet facility (for example at your workplace or where you spend time outside the house during the day)?

If 'yes' What is the second most common toilet facility that you use?

74. The list of toilet options and the scoring are drawn from the WHO/UNICEF Joint Monitoring Program, www.wssinfo.org.

The scoring is the same as for the primary toilet.

Note: The secondary indicator here reflects that a person's primary and secondary toilet facilities may differ considerably. For example, you might have access to adequate sanitation at home, but have none at school or your place of work or in your daily activities.

If a secondary toilet is regularly used, the dimension score is the average of the primary and secondary scores. If not, the dimension score is the primary toilet score.

8. Dimension: Decision-making and personal support

Indicator 1: Control over decision-making

Question

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

Indicator 2: Personal support

Question

If you were in trouble, how much support could you count on from friends and family?

Scoring:

1 = No Support
2 = Very Little Support
3 = Some Support
4 = A fair amount of support
5 = All the support that I need

The dimension score is a simple average of the control over decision-making and personal support scores.

9. Dimension: Clothing and personal care

Indicator 1: Protection from the elements

Question

To what extent does your clothing and footwear protect you from the weather and from hazards in your environment, such as broken glass where you walk?

Scoring:

1 = No protection
2 = Very little protection
3 = Some protection
4 = A fair amount of protection
5 = Good protection

Indicator 2: Personal care/presentation in public

Question

To what extent are you able to present yourself in public, in terms of clothing, body odour and grooming, in a way that is acceptable by the standards of your community?

Scoring:

1 = Never
2 = Rarely
3 = Sometimes
4 = Often
5 = Always

The dimension score is a simple average of the protection from the elements and personal care scores.

10. Dimension: Violence

Indicator: Freedom from violence[75]

Questions

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 anyone?

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?

75. This module is from Diprose, R. (2007). *Safety and security: a proposal for internationally comparable indicators of violence.* Centre for Research on Inequality, Human Security and Ethnicity, in collaboration with Oxford Poverty and Human Development Initiative. University of Oxford. Available at http://r4d.dfid.gov.uk/PDF/Outputs/Inequality/wp52.pdf.

In the past year, did anyone use physical force of threats to make you or try to make you have sexual intercourse or perform other sexual acts against your will?[76]

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)

Scoring:

1 = Multiple violent incidents
2 = One violent incident
3 = No violent incidents, but perceived risk
5 = No violent incidents, and no perceived future risk

11. Dimension: Family planning

Indicator 1: Access to contraception

Question

Do you or your partner have ready access to any types of contraception? (If 'yes') Which methods do you or your partner have ready access to?[77]

Scoring

1 = No options
3 = One safe option
5 = More than one safe option

Indicator 2: Use of contraception

Question

To what extent, if at all, do you face barriers to using the contraceptive methods you listed above to prevent, limit or space pregnancies for example from your family, from a partner, or from religious authorities?

Scoring

1 = Face severe barriers
3 = Face some barriers
5 = Face no barriers

The dimension score is a simple average of the access and use scores.

This module is not designed to be asked of females beyond reproductive age. It is anticipated that some other respondents will not consider access to contraception to be relevant to their current life circumstances. Relevant answer coding is used to accommodate these respondents.

12. Dimension: Environment

Indicator: Environmental problems

Questions

Are any of the following a significant problem for you, either at or near home or at other:

1 = Places where you spend a lot of time?

2 = Large amounts of rubbish or a waste disposal site

3 = Open sewage

4 = Air pollution (air that smells bad or makes your eyes or throat sting)

5 = Pools of water where mosquitoes or other disease carrying insects breed

6 = Stores of unsecured agricultural or industrial chemicals and waste

7 = Heavy vehicle traffic for much of the day

8 = High levels of noise other than from vehicle traffic for much of the day

9 = Any other significant environmental hazard

76. We are aware that asking questions about violence in general and sexual violence in particular raises difficulties for the ethics and accuracy of the survey. However, given its significance in the lives of poor women and men, and its costs to individuals, families and communities, the research team considered it important to find a way to safely include violence in a measure of gender-sensitive multidimensional deprivation. We sought input from a number of academics with experience of researching violence against women; drew on the best available guidance regarding researching violence against women, including about the importance of a safe, private and supportive interview context for response rate and accuracy; and provided training for enumerators around the need for sensitivity and ensuring privacy. An introduction to this question was read to each respondent explaining our reasons for asking about violence, stating that no questions would be asked about the location of any acts of violence or about the perpetrators, and emphasising that all answers would be kept confidential. The right of the respondent not to answer this module was stressed. Respondents were then asked if they were prepared to answer questions on this topic. We used self-completion for the violence module, with a folder obscuring the respondent's markings on the answer sheet from the enumerator and a sealed envelope to hold the responses. Icons illustrating the kind of violence being asked about in each question were used on the response sheet to enable completion by respondents without formal literacy. A response rate of 90% in the trial in the Philippines suggests that these provisions, in combination, assured respondents of their safety and privacy in responding to the questions.

77. The list of options for family planning methods in the DHS are female sterilization, male sterilization, IUD, Injectables, Implants, Pill, Condom, Female Condom, Diaphragm, Foam/Jelly, Lactational Amenorrhea Method, Rhythm method, withdrawal, other modern method, other traditional method. Notes to the survey enumerator say 'Other commonly used methods may be added to the list, such as contraceptive patch, contraceptive vaginal ring, or sponge'. After considerable discussion within the team, we decided not to count any traditional methods [rhythm method, withdrawal, lactational amenorrhea method (breastfeeding to delay fertility)] as 'safe' given their lack of reliability.

Scoring

1 = More than two environmental problems
2 = Two environmental problems
3 = One environmental problem
5 = Zero environmental problems

13. Dimension: Voice in the community

Indicator 1: Ability to participate in community decision-making

Question

To what extent are you able to raise issues in your community that you feel strongly about, such as crime in the community, the way government programs are implemented or the way you or members of your family are treated at work or by other community members?

Scoring

1 = Not at all
2 = With great difficulty
3 = With some difficulty
4 = Fairly easily
5 = Very easily

Indicator 2: Ability to change your community

Question

To what extent do you think that people like you can change things in their community if they want to?[78]

Scoring

1 = Not at all
2 = With great difficulty
3 = With some difficulty
4 = Fairly easily
5 = Very easily

The dimension score is the average of the scores of the two indicators.

14. Dimension: Time-use/labour burden

Indicator: Labour burden as percentage of 24 hours

Question

On the basis of a 24-hour diary of activities completed for the previous day, the enumerator calculates the hours of paid and unpaid work and formal study undertaken by the participant Secondary work/study time (i.e., activities carried out while undertaking a primary activity, such as keeping an eye on children while enjoying leisure) is included in scoring this dimension.

Scoring

1 = 16 hours or more of paid and/or unpaid work and/or formal study
2 = 14-15.9 hours
3 = 12-13.9 hours
4 = 10-11.9 hours
5 = Less than 10 hours

Additional question

How typical was the 24 hour period we have just discussed in terms of the amount of paid and/or unpaid work that you did? (much more than usual, about the same, much less than usual)[79]

15. Dimension: Paid and unpaid work: Risk and respect

Indicator 1: Risk (paid and unpaid work)

Question

Have you suffered any injury, illness, disability, or other physical or mental harm from your paid (unpaid) work in the last 12 months?

If yes, what effect did this injury, illness or other harm have on you? (a long-term effect that prevents you from working at all, a long-term effect so that you can't continue to perform the same work, a long-term effect but you are able to carry on in the same work, no long-term effect)

Are you concerned that your paid/unpaid work will cause you physical or mental harm in the future? (very concerned, somewhat concerned, not very concerned, not concerned at all)

Note: These questions are asked separately about paid and unpaid work, as individuals may have very different experiences in each kind of work.

78. These questions are drawn from Ibrahim, S., Solva, I. & Alkire, S. (2004). Agency and Empowerment: A Proposal for Internationally Comparable Indicators. Working Paper. Oxford Poverty and Human Development Initiative. Available at www.ophi.org.uk/wp-content/uploads/OPHI-wp04.pdf.

79. This question was not used for scoring purposes. Because the measure of leisure time and labour burden relies entirely on a 24 hour clock from the preceding day, we wanted to evaluate whether that day was typical or atypical. For example, a survey covering a Sunday may not reveal a labour burden whereas a survey covering a Monday would.

