

CHAPTER II. CONCEPTS OF POVERTY

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Introduction

Nelson Mandela came out of retirement in February 2003 to speak on behalf of the *Make Poverty History* campaign in London, an effort to renew the global commitment to eliminating poverty worldwide. “Like slavery and apartheid, poverty is not natural,” Mandela intoned. “It is man-made, and it can be overcome and eradicated by the action of human beings.” In imagining a world without poverty, Mandela echoed arguments first made by reformers like Paine and Condorcet in the wake of the French Revolution (Stedman Jones, 2004). Writing of an imminent effort to fight global inequality, Condorcet wrote in 1793 that “everything tells us that we are now close upon one of the great revolutions of the human race.”² Condorcet’s great revolution remains unrealized two centuries later, and advocates hope that Mandela’s strong voice will spur surer action to eliminate the deprivations suffered by the world’s poor.

In turning from a moral case to the practical task, the initial questions are:

- How do we go from advocacy to action?
- What are the most important constituents of poverty?

² Antoine-Nicolas de Condorcet, *Sketch for a Historical Picture of the Progress of the Human Mind*, 1795, as cited in Stedman-Jones (2004), p. 17.

- How can elements of deprivation be addressed that go beyond a lack of private resources?
- How, as a practical matter, should poverty be officially defined and measured in a world where technical and administrative capacities are often limited, especially where national statistical offices are already stretched thin?”

Experts have long-debated the philosophical foundations of what it means to be poor. But for all of the precision of language and concept, it is a different matter entirely to apply philosophies to data and implement concepts that appear so crystalline on paper. The world of poverty measurement in practice is one of compromise, of short-cuts and approximations. This handbook is devoted to improving the practice of compromise and approximation, to making choices more transparent, and to identifying seemingly minor methodological points that can have major implications for measured outcomes.

Compromise and approximation turn out to be critical matters. Researchers have found, for example, that changing assumptions about data collection and measurement methods can dramatically alter the poverty rate in Latin America—raising measured poverty rates from 13 percent of the region to 66 percent. In the process, 250 million people go from being counted as non-poor to poor (Székely, et al, 2000). The same researchers describe how differences in assumptions led one set of researchers to find poverty to be as low as 20 percent of the population of Mexico in 1994, while another set of researchers found poverty to be as high as 46 percent. This difference shifts 25 million

people from one side of the poverty line to the other—even though both sets of researchers were analyzing the same household survey.

Governments around the world have found it useful to define and measure poverty in ways that reflect their own circumstances and aspirations. But a historical assessment suggests that, on balance, greater uniformity of practice will be a major step forward. One unintended consequence of the various indigenous methods of survey collection in practice today is the difficulty of comparing poverty measures across countries and across time. The lack of uniformity also makes it difficult to confidently integrate country-level poverty measures to gain an overall sense of regional and global poverty. At present, even basic parameters are treated very differently around the world. Lack of purchasing power is universally an important element, for example, but some statistical offices measure purchasing power as income and others measure it as expenditures. Within each definition (income or expenditures), an even greater diversity of approaches are employed. Wide differences arise in the setting of poverty lines, for example, as well as variations in the types of data collected, survey methods, and ways data are aggregated to create poverty measures.

Questions of measurement are not matters of mere description. The way that poverty is gauged affects how policy questions are conceptualized, how groups are targeted, and how countries determine progress in improving living standards. The implications go beyond any given country at any given moment; they are critical for future understandings, and for identifying how other countries consider, through

comparison, their own conditions and possibilities. Transparent, consistent poverty measures based on transparent, consistent survey data are thus an international concern. However, few methodological choices are completely obvious, and the result to date has been a wide-range of practices with limited comparability.

The United Nations Statistical Division (UNSD) implemented a global survey of approaches in 2004-5 to gauge the range of ways poverty is measured. By the end of 2005, government statistical offices in 93 countries provided detailed responses to the survey. Of these countries, 62 completed a slightly longer “expanded” survey with a broader set of questions.³ The survey was accompanied by four regional meetings also organized by the UNSD (in Latin America, Africa, Asia, and Europe). Together, the data show a broad consensus about the guiding principles underlying poverty measurement. They also reveal, however, considerable variation in how the principles are implemented in practice. As described throughout this handbook, these details matter, often to a surprising degree.