Scoring

1 = Extremely dangerous paid/unpaid work (injured with long-term effect preventing any work)

2 = Very dangerous paid/unpaid work (injured with long-term effect preventing the same work as before)

3 = Somewhat dangerous paid/unpaid work (injured, can do the same work as before but very concerned about future harm)

4 = Slightly dangerous paid/unpaid work (injured but no long-term effect, little or no future concern)

5 = Not dangerous paid work (no injury, no perceived risk)

Total Risk Indicator calculated as average of both scores (assuming respondent answers for both). If the respondent only answers for a single kind of work, that score is used.

Indicator 2: Status (paid and unpaid work)

Questions

To what extent do you agree or disagree with the following statements?

Members of my community respect the paid unpaid work I do (that is, my job is a respected one).

I am treated with respect when I do paid/ unpaid work (this includes being free from physical and verbal abuse or demeaning treatment while working)

Scoring

1 = Extremely disrespected (strongly disagree)

2 = Somewhat disrespected (disagree)

4 = Not disrespected (agree)

5 = Strongly respected (strongly agree)

The score for this indicator for each of paid and unpaid work is the average of the scores for the degree of respect for the participant's paid/unpaid work and the respect shown the participant at their paid/unpaid work.

The overall indicator score is the simple average of the indicator scores for paid and for unpaid work (assuming respondent answers for both). If the respondent answers for only one of paid and unpaid work, that score is used.

Additional question

What is the main kind of paid/unpaid work that you regularly do?

DIMENSION - INDICATOR	1. Hunger	2. Water source (HH)	Water quantity	3. Shelter Materials and dwelling condition (HH)*	4. Health care access**	Health care quality**	Health care status	5. Education completed	Education achievement	6. Energy cooking fuel (primary & secondary (HH) and harm from smoke	Energy access to electricity (HH)	7. Toilet primary & secondary	8. Family relations decision -making	Family relations personal support	9. Clothing protection	Clothing personal care	10. Violence experience and risk	11. Family planning access	Family planning use	12. Environment	13. Voice Participation (ability to raise issues in the community)	14. Time use labour burden	15. Paid/ unpaid work status	Status of the paid/ unpaid worker	Paid & unpaid work-risk	A. Wealth
LEVEL 1 SEVERELY DEPRIVED	Severe hunger	Not improved more than 30 minutes from dwelling (one way)	Never enough to meet personal needs	Very low quality shelter materials (at best a mix of natural and rudimentary)	No treatment when needed or treatment not provided by a professional	3 or more significant problems	Unable to perform (un)paid work due to illness for more than 2 weeks in the last 12 months	Little or no schooling (completed grades 0-2)	Not able to read, write, do arithmetic	No clean fuel	No access	Not improved	No control	No support	No protection	Never presentable	Multiple violent incidents	No modern methods	Severe barriers to use	More than two environmental problems	Not at all	Excess burden (16 or more hours per day)	Extremely disrespec-ted	Extremely disrespec-ted	Extremely dangerous (injured at work, unable to work long-term	Extremely poor
LEVEL 2 VERY DEPRIVED	Moderate hunger	Not improved 30 mins or less	Rarely (1-2 days per week)	Mostly rudimentary housing materials		2 problems	Unable to perform (un)paid work due to illness for 1 to 2 weeks in the last 12 months	Some primary schooling (completed grades 3-5)	Minimal literacy and numeracy		Up to 4 hours per day	Pit latrine without slab	Very little control	Very little support	Very little protection	Rarely	One violent incident			Two environmental problems	With great difficulty	Significant burden (14-16 hours per day)	Somewhat disrespec-ted	Somewhat disrespec-ted	Very dangerous (injured at work, long-term unable to work as before)	Very poor
LEVEL 3 SOMEWHAT DEPRIVED	Some hunger	Improved, more than 30 minutes	Sometimes 3-4 days)	Mixed quality shelter (good materials but dwelling in poor condition or moderate materials but dwelling in good condition)	Treatment provided by a community health worker, nurse or midwife	1 problem	Unable to perform (un)paid work due to illness for less than 1 week in the last 12 months	Completed primary	Moderate literacy and numeracy	Clean fuel but health problems from smoke	5 to 9 hours	improved shared pit or latrine	Some control	Some support	Some protection	Sometimes	No incidents but perceived risk	One modern method	Some barriers to use	One environmental problem	With some difficulty	Moderate burden (12-14 hours per day)			Extremely dangerous (injured at work, unable to work long-term)	Poor
LEVEL 4 SLIGHTLY DEPRIVED	Little hunger	Improved, 30 minutes or less	Often (5-6 days)	Moderate quality shelter (all finished materials, condition of dwelling moderate)				Some secondary schooling	Adequate literacy and numeracy		10 to 20 hours	Public flushing toilet	Fair amount of control	Fair amount of support	Fair amount of protection	Often					Fairly easily	Slightly burdened (10-12 hours per day)	Not disrespec-ted	Not disrespec-ted	Slightly dangerous (injured at work, but no long-term impact and not concerned about future injury)	At risk
LEVEL 5 (AND ABOVE) NOT DEPRIVED	No hunger	Improved in dwelling	Always	Good quality shelter (finished materials in good condition)	Treatment provided by a doctor	No complaints	No illness time off (un)paid work due to illness in the last 12 months	Completed secondary or above	Fully literate and numerate	All clean fuel, no problems from smoke	More than 20 hours access	Private flushing toilet	Full control	All the support needed	Good protection	Always	No incidents and no perceived risk	More than one modern method	No barriers to use	No environmental problems	Very easily	Not burdened (10 hours or less per day)	Highly respected	Highly respected	Not dangerous (no injury, no percieved risk)	Highly respected

* Note: Homelessness serves as a substitute indicator for housing materials and condition of the dewlling only when a person has been homeless for at east seven days in the past year.

** Note: Pregnancy module substitutes for health care access and quality when the respondent is pregnant or has been pregnant in the last three years.
'HH' means household level indicator.

TABLE 11: SUMMARY CHART OF INDICATOR SCORING

CHAPTER SIX
PILOTING THE INDIVIDUAL DEPRIVATION MEASURE IN THE PHILIPPINES

THE THIRD AND FINAL PHASE IN OUR PROJECT TESTED OUR NEW PROPOSED INDIVIDUAL DEPRIVATION MEASURE. THE AIM OF THE PILOT WAS THREEFOLD: FIRST, WE SOUGHT TO EVALUATE THE QUALITY OF OUR SURVEY AGAINST ITS PROPOSED AIMS, SUCH AS WHETHER IT WAS FEASIBLE TO ASSESS POVERTY MULTIDIMENSIONALLY AT THE INDIVIDUAL LEVEL, WHETHER THE SURVEY COULD REVEAL INTRAHOUSEHOLD DISPARITY, AND WHETHER IT COULD MAKE COMPARABLE ASSESSMENTS ACROSS CONTEXTS; SECOND, WE SOUGHT TO COMPARE THE RESULTS OF THE IDM AGAINST OTHER MEASURES OF POVERTY; AND THIRD, WE HOPED TO VALIDATE THE RESULTS OF THE IDM AGAINST PERCEPTIONS OF POVERTY AMONGST OUR PARTICIPANTS AND NATIONAL RESEARCH TEAMS.

THE FINDINGS PRESENTED HERE, AND THE ASSOCIATED DISCUSSION, ARE BASED ON THE INITIAL ANALYSIS OF THE PHILIPPINES SURVEY DATA. WHILE THE WORK IN THE PHILIPPINES PROVED THE VALUE OF INDIVIDUAL LEVEL MEASUREMENT OF MULTIDIMENSIONAL POVERTY, SUBSEQUENT WORK RAISED SOME QUESTIONS ABOUT ASPECTS OF THE ANALYSIS OF DATA FROM THE PHILIPPINES TRIAL. IN JUNE 2016, WE BEGAN A PROCESS OF REANALYSING THE DATA FROM THE PHILIPPINES PILOT. THIS REPORT WILL BE AGAIN UPDATED WHEN THAT ANALYSIS IS COMPLETE.

Data enumeration, entry and initial analysis were conducted by Pulse Asia, a survey and analytics firm based in Manila. Their report covers their experience of administering the IDM.

Sampling

Our project aimed to address a long-standing challenge with survey collection. Many multi-topic surveys interview only a single member of the household or, if they do interview a second person, it is only for separate modules than those covered by the primary respondent. For example, the head of household may be asked a range of questions on consumption, education and health, but then a female in the household may be asked about use of contraception, pregnancy, childbirth, and pre-natal care. In order to evaluate the intra-household distribution of deprivation, we abandoned this common practice and asked questions of multiple household members about each dimension.

Recently, USAID and other research partners developed the Women's Empowerment in Agriculture Index. The survey used to construct that index required sending two data enumerators to each household interviewed to assess the level of empowerment among men and women within the household. By doing so, the survey challenged the long-standing tradition of having a single enumerator per household. While this is a welcome improvement, interviewing only two household members would not have allowed us to explore other possible variations of intra-household distribution, such as between generations. It was therefore necessary to design a sampling method that allows for both randomised sampling of households that would generate nationally representative figures and interviewing multiple members of households to examine intra-household differences. As noted in the preceding chapter, we attempted to interview all adult household members, thereby ensuring the intra-household distribution could be investigated across all adult members.

A total of 750 households consisting of a random sampling of Filipino households were surveyed in the third phase. Using the 2000 National Statistics Office Census as the sampling frame, Pulse Asia randomly selected households within five sub-national regions: the National Capital Region, North and Central Luzon, South Luzon, the Visayas, and Mindanao. A total of 150 households were interviewed in each of these five areas. Following the random selection of households, data enumerators aimed to interview every adult household member. Following discussion with an external expert,[80] small financial inducements were used to encourage participation by all household members. In some cases, data enumerators remained in the surveyed area for multiple subsequent days to attain interviews with additional household members. However, it was still not possible to always interview all household members, and this may have resulted in a slightly non-randomised and potentially biased selection of individual respondents. This will be discussed further below. Briefly, it may be that individuals who were not available for interview, because they were away at work, systematically differed from those interviewed, both in terms of gender and in terms of deprivation.

The initial respondent answered a series of questions relevant to all household members—that is, questions that could not have individual variation (such as the nature of the dwelling, whether it had electricity, the nature of the household toilet, and so on). Both the initial respondent and all subsequent

80. Juan Munoz, one of the founding partners of Sistemas Integrales, is an expert in the design and implementation of household, impact evaluation and agricultural surveys. www.ariel.cl/index.php/partners/87-juan-munoz

respondents answered the individual questionnaire, regarding their own life circumstances.

	NO. OF HOUSEHOLDS
1st respondent	750
2nd respondent	649
3rd respondent	236
4th respondent	103
5th respondent	43
6th respondent	17
7th respondent	6
8th respondent	2
TOTAL	1806

TABLE 12: RESULTS OF COMPLETED HOUSEHOLD INTERVIEWS IN THE PHILIPPINES

A total of 750 households were interviewed, and had at least one respondent.

The ratio of completed interviews to attempted interviews is high. Only a small fraction of attempted interviews could not be completed (104 uncompleted out of 1,910 attempted interviews). The interview completion rate indicates that the survey design and length are feasible options for a range of development actors that might be interested in multidimensional deprivation measurement.

The completion rate of modules within the survey was also high. In the case of four dimensions—(i) freedom from violence, (ii) family planning, (iii) voice and (iv) respect in relation to paid and unpaid work—not all respondents received a score. In the case of violence, respondents were given an explicit choice whether they wished to answer the module, and 163 (just over 9%) declined to do so. In the case of family planning, some respondents were not asked the module (females 50 years and over), while others said that family planning was not relevant to their life circumstances (a total of 775 respondents or 43 per cent of the sample received no score for this dimension[81]). In relation to voice, some said they did not know to what extent they could raise issues or affect outcomes (17 respondents or under 1%), while in the dimension dealing with respect in relation to paid and/or unpaid work, 78 respondents (4.3%) said they performed neither paid nor unpaid work.

Initial Results

This IDM report, launched in 2014, provided initial results from the piloting of the IDM in the Philippines. According to the first round of analysis of the survey data in the Philippines, Filipinos fall into the following categories of the IDM.

IDM score	Males (no.)	Males (%)	Females (no.)	Females (%)	Full Sample (no.)	Full Sample (%)
90+ Not deprived	61	7.4	129	13.1	190	10.5
80-90 Somewhat deprived	322	39.1	426	43.3	748	41.4
70-80 Deprived	259	31.5	276	28.1	535	29.6
60-70 Very deprived	130	15.8	120	12.2	250	13.8
50-60 Extremely Deprived	44	5.3	30	3.1	74	4.1
40-50	7	0.9	1	0.1	8	0.4
Less than 40	0	0	1	0.1	1	0.1
Total	**823**	**100**	**983**	**100**	**1806**	**100**

TABLE 13: INTITIAL RESULTS OF HOUSEHOLDS IN THE PHILIPPINES

At the population level, we find considerable variation with other estimates of poverty in the Philippines. In the chart below, we compare the percentage of poor people in the Philippines as estimated by the World Bank's two monetary poverty lines, the MPI, and the national poverty line.

IDM Not Deprived	10.5%	World Bank $1.25 PPP	18.4%
IDM Somewhat Deprived	41.4%	World Bank $2.00 PPP	41.5%
IDM Deprived	29.6%	MPI	13.4%
IDM Very Deprived	13.8%	Philippine National (food) Poverty Line	7.2%
IDM Extreme Deprivation	4.6%	Philippine National (Food plus basic needs) poverty line	20.9%
IDM (total in three categories of Deprivation	48%		13.4%

TABLE 14: COMPARING PERCENTAGE OF POOR PEOPLE IN THE PHILIPPINES BY MEASURES

The results of the IDM appear initially consistent with a plausible interpretation of the deprivation experienced by people in the Philippines. According to the IDM, 48% of the population counts as deprived, very deprived, or extremely deprived. This is slightly higher than the percentage of Filipinos thought to be living on less than two dollars per day (with all the problems associated with purchasing power conversion entails). A further 41.4%

81. See the presentation by Africa, T. (2011) Family Income Distribution in the Philippines 1985-2009 [Presentation Slides]. Social Weather Stations, Quezon City, 18 March 2011. Available at www.sws.org.ph/fel-news.htm

82. www.nscb.gov.ph/poverty/defaultnew.asp

of the population fall in the category of being somewhat deprived. This result is striking, as only 10.5% of the population clearly counts as not deprived according to the IDM. However, this too may be plausible. General surveys are conducted for marketing purposes that use proxies for household income to categorise families on a scale of A-B-C-D-E, where each letter represents a socio-economic classification based on wealth/assets, as determined by proxies including the conditions in the community, the house itself, whether it is owned, and its furnishing. On this scale, estimates place approximately ten per cent of Filipino families in the classes of A, B, and C combined, with approximately 60% in class D, and 30% in class E.[83] These figures are broadly consistent with our categorisations, on which many Filipinos are classified as somewhat deprived or experiencing deprivation, while recognising that within these groups there is significant variation in the extent of the deprivation. None of these reflections are intended to stand alone as verifications of the value of the IDM, and the fact that it deserves to complement other measures of deprivation. Since our method seeks to improve upon what we see as the shortcomings of other methods, we should expect this new measure to differ from these. Nonetheless, it is useful to see whether the results it generates are at least somewhat plausible when compared with the results of other measures.