This chapter and the handbook as a whole identify and build on the areas where there is broad consensus. While identifying important variations in implementation, this book explores ways to build greater consensus in international practice by translating

³ Responses to the longer survey were received by May 2004. The 62 countries included Albania, Armenia, Australia, Austria, Bahamas, Belarus, Burkina Faso, Cambodia, Cameroon, Canada, Croatia, Cyprus, Czech Republic, Denmark, Dominica, El Salvador, Finland, France, Gambia, Germany, Greece, Iran, Iraq, Ireland, Israel, Jordan, Kazakhstan, Kenya, Lithuania, Macedonia, Madagascar, Malawi, Maldives, Mauritius, Mexico, Moldova, Mongolia, Morocco, Nepal, Netherlands, Norway, Oman, Palestine, Paraguay, Philippines, Poland, Russian Federation, St. Kitts and Nevis, Senegal, Sierra Leone, Slovakia, Spain, Suriname, Sweden, Tajikistan, Thailand, Turkey, Uganda, United Kingdom, Ukraine, Vietnam, and Zanzibar.

principles into action. Section 2.1 discusses issues involved in establishing and updating poverty lines. Section 2.2 describes debates around the international “\$1/day” poverty line, and Section 2.3 describes possibilities for harmonizing approaches.

2.1 Basic approaches

The earliest definitions of poverty centered on the inability to obtain adequate food and other basic necessities. Today, the main focus continues to be on material deprivations, i.e., the failure to command private resources. Development experts, including Sen (1987), though, have argued that this notion of economic welfare remains too narrow to reflect individual well-being, spurring active efforts over the past several decades to expand the concept of poverty.

One direction of expansion begins with recognition that even material deprivations may involve more than lack of private resources. If a village has no wiring for electricity, residents can have substantial income but no steady power source. If quality health facilities do not exist, no amount of money may be enough to purchase effective, convenient care.

One direction is thus to use household surveys and community-based questionnaires to ascertain a population’s access to basic services, irrespective of household incomes. About 14 percent of respondents to the UNSD “expanded” survey collect data on such “unmet basic needs” (56 statistical offices responded to the

question). Among the focuses are housing conditions, water, sanitation, electricity, education, and infrastructure. Most commonly, statisticians calculate an index that combines the degrees of access to the various components. They then describe deprivations according to cut-off points in the index. Methods here are still being developed, and there is much less uniformity of practice than around the analysis of income and spending-based poverty measures. Still, even the emerging efforts are a reminder that household budgets tell only one part of a story.

A second direction of expansion includes collecting data on household-level deprivations along dimensions other than money. Researchers, for example, have focused on social deprivations: the inability to fully participate in communities and, perhaps, in religious life. They have also focused directly on physical deprivations, such as those caused by disability, disease, and under-nutrition. And, increasingly, policy makers have recognized that one part of what it means to be poor resides in a sense of vulnerability to devastating loss--living on the edge of adequacy with its attendant uncertainties.

Not surprisingly, a single, all-encompassing measure of poverty remains beyond reach. One response is to turn to methods like “participatory rural assessments” (which can be applied as well to urban areas). The idea in this approach is to ask members of a village or neighborhood to define their own poverty standards and to identify who would be judged poor according to that notion. The appeal of this approach is that it accommodates local ideas and conditions; the disadvantage is that it could produce

various, noncomparable standards. Moreover, the results typically yield only a reckoning of who is poorer than who, rather than an absolute measure of poverty against a fixed benchmark.

Recognizing the trade-offs, researchers are now seeking compromises by integrating qualitative and quantitative indicators into their analyses. While important in itself, the qualitative data can also provide a helpful check on the robustness of lessons learned from traditional quantitative analyses. The ongoing challenge faced by statisticians and researchers (no matter which techniques they employ) is how to capture important elements of poverty in transparent, reliable, and practical ways.

2.1.1 Poverty Lines

Despite the breadth of concerns, social scientists still find it useful to focus largely on poverty as a lack of money—measured either as low income or as inadequate expenditures. One reason for focusing on money is practical: inadequate income is clear, measurable, and of immediate concern for individuals. Another reason is that low incomes tend to correlate strongly with other concerns that are important but harder to measure. Those in the worst health and with the lowest social status, for example, tend also to come from the bottom of the income distribution. Lack of money serves as a rough but quantifiable proxy for a host of deprivations. Thus, narrow definitions of

poverty claim particular attention throughout the handbook, even as income and expenditure are understood to determine only part of overall well-being.⁴

Even within the narrow sphere of money-based measures, substantial questions remain about how to proceed, and practices differ widely from country to country. There is no consensus, for example, on whether money-based measures should focus on income levels or on spending patterns. Poverty can be measured either by a lack of income or by a shortfall in expenditures. While they are closely related conceptually, they can sometimes be quite far apart quantitatively. The 2004-5 survey by UNSD showed that of 84 countries that responded to the question, almost half base their poverty calculations on expenditure data, about 30 percent base the calculations on income data only, and 12 percent use both.