Another way to check the plausibility of the IDM is by plotting all IDM scores against the household asset index which comprises the financial axis of the measure. As mentioned in the preceding chapter, our fieldwork indicated that individuals consider income, wealth and overall financial status very important as dimensions necessary for a life free from poverty and hardship. We therefore used a crude asset index as a proxy for a household's financial status (recognising that this is

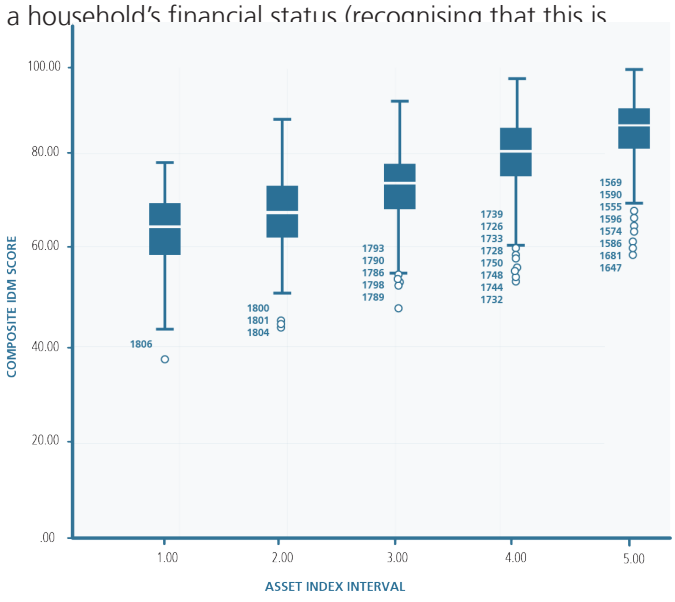


FIGURE 6: PLOTTING THE ASSET INDEX INTERVAL

imprecise, but feasible given time constraints associated with a short multi-topic survey).

In the graph above, the boxes show where responses between the 25th and 75th percentiles fall, with the lines running to zero (below) and the 100th percentile (above), showing the overall range of responses. The dots represent extreme/outlying cases, with the numbers specifying the relevant respondent. The horizontal line within each box shows the median. The x axis is the asset index interval, and the y axis is the composite IDM score.

Plotting the assets index on a one to five interval scale shows a positive relationship between household assets and IDM score. However, it should be noted that there is still a great range among individual scores at any given asset level. This result confirms what we had suspected: that an individual's multidimensional deprivation can diverge greatly from her financial status. Some individuals with fewer financial assets may avoid many deprivations through the provision of public services, strong interpersonal and communal relations and generally high conversion factors between material goods and individual achievements. Others may be in the opposite situation—possessing a number of modern assets but failing to avoid multidimensional deprivation, perhaps in the absence of the provision of public goods such as roads, or when facing a lack of social cohesion, oppressive social structures and other challenges that make it difficult to convert material goods into individual achievements.

One final check on the plausibility of the IDM is a comparison of individual hunger scores versus an IDM. Absent any further information, going hungry is a good proxy for being more generally deprived. The less hungry an individual is, the better her multidimensional score.

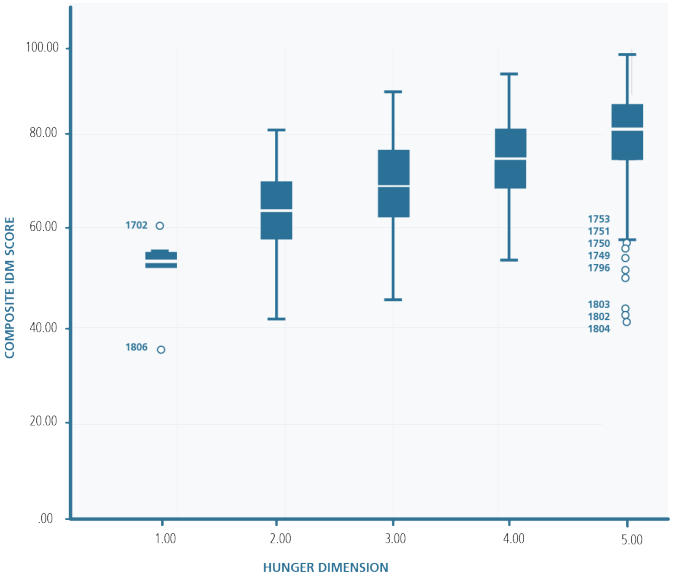


FIGURE 7: PLOTTING THE HUNGER DIMENSION

But again, there is considerable variation between a person's IDM and hunger score.

83. See the presentation by Africa, T. (2011) Family Income Distribution in the Philippines 1985-2009 [Presentation Slides]. Social Weather Stations, Quezon City, 18 March 2011. Available at www.sws.org.ph/fel-news.htm

84. UN WOMEN still claims that 70% of the poor are women at www.unifem.org/gender_issues/women_poverty_economics. The oft-repeated claim that women eat last was made perhaps most prominently at the Fourth World Conference on Women in 1995, by the Executive Director of the World Food Program. See www.un.org/esa/gopher-data/conf/fwcw/conf/una/950906150325.txt.

As above, the middle line represents the median, the edges of the boxes represent the 25 and 75 percentiles, the end lines represent 0 and 100 percentile, and the dots represent outliers. The x axis is the prioritarian weighted score in the hunger dimension, and the y axis is the composite IDM score.

We also find that the thresholds we have proposed for the IDM appear to be useful guides for anti-poverty work. With 4.6% of the population falling in extreme deprivation, and a further 13.8% being very deprived, the thresholds suggest an ability to identify a small group of individuals that are the 'poorest of the poor' and a larger group who are extremely poor. These findings need to be validated and explored in further detail (for example, through longitudinal studies that examine whether the very deprived and extremely deprived are chronically poor).

Gender differences

The initial analysis of the Philippines data, presented in the table of results, was striking, suggesting that women in our sample are slightly better off than men. This was unexpected. The results of the initial analysis also revealed different scores for women and men across different dimensions, proving the value of measuring at the individual rather than the household level. However, further analysis of the data was clearly warranted. In considering the initial results we postulated several possible explanations for how this result came about.

First, it bears noting that the Philippines scores well in many composite indices of gender equity. The Philippines ranks 12th on the OECD's SIGI, 9th on the Global Gender Gap Index,[85] and 25th on the Gender Equity Index. Women in the Philippines have slightly higher literacy than men, are much more likely to attend tertiary education and live longer (a life expectancy ratio of 1.06). Based on these figures, we expect that when the measure is piloted in a different country, with more pronounced gender inequalities in dimensions addressed by our measure, we will see different results. But we recognise that in several important dimensions, such as income, men are doing better than women in the Philippines.[86]

Second, the design of the sampling method may slightly bias our results by excluding men who are well off. Households were randomly selected. But within households, we aimed to interview every adult family member if possible. This was to help us explore a) whether it was possible to capture deprivation information on multiple household members for the purpose of multidimensional measurement and b) to see whether there were systematic intra-household differences. But it may be that by using this sampling method, we tended to miss interviews with men who were well-off in their households and engaged in high-quality, formal employment. Such men may have (arguably) been less likely to take the survey, and therefore did not balance the worse-off men engaged in subsistence agriculture or informal employment who were still available for interview. These explanations are purely speculative, and it was recognised at the time of the original analysis that further interrogation of the data was essential.[87]

A third explanation for the unexpected findings, put forward in the original IDM report, is that in some dimensions, individuals' subjective assessment of their objective situation is the basis for their score. It is possible that standards of assessment vary in a systematic way between men and women such that men, on average, tend to rate things as slightly worse than when women evaluate the same objective situation. Men scored slightly worse than women on the environment. But this seems difficult to reconcile with the fact that men and women should more or less live and work in the same environment (though some forms of employment dominated by men could potentially expose them to additional environmental hazards). It is possible that men were more likely to register that environmental hazards exist even when in fact they did not face higher rates of environmental hazards.

Fourth, the nature of the IDM is such that it treats deprivations equally between men and women, even if in fact a particular deprivation is experientially worse for a woman than a man (or vice versa). For example, both women received the same score as men when subject to violence. But it may be that violence of a private or sexual nature suffered by a woman, especially in the home where she typically cannot avoid the violence, is experientially worse than a similar degree of violence of a public physical nature suffered by a man. Most obviously, lack of access to or control over contraception is arguably worse for a woman than a man, because she faces the direct physical and health implications of an unwanted pregnancy and a disproportionate share of the unpaid care work associated with an additional child, with flow-on implications for her ability to undertake paid work. However for the IDM, women are scored the same as men when they do not have access to modern contraception or face barriers in its use.

85. These rankings are all for the year 2012. See http://genderindex.org/country/philippines for the SIGI ranking, www3.weforum.org/docs/WEF_GenderGap_Report_2012.pdf for the GGI ranking, and www.socialwatch.org/node/14367 for the 2012 results.