The ability to spend is primarily determined by one's income. But spending and income are not identical since households also borrow, sell assets, or draw on savings when income is low. Conversely, households often save when times are especially favorable. Measuring poverty as a shortfall in spending takes into account these kinds of coping mechanisms and households' general abilities to "smooth consumption" over time. A second difference concerns the ease and reliability of data collection. As described in subsequent chapters, pure statistical issues reinforce the advantages to basing poverty measures on expenditure data rather than income. As noted above, one purpose

⁴ The United Nations Millennium Development Goals for 2015 reflect the diversity of objectives through a broad list of primary and secondary goals focusing on deprivations, such as low levels of child and maternal health, education, and basic nutrition.

of the handbook is to clarify how these kinds of choices affect measurement—and how they affect the understanding of poverty.

The usual next step is to identify a poverty line. A poverty line typically specifies the income (or level of spending) required to purchase a bundle of essential goods (typically food, clothing, shelter, water, electricity, schooling, and reliable healthcare). Identifying the poor as those with income (or expenditures) below a given line brings clarity and focus to policy making and analysis. Having a poverty line allows experts to count the poor, target resources, and monitor progress against a clear benchmark. Communicating the extent of poverty becomes easier, and explaining the notion of deprivation simpler.

Statistical offices spend much time and effort setting and updating poverty lines. However, the place of poverty lines needs to be put in context. A recent study of 17 Latin American countries, for example, shows that many other elements of poverty measurement are more important than the choice of poverty lines. These include adjustments for adult equivalent family size and the treatment of missing data in surveys (Szekely, et al, 2000).

It is also important to bear in mind differences between concepts and reality. The fact is that a poverty line (below which one is poor and above which one is not) has little empirical correspondence in the daily lives of the poor. Researchers analyzing data on households see no clear breaks or discontinuities in the relationship of income and health

or nutrition, and certainly no systematic breaks in living standards that correspond to poverty lines as the term is used. Yet, poverty measures based on poverty lines serve an important descriptive purpose and should be seen in that light.

2.1.2 Absolute versus relative poverty

A poverty line indicates deprivation in an absolute sense, i.e., the value of a set level of resources deemed necessary to maintain a minimal standard of well being. With such a definition, poverty is eliminated once all households command resources equal to or above the poverty line. The \$1/day per capita poverty line is one example of an absolute poverty line, but most countries determine their own absolute poverty lines as well.

Many wealthier countries, on the other hand, set poverty lines based on relative standards. In the United Kingdom, for example, the poverty line is 60 percent of the median income level (after taxes and benefits and adjusted for household size), an approach adopted broadly in the European Union. In 2002/2003, the UK figure translated into a poverty line of £283 per week (equivalent to \$28,418 per year based on 2003 exchange rates) for a household with two adults and two children, a figure considerably higher than the absolute 2003 poverty line in the United States of \$18,400 per year for a similar family.⁵ The relative benchmarks used in Europe reflect the belief that important deprivations are to be judged relative to the well-being of the bulk of

⁵ The US standard translates to \$19.46 per day per capita or \$7,104 per year per capita. UK data are from http://www.poverty.org.uk/summary/key_facts.htm. US data are from <http://aspe.hhs.gov/poverty/figures-fed-reg.shtml>. The websites were accessed in June 2005.

society, approximated by the income level of the household at the mid-point of the income distribution. In short, inequality matters as a component of deprivation. As such, relative poverty can be reduced but never eliminated--except in the extreme (and implausible) case in which income equality is fully achieved.

When asked in the UNSD survey whether they calculated absolute poverty lines, two-thirds of statistical offices answered affirmatively. Those that favored relative approaches were mainly drawn from the OECD, including, for example, Australia, Canada, Denmark, Ireland, Norway, and the United Kingdom. Where the incidence of hunger and the inability to obtain basic essentials is more pronounced, however, the preference strongly favors absolute measures of poverty—and the \$1/day or \$2/day lines echo that choice.