86. One recent study by the International Trade Union Confederation finds a 16.8% gender pay gap between men and women in the Philippines. See: Tijdens, K.G. & Van Klaveren, M. (2012). *Frozen in time: Gender pay gap unchanged for 10 years*. Brussels: ITUC, available at www.ituc-csi.org/frozen-in-time-gender-pay-gap.html.

87. Our data collection partner, Pulse Asia, noted their efforts to respond to this difficulty in their final report: "The field Interviewers were asked to conduct interviews of all adult members in a household to ensure that they not stop conducting interviews upon reaching some acceptable minimum number and thereby possibly skew the distribution of interviewed adults toward non-working members. In some cases this required interviewers staying in an area over several days since as many as five call-backs were needed to obtain interviews with working respondents. But we may still have missed people who were away from the household for an extended period for work. And we may have missed others." The full report is available at www.iwda.org.au

Fifth, it is important to recognise that many important gender inequities occur above the minimum deprivation threshold where our measure stops tracking individual achievement. For example, women hold only 27% of the parliamentary seats in the Philippines[88], and they have fewer opportunities for economic empowerment. But these are areas in which our measure will not capture information, as it is focused on deprivations below a minimally acceptable threshold. All that our measure shows in the Philippines is that deprivations in the areas we measured are not registered more frequently among women than men.

Sixth, the fact that men are worse off in some dimensions is a separate question from whether this constitutes gender injustice. Higher dropout rates among men, or worse health outcomes, may or may not be an instance of gender injustice, depending on what the causes of those outcomes are. If men are smoking and drinking at higher rates, and this explains worse health outcomes, it is arguably not a form of gender injustice (even if it might be an appropriate problem to target with social policy). Just as a persecuted minority group may have higher objective living standards than the majority group that persecutes them, so too may women face (slightly) less objective deprivation, despite the patriarchy they face.

Considering each of these possibilities is valuable in interrogating and deepening thinking around the gendered nature of poverty, and in considering ways in which men may be more disadvantaged in some contexts and in some dimensions. This possibility highlights once more the value of measuring poverty at the individual level, thus illuminating the gendered and intersectoral nature of poverty and moving beyond unsubstantiated assumptions.

We also considered a seventh possibility relating to the robustness of the original data analysis. Subsequent investigation has revealed some issues with the syntax used in the initial analysis of the Philippines data, and as a result, reanalysis of the data is now underway (June 2016). This report will be updated when the new analysis is available.

Contrast with MPI, individual level

We measured, as close as possible, the MPI for each household in our sample by including the same questions that are used to calculate the MPI in the administered survey. We were not able to use the exact same data because our survey instrument did not include a measure of child nourishment due to practical and financial limitations. However, for the most recent MPI assessment of the Philippines (using a 2008 Demographic and Health Survey), OPHI did not have information on either child nourishment or household nutrition. With this information in hand, we were able to compare an individual's IDM score, our evaluation of their MPI status, and OPHI's reported levels of MPI poverty in the country.

On our calculation, 7.3% or 55 households appear MPI poor. This is lower than the current calculation reported by OPHI for the MPI of 13.4%.[89] There are several possible explanations for the difference. First, the OPHI MPI calculation for the Philippines currently contains no data for both school attendance and nutrition. It is likely that if this data were collected the MPI would be lower. Second, we do not capture BMI (which is the MPI indicator for nutrition), and so use a hunger score as a substitute indicator to populate the MPI (using a cut-off of six points or under from a maximum of 15 as MPI deprived in nutrition). It is possible that this contributes to a slight lowering of our approximated MPI. Third, the MPI calculation reported by OPHI is from a 2008 DHS survey, while ours is from our 2013 survey. It is possible that progress in the intervening years has lowered the MPI deprivation (for example, through gains in education and reductions in child mortality). Finally, one expects some variation between any calculations of the MPI and both reported figures may be within a sensible standard error.

For those households in the Philippines that were not MPI deprived (695 of the 750 households surveyed), 402 contained at least one household member who scored in the deprived range, or under 80, on the IDM. Of these 402 households, 152 contained a household member with an IDM score of 70 or less and 33 contained a household member who scored under 60. In other words, nearly 58% of the 695 households in our sample, which count all individuals in the household as not poor using our MPI assessment contain at least one member who is deprived on the IDM. Of the households in our sample that are not classified as deprived on our MPI assessment, nearly 22% includes a member who is very deprived or extremely deprived on the IDM.

In the other direction, there are only two households in the sample that count as deprived using our application of the MPI which do not have at least one member who scores lower than 80, i.e. in the deprived range, on the IDM.

It appears quite clear that the IDM reveals a good deal of deprivation that the MPI masks. The IDM certainly sets a higher bar for measuring deprivation. But more importantly it reveals deprivation within households that is not visible using the MPI.

Intra-household differences

By measuring deprivation at the individual level, the IDM provides an opportunity to explore whether differences

88. Data accessed from http://data.worldbank.org/indicator/SG.GEN.PARL.ZS.

89. See: Oxford Poverty and Human Development Initiative. (2013). *Philippines Country Briefing*. Multidimensional Poverty Index Data Bank, OPHI, University of Oxford. Available at www.ophi.org.uk/wp-content/uploads/Philippines-2013.pdf.

	*R1 & R2** (649) %	R1 & R3 (236)%	R1 & R4 (103)%	R1 & R5 (43)%	R2 & R3 (236)%	R1 & R4 (103)%	R2 & R5 (43)%	R3 & R4 (103)%	R3 & R5 (43)%	R4 & R5 (43)%
Percentage points Difference > 5	42.5	44.5	45.6	44.2	45.3	42.7	44.2	40.8	55.8	41.9
Percentage points Difference >10	13.7	10.6	13.6	9.3	14.4	19.4	20.9	16.5	20.9	4.7

*R1 and R2 refer to the first and second respondents in a household, and so on.

**This number refers to the total number of pairs, the comparisons shown in this table account for all but 25 of the 1,806 respondents.[90]

TABLE 15: INTRA-HOUSEHOLD VARIATION IN IDM AVERAGE SCORES (percentage of intra-household pairwise comparisons where IDM differences are greater than five and 10 percentage points respectively).

exist among members of the same household. One way to explore this variation is simply to compare each respondent in the household to all other respondents.
In our sample there was wide variation within households, as demonstrated by comparing each respondent in the household to every other respondent, and measuring the difference in their IDM scores.

Generational differences

Our sampling method was also designed to allow for explorations of generational differences in the level of deprivation. On average, there is effectively no difference in the IDM score between those members who are 35 or under (IDM of 78.79), those who are between 36 and 54 (IDM of 78.78), and those who are 55 and over (78.93). This too might be regarded as a slightly surprising result. One might have expected, for example, older people to be more deprived than middle aged or young adults. But it may be that the nature of deprivation, rather than its overall level, changes with age. For example, as indicated by the table below, older people are less likely to be well educated, but are also less likely to face violence. Because the IDM does not yet apply to children, we cannot explore whether differences exist between those under 18 and the older generations. The possibility of applying the measure to children will be discussed in the next chapter.

Dimension and IDM averages by age group

DIMENSION	Age 18-35	Age 36-54	Age 55 and over	Total Possible dimension Score
Hunger	*14.31 (821)*	*14.24 (632)*	*14.26 (353)*	*15*
Water	*12.76*	*12.77*	*12.74*	*15*
Shelter	*9.86*	*10.39*	*10.99*	*15*
Health	*11.56*	*11.77*	*11.50*	*15*
Education	*13.16*	*12.10*	*10.34*	*15*
Energy	*6.22*	*6.04*	*6.37*	*10*
Toliet	*8.99*	*9.12*	*8.96*	*10*
Decision-making & Personal support	*8.28*	*8.24*	*8.08*	*10*
Clothing/ personal care	*8.57*	*8.40*	*8.16*	*10*
Freedom From Violence	*6.93 (769)*	*7.68 (573)*	*8.52 (301)*	*10*
Family planning	*1.97 (546)*	*1.75 (408)*	*0.52 (77)*	*5*
Environment	*3.03*	*3.14*	*3.35*	*5*
Voice	*3.13 (813)*	*3.15 (626)*	*2.99 (350)*	*5*
Work time/ leisure	*4.09*	*3.98*	*4.49*	*5*
Respect paid/ unpaid\Work	*4.62 (792)*	*4.57 (624)*	*4.57 (312)*	*5*
Total	**78.79**	**78.78**	**78.93**	**100**

TABLE 16: DIMENSION AND IDM AVERAGES BY AGE GROUP

Numbers in parentheses are the number of respondents when less than the total sample. The total sample breakdown is shown in the hunger dimension. Note the small number of respondents over age 55. This is because many participants would not have answered these questions on account of their lack of a need for contraception.