2.1.3 Cost of Basic Needs approach

The way in which statistical offices set absolute poverty lines varies considerably. Most begin with a “cost of basic needs” approach (described in greater detail in Chapters 4 and 5), but the variations in the application of the approach multiply with each step.

The basic approach begins with a nutritional threshold chosen to reflect minimal needs for a healthy life, and adjustments are then made for non-food expenses (e.g., housing and clothing). To set a poverty line, statisticians typically identify a basket of foods that will deliver the minimal nutritional requirements. Assumptions about the underlying nutritional requirements vary considerably around the world, though. Of 29 statistical

offices giving relevant information on the “expanded” UNSD survey of poverty measurement practices, two-thirds adopted international standards in setting the food threshold, almost all adopting nutritional standards set by the World Health Organization and Food and Agriculture Organization (WHO/FAO). The others set standards based on inputs from national experts.

Even when using the WHO/FAO standards, however, there is considerable variation. In Armenia and Vietnam, for example, the reported minimum threshold is set at 2,100 calories per person per day--with no adjustment for age, gender, or location. Statisticians in Senegal, on the other hand, report that they use a threshold of 2,400 calories per adult per day (whether man or woman, with lower thresholds for children). In Kenya, the standard is 2,250 calories for adult men, with lower thresholds for others. In Sierra Leone and the Gambia, the minimum for adult men is 2,700 calories. Differences arise in part because the WHO/FAO standards are specified by age, gender, weight, and activity level—but only age and gender are collected in typical household surveys. There is then considerable scope for variation in choices since different assumptions about the activity levels and average weights of the population will lead to different calorie standards.

An individual’s weight is important to calorie requirements since it determines their basal metabolic rate (BMR). This is the amount of energy consumed merely to get through the day, before extra calories are spent for specific activities. Experts estimate that the basal metabolic rate accounts for 45 to 70 percent of total energy expenditures for

a person of a given age and gender. So adjusting for weight (and thus for BMR) is a critical part of determining the minimum calorie needs of an individual (WHO/FAO/UNU, 2001, p. 35).⁶

The balance of energy expenditure is determined by the person's activity level. A WHO/FAO/UNU report estimates that a moderately-active 25 year-old man requires at least 2,550 calories per day if he weighs 50 kg. At 70 kg, his minimum requirement rises to 3,050 calories per day (WHO/FAO/UNU, 2001, Table 5.4, p. 41). However, a 70-kg man who is sedentary requires only 2,550 calories per day. So, activity level also matters greatly in defining how much food one needs and therefore in setting poverty lines.

As noted above, however, neither activity level nor weight is collected in typical household surveys. Thus, while adjustments can be made for age and gender, statisticians must make assumptions about the average activity levels and weights of individuals—and different assumptions lead to different nutritional thresholds. Given the wide use of WHO/FAO standards, an important step toward comparability of poverty approaches would be to reach a consensus on assumptions about weights and activity levels used to establish food requirements standards by age and gender. Chapter 4 provides additional details on current practice.

2.1.4 Households and individuals: adult equivalence and scale economies

⁶ <ftp://ftp.fao.org/docrep/fao/007/y5686e/y5686e00.pdf>.

A second related area for finding consensus concerns adjustments for age and gender. At a conceptual level, poverty is most often seen as a condition specific to individuals. All members of a family may not be equally poor, however. For instance, a grandparent or a child might face deprivation within a household that has adequate resources. To capture this idea, researchers would ideally collect data on individuals, and poverty measurement would take place at the individual level.

The unit of analysis, however, is rarely the level of the individual. Doing so greatly raises logistical hurdles and survey costs. Even if all members of a household could be identified and surveyed (each in full detail), it is often too difficult to allocate particular flows of income, e.g., the value of a harvest for a farming family, to one member or another, just as it is hard to determine who consumes which part of a common pot of rice or pot of soup. In the end, the benefits of individual specificity are seldom judged to outweigh the extra costs of data collection.

Instead, researchers collect data on households as collective units (where households are often defined in surveys as those who share meals together or live under the same roof). The question then asked is: Does the household command adequate resources to provide for all members? The simplest way to proceed is to consider the per capita income of the household, calculated by simply dividing total household income by the number of household members. (The same method can be applied to total expenditures.) This approach is taken, for example, in calculating the widely-used \$1/day and \$2/day per capita poverty lines.