Urban-rural differences

The table below shows the overall IDM score, and each dimension score, by gender and by urban or rural location. There is a considerable difference between the scores of urban and rural Filipinos. Urban Filipinos average a score of 80.66, while rural Filipinos average a score of 75.42. The urban population scores significantly better

DIMENSION	SEX	URBAN AVERAGE	RURAL AVERAGE	AVERAGE FULL SAMPLE	TOTAL POSSIBLE DIMENSION SCORE
Hunger	M	14.25 (515)	14.26 (308)	14.25 (823)	15
	F	14.26 (654)	14.38 (329)	14.30 (983)	
Water	M	12.64)	12.93	12.75	15
	F	12.73	12.83	12.76	

90. The figures above only indicate the difference between different respondents in the household. There is no direct correspondence between respondent number and position in the family.

Shelter*	M	11.02	8.13	9.94	15
	F	11.52	8.60	10.54	
Health*	M	11.43	10.36	11.03	15
	F	12.50	11.36	12.12	
Education*	M	12.54	11.00	11.97	15
	F	12.86	11.68	12.46	
Energy	M	6.85	4.74	6.07	10
	F	7.01	4.85	6.28	
Toilet*	M	9.20	8.42	8.91	10
	F	9.28	8.85	9.13	
Decision making and support*	M	8.22	8.00	8.14	10
	F	8.41	8.07	8.30	
Clothing and personal care*	M	8.52	8.08	8.36	10
	F	8.70	8.09	8.49	
Freedom from violence*	M	7.08 (475)	7.34 (272)	7.18 (747)	10
	F	7.63 (610)	7.95 (286)	7.74 (896)	
Family planning*	M	1.58 (324)	1.53 (200)	1.56 (524)	5
	F	1.97 (329)	2.06 (178)	2.00 (507)	
Environment	M	2.76	3.57	3.06	5
	F	2.95	3.66	3.18	
Voice	M	3.09 (515)	3.22 (303)	3.14 (818)	5
	F	3.04 (648)	3.18 (323)	3.09 (971)	
Work/leisure time**	M	4.33	4.40	4.35	5
	F	3.94	3.95	3.95	
Respect at/ for paid* and unpaid work	M	4.57 (492)	4.53 (292)	4.56	5
	F	4.63 (628)	4.60 (316)	4.62	
IDM*	**M**	**79.38**	**74.17**	**77.43**	**100**
	F	**81.67**	**76.6**	**79.97**	

***Dimensions where the differences by sex in the full sample are statistically significant.**

****Numbers in parentheses refer to the number of respondents when less than the full sample. The numbers for the full sample are given in the hunger dimension.**

TABLE 17: DIMENSION SCORES AND THE IDM SCORE, DISAGGREGATED BY URBAN/ RURAL AND BY SEX

in shelter, health, education, access to energy and toilet facilities. Not surprisingly, the one dimension in which the rural population scores considerably better is environment.

The five sampled subregions which comprised the nationally representative sample display considerable differences in multidimensional deprivation. Again, perhaps not surprisingly, Mindanao scored by far the worst among all sampled regions. As a region

REGION	NO. OF RESPONDENTS	AVERAGE IDM SCORE
National Capital Region	*336*	*83.98*
North/Central Luzon	*372*	*80.61*
South Luzon	*352*	*79.32*
Visayas	*368*	*77.24*
Mindanao	*378*	*73.51*

TABLE 18: AVERAGE IDM SCORES BY REGION

that continues to struggle with conflict and a violent insurgency, the average person in Mindanao scored on the lower end of the IDM deprived category, with many more very deprived or extremely deprived.

There is significant variation in the levels of deprivation across geographic regions investigated in our sample. The general urban to rural difference is only five points. But the difference between the capital and Mindanao is a full 10 points.

People with disabilities

One final application of the IDM to differences amongst individuals is possible. Asking participants whether they have a disability or not generally leads to low reporting rates and mistakenly treats what is at least partially a matter of degree as a simple binary variable. Therefore, the IDM survey asked several questions that allowed for the categorisation of individuals as living with no disabilities, some disabilities, or significant disabilities.[91] Using this categorisation, we find that people with no disabilities average 79.9, people with some disabilities average 77.07, and people with significant disabilities average 74.34. This confirms both that the survey is capable of revealing disparities based on living with disabilities and that there is a considerable difference in the level of deprivation between those who have no disabilities and those who live with significant disabilities.

Overall assessment

The pilot of the IDM in the Philippines was successful in several ways. The strategy of sampling multiple

91. As noted more fully in chapter five, the survey incorporates a brief set of questions on disability to identify limitations in basic activity functioning. The questions were developed for use in census or similar multi-topic survey contexts where only brief information can be sought on any one topic. In contexts where women and men living with disability experience discrimination and stigma, simply asking respondents whether they have a disability may result in significant under-reporting of functional limitations.

respondents within a household allowed for an exploration of the distribution of deprivation within a household. Each of the survey modules was able to produce interval scores of deprivation for respondents. Very few survey modules were not completed.

The amount of time to complete a full interview (both the household and individual questionnaire) was about 90 minutes, and the individual survey alone could be done in under 60 minutes, a feasible length of time for development agencies, national statistics agencies, NGOs, civil society groups, and most importantly participants themselves.

The results provide useful, action-guiding information regarding deprivation in the Philippines. They show a) the dimensions in which shortfalls occur, b) the depth of those shortfalls and c) the geographic and social location of those shortfalls. With this dataset, further analysis can be conducted to explore correlations among shortfalls in various dimensions. If used in a longitudinal study, the results would allow for the exploration of changes of multidimensional deprivation over time.

CHAPTER SEVEN DIRECTIONS FOR FUTURE RESEARCH

THIS RESEARCH PROJECT HAS PRODUCED A MULTIDIMENSIONAL, INDIVIDUAL LEVEL, GENDER SENSITIVE MEASURE OF DEPRIVATION THAT IS GROUNDED IN THE STATED VIEWS OF POOR MEN AND WOMEN. AFTER FOUR YEARS OF RESEARCH, DISCUSSION AND ANALYSIS, AND WITH THE INVOLVEMENT OF THOUSANDS OF PARTICIPANTS ACROSS 18 SITES IN SIX COUNTRIES, WE HAVE COME A CONSIDERABLE WAY TOWARDS PRODUCING A MEASURE THAT CAN BE DEPLOYED TO HELP MEASURE PROGRESS IN THE STRUGGLE AGAINST POVERTY AND GENDER INEQUITY.

Nonetheless, work remains to refine and develop the IDM to the point where it can be easily integrated into national and international systems of social valuation. Future trials in different countries and locations, and continued work with both men and women living in poverty and experts in survey design and measurement will continue to improve the measure. In this chapter we discuss several areas in which further research should be conducted.

Refining dimensions and indicators

The dimensions included in the IDM were developed through participatory processes, academic research into the extensive literature on poverty and poverty measurement and extended dialogue with substantive subject specialists and survey experts. In particular, the participatory research in the first phase—including focus group discussions and individual interviews—helped generate definitions of our candidate dimensions. The second phase of participatory research helped select among those candidate dimensions a final list for inclusion in the IDM. The list of included dimensions and the definition of these dimensions should be further refined through both participatory and non-participatory methods. For example, the dimension of time-use might best be specified as regarding required hours of labour, actual hours of labour, difficulty of labour, amount of leisure time, quality of leisure time, amount of discretionary time, etc. Each of these specifications gives rise to different priorities in reducing deprivations in the time-use dimension, and might be best captured by different indicator(s) than the one we selected.

The indicators that populate our measure were selected predominantly through an examination of existing methods of information collection, especially multi-topic and single topic surveys, and the secondary literature on their reliability, validity, and cross-cultural applicability. We do not claim that we have identified the best possible indicators for each dimension. There are several ways in which indicators might be improved. First, different indicators may be selected which better cover the dimension in question. For example, in the dimension of food, we currently have a single indicator of hunger during the preceding four weeks. A recent study by USAID's FANTA project[92] identified the three questions that we used to generate this indicator as the most reliable across different contexts for measuring household hunger. We were not able to include other indicators to track other important deprivations in the area of food, given our commitment to develop a survey that is manageable in terms of technical requirements, costs and time. For example, an indicator of a person's body mass might better reflect long term food deprivation. Or an indicator of micro-nutrients in the blood might better reflect the dietary diversity and nutritional intake a person faces. Similarly, our current indicator regarding time-use simply reflects a person's labour burden in the preceding day. This is because considerable recall bias is introduced when asking about longer periods of time. This indicator therefore may not reflect when a person faces excessive labour burden if they are surveyed on a day that follows a public holiday or a day-off. It also will not capture the seasonal nature of many people's work schedules.

Several dimensions and indicators that were tested in the third phase trial gave us reason to believe that further investigation and refinement is required.

In using a crude asset index to measure financial status for the household, we quickly encounter two problems.

The first is that the indicator is attributed to all household members, even though members may have very different levels of consumption. The second is that countable assets may accumulate over time within a household, and may become cheaper due to lower manufacturing costs, but neither of these changes will necessarily reflect a change in day-to-day consumption of important goods, including food and other necessities. Because we aimed for a short survey, we did not pursue more standard

92. www.fantaproject.org

consumption-expenditure or income measurement at the individual level. Future efforts may advance the indicator(s) for a person's financial status.

In the measurement of education, we attempted to reverse the long-standing practice of measuring enrollment to the exclusion of achievement.

We asked participants to read, write, and perform simple arithmetic. Future iterations may do better to have a longer section of educational testing to reveal greater differences in educational achievement.

In the measurement of access to family planning, we currently treat male and female access equally.

That is, men and women are both considered to be deprived if they do not have access to modern methods of contraception or are restricted in their ability to space pregnancies. In the Philippines this had the odd result of showing men to be more deprived than women. This seems twice mistaken. First, women may have greater access to contraception quite simply because they work harder to procure it. It is odd to mark men as more deprived when they make no such efforts. Second, and more importantly, it is arguably a much greater deprivation for women than men to be without contraception and to face the burdens of unwanted pregnancy. However, the alternative options here are not particularly appealing. One may exclude this indicator for men. But then one must either simply have fewer indicators for men, or find some 'substitute' indicator for men which is specific to men and not women. Doing so also misleadingly suggests that men may not genuinely need, and be deprived of, access to contraception.

A similar problem in measuring the gendered distribution of deprivation arose in measuring deprivation in freedom from violence.

Men's and women's experience of violence counts equally assuming a similar incident of violence occurred. For example, if a man is hit in a public fight, this scores the same as if a woman is hit by her partner. Arguably, in some instances the woman's deprivation is more severe because her exposure to violence is in the home (with implications for her ability to avoid it), because it is more likely to occur again (and fear of this may be ever present), and because it is likely to affect many other aspects of her life. If the man's public fight is not likely to have these similar features (possible future occurrence, affecting many aspects of life) perhaps it should not count equally. Again, the alternatives to this scheme are not particularly attractive. We have deliberately excluded from the questions any information about the location of the violence or the perpetrator, so that respondents who were also perpetrators of violence against other household members would be aware that answers to the survey could not be used to identify them. Changing the questions to identify the location of the violence, in order to attach greater weight to violence in the home, would increase the risks of responding to the survey given our sampling method seeks data from all adult household members. Alternatively, we could specify some greater weight for women's exposure to violence than men's, regardless of where that violence occurs. But certainly many instances of men being exposed to violence are severe, have enduring multidimensional impacts, may not be readily avoidable, and are equally deserving of a claim to public resources directed towards prevention and mitigation.

Every dimension that requires subjective assessments of objective situations requires further exploration.

Asking individuals to rate their water quantity, or their control over decision-making in the household, permits subjective assessments to influence objective deprivation scores. Individual respondents may understate or overstate the extent of their deprivation, and this may occur systematically on a group basis. For example, women might systematically understate how much control over decision-making they should have, and thus how much they do have. Or geographically remote communities may understate how much water they need to meet their needs, leading to biased assessments of how much they actually use.

Measuring the health status of individuals is difficult, and self-reports of morbidity are not sufficiently reliable.

However, merely reporting on access to health care fails to take account of disproportionate exposure to unhealthy environments. Future iterations of the IDM should adjust the measurement of health status.

We used access to adequate health care during pregnancy as a substitute indicator for women's access to health care.

This decision was intended to be sensitive to unique health needs before and after pregnancy. However, it had the impact of attributing better access to health care to women than had we used information on treatment during a recent illness. This is an odd result, and future iterations of the IDM should consider whether it is valuable to continue taking account of access to health care during pregnancy. It may be that the perceived risks associated with pregnancy encourage women and their families to priorities maternal care for women to a greater extent than they do other health care. Focusing on this as an indicator of health access for women provides important information about a key event in the lives of many women that involves significant risks; but this comes at the expense of masking ongoing inequity in access to general health care.

Measuring environmental problems by simply counting them may introduce understatement or overstatement of environmental deprivation.

A person who faces a single environmental problem of very severe air pollution may be worse off than a person who suffers several more moderate environmental problems, such as exposure to traffic, pools of water where mosquitoes breed, and other noise during the day. In addition to refining the dimensions and indicators, there is room to refine the scoring system that is applied to each indicator. For example, for the dimension of time use, we identify as deprived a person who works (in both paid an unpaid labour) more than 10 hours in the preceding day. To our knowledge or to the knowledge of experts on time-use we consulted, there are no international standards on the labour burden that individuals ought to face. Because we are the first to introduce scalar assessment within dimensions for the purpose of measuring multidimensional poverty, we recognise that further deliberation and investigation will improve the cut-offs used within each dimension. Similarly, more work needs to be done to test the thresholds that separate different categories of poverty in the composite measure against the perceptions of poor women and men in a variety of contexts and adjust the specifications as needed.

Despite these outstanding challenges, the relevant comparison for the selection of dimensions, indicators, and interval scores is with existing multidimensional measures. On this comparison, the IDM is vastly superior to existing alternatives on offer.

Weighting

Our current weighting scheme is informed by three broad commitments. First, we are broadly prioritarian. More severe deprivations are morally worse than less severe deprivations. The absence of a person's third meal of the day should count for much less than the absence of a second. Second, deprivations in some dimensions of life are more important than other dimensions for a person's physical survival. Food deprivation counts for more than deprivation in the ability to participate in one's community. Third, weighting schemes should, at least in part, reflect the collective preferences of the individuals that they measure. From these commitments, we generate a weighting scheme that assigns different values to each of the intervals on our five point scale within a dimension and assigns different weights to three categories of dimensions.

With more time and resources, we would have explored in greater depth the possibility of generating weights directly from participatory exercises. Several different methods exist in the literature for generating participatory weights. Participants may be asked to make comparisons between sets of pairs of situations in which an individual's status in various dimensions is described. The participant may simply state a preference between the two or state the degree to which they prefer one to the other. From a series of these answers participatory weights can be derived. Participants may also vote on the importance of various dimensions, or increments within those dimensions. Or participants may engage in a budget allocation process, through which they express their willingness to pay for goods in various dimensions.[93] Each method can be used to generate dimension weights in composite indicators.

One common shortcoming of most efforts at generating participatory weights is that they apply to dimensions as a whole, rather than to increments within a particular dimension. The weight that a person assigns to food may depend on how much food the person has at the moment, or the increment of food (say, the 2nd meal) they have in mind when assigning weight to the dimension. Future research should seek to develop methods of generating participatory weights for each increment within a dimension.

In addition to generating participatory weights, other methods are available for devising weighting systems.