These per capita calculations weigh all household members identically. A forty-five year-old man is equally weighted as his seventy-five-year-old mother or his ten-year-old daughter. And a household with four adults is judged equally poor as another with identical income but with two adults and two young children. Nor are adjustments made for cost savings that might benefit larger households relative to smaller ones. The cost of a second child, for example, may not be as great as the cost of the first. And the cost of adding a fourth person to the household often exceeds the cost of adding a fifth. The \$1/day approach, though, like many other approaches, fails to account for such changes.

Creating weights that reflect “adult equivalents” helps address the first problem, and adjusting for economies of scale helps respond to the second. The most common approach to establishing adult equivalence standards is to weight, for example, a 45-year-old male as “1” and to weight others in proportion to the resources they require. His teenage daughter may take a weight of 0.7 and his elderly mother takes a weight of 0.8. These weightings reflect the fact the daughter and her grandmother consume less than the man to meet their basic needs. In reality, however, it is far from clear how to set specific weights.

One method is to examine the relative consumption patterns of people of different ages and genders and to use the ratios of consumption levels as weights (or to use a similar approach based in observed consumption patterns). The approach would solve the adult versus baby problem, but it runs into limits. A particular fear is that using

actual consumption patterns to determine “needs” could introduce elements of discrimination into the analysis, particularly differences in consumption by men and women of similar ages and, to a degree, children versus adults. If, say, 25 year-old men are observed to eat twice as much as 25 year-old women, can we assume that the needs of men are twice as great? Chapter 5 examines these issues in greater detail, but we can say here that the answer is surely No.⁷

The UNSD survey reveals that 35 percent of the 74 respondents answering the question make adjustments for adult equivalence in their poverty analyses. In Senegal, for example, a simple adjustment is made such that all adults are given a weight of 1, and all children under age 15 take a weight of 0.5. In Kenya, adults over the age of 15 are also given a weight of 1, but children between the ages of 5 and 14 are weighted at 0.65. Children between the ages of 0 and 4 count for 0.4 of an adult. In other countries, finer scales are employed as well as adjustments for scale economies, and gender is incorporated into the calculations following the WHO/FAO standards. Among 31 statistical offices responding to a question on the “expanded” UNSD survey about adjustments to the minimum calorie threshold, 74 percent report that they adjust for gender, and 58 percent adjust for both age and gender.

Making adjustments for children can matter particularly when comparing changes in poverty over time. If parents give birth to a baby in a given year, per capita income or

⁷ One rough check on the method chosen is to also collect health and education data on individuals (which are free of the kinds of allocation problems described above) to complement the household-level income/consumption data.

per capita expenditures will fall substantially for the family since the baby's needs would count as much as anyone else's. But with adjustments that reflect adult equivalence, the addition of the baby to the family—while adding costs—is counted in line with the baby's actual needs.

One implication of considering income on a per capita basis, instead of an adult-equivalent basis, is that a population experiencing a rapidly declining fertility rate (fewer babies born in successive years) will experience a faster decline in the short-term poverty reduction. Conversely, environments with rapid fertility increases are apt to show exaggeratedly increasing short-term poverty rates when age-adjustments are not made.

2.1.5 Adjustment for non-food needs

The food poverty line is just one part of the overall poverty threshold. There are two common approaches to making adjustments for non-food needs. Roughly half of the respondents to the UNSD survey use the “direct” method (conditional on constructing a poverty line using the “cost of basic needs” approach). The direct method parallels the way in which the food poverty line is constructed. First, necessary items are selected. In the Gambia, for example, the list includes rent, clothing, firewood, transport, education, and health costs. In Albania, by contrast, the list also includes tobacco and entertainment. After the list is determined, the goods are priced and the non-food line is formed.

The UNSD survey shows that 38 of 91 statistical offices do not make specific non-food adjustments, but of the 53 offices that reporting making adjustments, 54 percent use an indirect method and 38 percent use the direct method described above (while 8 percent use both). One advantage of the indirect method is that it is simpler and can capture a wider range of non-food needs. As an indirect method, though, it may include expenditures on alcohol, tobacco, lotteries, certain religious ceremonies, and other categories that might be deemed (rightly or wrongly) inappropriate as constituents of a poverty line designed to measure “basic needs.”