Data-driven methods require various forms of multi-variate analysis to set weights. Such methods (including factor analysis and principal components analysis) investigate the correlation between the variables in a measure and can be used to set weights based upon the degree to which a particular variable is correlated with other variables in the measure. We do not endorse this method for the following reason. The mere fact that a variable is not correlated with other measured variables is not a sufficient reason to discount its importance. For example, in Klasen (2000), principal component analysis (PCA) revealed violence to be very weakly associated with other dimensions of deprivation in South Africa. Using PCA to set weights would require heavily discounting the importance of violence.[94]

The most sophisticated weighting system would be sensitive to a range of factors, including:

1. Either the individual's or a relevant group's preferences regarding incremental changes in her current status

93. For reviews of various weighting schemes available in multidimensional measurement see Decancq, K & Lugo, A.M. (2013). Weights in multidimensional indices of wellbeing: An overview. *Econometric Reviews.* 32(1): 7-34. Also see: Organisation for Economic Cooperation and Development (OECD), European Commission Joint Research Centre. (2008). *Handbook on constructing composite indicators: methodology and user guide.* OECD: Paris.

94. Stephan Klasen notes that there are significant drawbacks to using PCA to set a weighting scheme. "The disadvantage of such an approach is that it implicitly assumes that only components with strong correlations with each other are relevant for the deprivation measure which may be debatable in some cases. For example, the fact that perceptions of safety are not closely correlated with the deprivation index and its other components should not necessarily suggest that safety is not an important indicator of deprivation, as would implicitly be assumed by a principal component analysis." Klasen, S. (2000). Measuring poverty and deprivation in South Africa. Review of income and wealth. 46(1): 39.

2. Her position in all other dimensions
3. The relative importance of marginal differences in her current position in a given dimension
4. The interaction of that marginal difference with other possible incremental gains or losses in other dimensions
5. The particular social, environmental, political and economic context in which she finds herself.

We suspect that any system that can actually be implemented in the real world will fall far short of this ideal. However, it is our hope that future research can improve systems of weighting to take account of some of the factors that appear, at least to us, should be taken into account in producing a composite metric of deprivation.

Children

Thus far our proposed measure of deprivation applies only to adults. Children were not included in any of the three phases. Given the ethical concerns that arise from working with children, and the need for distinct methods to involve children in participatory research, we decided from the outset to exclude children under the age of 16.

Among members of our project, there are two divergent views about how one might proceed from the work we have completed to a measure of deprivation that can be applied to children. On one view, important as a process of public reasoning is for setting a system of social valuation, it is not particularly problematic to exclude children from questions of poverty measurement. While there are many things that can be learned from working with children living in poverty about how that poverty may best be measured and combated, it is not necessary to have children living in poverty help construct new measures of deprivation. According to proponents of this view, expanding the Individual Deprivation Measure to children would require a two-step, non-participatory process. First, at the level of dimension selection, one would need to identify those dimensions that are not relevant for children in the current measure and remove them. For example, it may not be necessary to measure a child's ability to participate in community decision-making, as this is not traditionally thought to be a sphere of activity in which children need to participate. Many of the dimensions that adult participants identified as relevant to determining whether a life is free from poverty and hardship, including the importance of control over decision-making in the household and the community, and status in paid and unpaid work,[95] are entirely or largely irrelevant for children, at least as currently formulated. Second, at the level of indicator selection, revisions would need to be made to better capture childhood deprivations. For example, in the space of health, it might be more appropriate to discover whether a child had received immunisations, rather than to evaluate the kind and quality of treatment she received when last sick. In the space of education, rather than measuring the final grade completed, it would be better to measure whether the child is enrolled in school, and to test her literacy and numeracy skills against age-appropriate standards.

On an alternate (and perhaps more widely held) view, just as adults should be involved in constructing a publicly justifiable measure of deprivation for adults, so too should children be involved in the construction of child poverty measures. Although different participatory methods might be needed, and heightened ethical scrutiny would be required to ensure the protection of participating children, children can and should be involved in identifying how childhood poverty should be conceived and measured. The IDM should therefore not be applied to children. Rather, a separate measure of childhood poverty should be developed through a participatory process involving, perhaps exclusively, children.

Household-based measures of deprivation provide an easy solution to the problem of measuring child poverty. They attribute the (usually financial) poverty of the household to all its members. This is mistaken for obvious reasons. Children in poor households may be better off or worse off than their parents. Effective programs targeting children may reduce their deprivations, in education, health care, or nutrition, for example, without making this progress for adults. In fact, many gains by children in these areas will not be reflected in most poverty measurement unless they raise the living standards of the entire household.[96]

Child deprivation measures must face several additional challenges not faced by adult measures.[97] They must find a way to select indicators that retain some degree of comparability as children age. The indicators needed for measuring deprivation among children under five will be quite different than those for children who are entering their teenage years. Ideally, measures of child poverty would also allow some degree of comparability between

95. Whereas adults ought to be treated with respect in paid and unpaid work, a child that is free from poverty would be involved in no or minimal levels of paid or unpaid work.

96. Income poverty lines generally treat children as poor if the household counts as poor. Similarly, multidimensional poverty measures generally treat children as poor if the household counts as poor. This has the effect of making invisible the impacts of any anti-poverty programs directed at children which do not raise the living standards of the household more generally. For example, improved quality and access to education, nutritional programs targeting children, or immunisation programs would have no impact on reducing poverty according to most measures even though they clearly reduce child poverty.

97. On extant child poverty measures see Roelen, K. & Gassmann, F., (2008). Measuring child poverty and well-being: A literature review. Maastricht Graduate School of Governance. Working Paper Series 2008/WP001.Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1105652. Also see: Gordon, D., Nandy, S., Pantazis, P., Pemberton, S. & Townsend, P. (2003). Child poverty in the developing world. The Policy Press: Bristol, UK.

children and adults, so that programs seeking to reduce poverty amongst both groups are judged by equivalent standards. They also must find a way of collecting the data from individuals who may not be fully capable of responding to survey questions. Much of the information about young children in existing multi-topic surveys is provided by parents. Depending on the nature of the question, parents may have reason to hide or deceive sensitive information about the child. For example, parents may not respond honestly if the child has been a victim of physical or sexual abuse, especially if that abuse was perpetrated by a family member. Similarly, a family may be hesitant to identify deprivations for which they might fear they will be held responsible, such as a lack of schooling. These are challenges that must be faced as child poverty measurement is integrated into pro-poor, individual-based measures of deprivation.

Context sensitivity

Finally, as discussed previously, there is a tension between developing a measure of deprivation that is comparable across context and over time, and having a measure be sensitive to the specific context in which poverty is being measured. The need for context-sensitivity arises at three stages in the process of generating the IDM. First, in existing survey questions, some questions and candidate answers need to be tailored to a particular context. For example, in assessing whether housing materials are natural, rudimentary, or finished, the selected answers must be revised in distinct natural contexts as the materials from which individuals construct their homes change a great deal. Second, indicator selection sometimes varies from case to case across countries. For example, indicators on shelter should take account of housing materials in Angola, but more appropriately take account of access to heat in Russia, due to very different environmental contexts. Third, it may be that new dimensions and indicators should be added in some contexts. For example, in many countries Female Genital Mutilation or Cutting is not prevalent, and therefore not relevant to assessing individual deprivation. But in other countries, these practices may be prevalent, and warrant a distinct dimension in a gender-sensitive deprivation measure.

The IDM can form the common core of a system of multidimensional measurement, but additional dimensions and corresponding indicators can be added in different contexts when needed. This would allow for both the measurement of the IDM (globally comparable), and a national IDM, relevant only within the country in question. Further research is needed in diverse national and subnational contexts if the IDM is to provide the groundwork for both internationally comparable but locally usable measurement of poverty and gender equity.

Conclusion

It has been a great privilege to join with thousands of participants in Angola, Fiji, Indonesia, Malawi, Mozambique, and the Philippines to develop a new measure of deprivation that is genuinely gender sensitive and, in our view, a considerable improvement upon existing methods of poverty measurement and a necessary complement to existing measures of development and progress. Much more work remains to be done. In addition to further research to address the questions identified above, policy makers must provide the resources to refine and adopt new measures to guide policy making and poverty eradication in the decades to come. The measurement of poverty and gender disparity is a necessary component of any successful program to eradicate poverty. We hope the efforts of this project go some way toward improving measurement to the benefit of poor men and women. Members of this project will continue to work on the measurement of poverty, gender equity, and social progress, and hope that the findings included in this report will inform ongoing efforts at local, national, and international levels to improve the measurement of poverty and gender disparity.

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