The indirect procedure examines data on food consumption and total expenditures. With a food poverty line in hand, the method entails finding the level of non-food expenditure that would be typical of a household whose food consumption is just at the food poverty line. There are two main ways to do this. The first way is to begin by calculating the “Engel coefficient,” the ratio of food consumption to total expenditures, and then to run a statistical regression that allows prediction of the Engel coefficient for the household whose food expenditure is at the food poverty line.⁸

A second approach is to calculate the average Engel coefficient for households whose food consumption is in the vicinity of the food poverty line (commonly above or below by 10 percent). In either case, once the appropriate Engel coefficient has been obtained, the overall poverty line can be found by multiplying the food poverty line by the inverse of the Engel coefficient.

⁸ World Bank researchers have developed a robust method that involves obtaining the non-food component from the constant in a related regression approach.

2.1.6 Setting and updating prices

With the calorie thresholds in place, statisticians can identify a basket of foods that will provide those minimum needs at least cost. Here, again, there is considerable variation in practices. In the Gambia, for example, the food basket consists of 7 goods. In Kenya, on the other hand, the list contains around 100 goods. In Sierra Leone and Vietnam, the list is 40 items long, and in the Philippines, Senegal, and Armenia, the list contains around 25 items. So, while experts in the Gambia and Sierra Leone employ identical nutritional thresholds, the food baskets they construct vary considerably in size.

Size and composition of the basket affect the accuracy of the overall poverty line. The trade-off in moving to a larger food basket is mostly given by the added costs of collecting price data. Collecting a moderate-sized food basket (say, with 25 items) but obtaining high-quality price data will likely enhance accuracy over either smaller or larger food baskets, especially if the latter makes it more difficult to update prices.

The final step in constructing a food poverty line involves pricing the goods in the basket. Again, practices differ considerably, and another set of choices must be made. In the “expanded” UNSD survey, of 30 statistical offices that responded to the question, only 7 percent adjust commodity prices to account for the fact that the poor often pay higher prices than wealthier individuals since they tend to purchase lower quantities in a single purchase and may have fewer choices of retail vendors. In addition, 20 percent

make adjustments for the likelihoods that poor households make purchases at different price points than richer households. Table 1 also shows that when updating the cost of the food basket from one year to the next, it is far more common to use the general consumer price index than a price index adjusted for a basket of goods more typical of the consumption patterns of the poor (a finding also in the larger survey reported in this handbook's appendix). The use of general consumer price indexes considerably reduces costs for statisticians, but it undermines the reliability of the measures. The debate around consumer price indexes is echoed in the debate around international comparisons discussed below.

Table 1: Use of prices in setting poverty lines.

	Yes (percent)	Number of observations
Is the general consumer price index (CPI) used to update prices for food basket?	71	34
Is a poverty-specific CPI used?	9	34
Are commodity prices adjusted for differential prices paid by the poor due to lower quantities purchased?	7	30
Are commodity prices adjusted for differential prices paid by the poor due to purchases at different price points?	20	30
Does the composition of the food basket allow for differences in regional consumption habits?	53	32

Source: Author's calculations from "expanded" UNSD international survey of statistical offices, May 2004.

Some adjustment for these concerns is implicit in setting separate poverty lines for urban and rural areas and for different regions. While 46 percent of respondents to the “expanded” UNSD survey construct only a single poverty line, 25 percent construct two lines, and 29 percent construct three lines or more. Having multiple lines can add precision, especially in geographically diverse countries, although it drives costs up.

2.2 International comparisons

It would be helpful to find a way to slash through the multiplicity of possibilities identified above. One way is to work toward the harmonization of approaches, seeking methodological consensus across countries. Another is to start from scratch with so-called international poverty lines.

Poverty measures are used both to compare progress across different countries (where the need for international comparability is paramount) and within a single country (where it is possible to customize the approach and definitions). The United Nations and World Bank have adopted \$1/day and \$2/day per capita poverty lines for international comparisons, even though national poverty lines may be more appropriate for comparisons within a specific country.

The UN \$1/day line happens to roughly approximate India's poverty line in the 1980's.⁹ The \$1/day line was not constructed based on a notion of an international basket of goods required to achieve basic capabilities, as described by Sen (1987) for example. Instead, it was chosen as a simple, if arbitrary, threshold that could be used to set goals and monitor progress. Given the challenge of constructing a consistent poverty line for any given country, arbitrariness is not surprising when constructing a line meant to apply globally.

One limit of the international lines is that for richer countries, the \$1/day line (or even the \$2/day line) captures few of those considered poor by experts in the countries themselves. The poverty line in the United States is roughly ten times higher than the \$1/day line, for example. The \$1/day poverty line used by the United Nations and World Bank is anchored in 1993 international prices, so it is instructive to compare the data to the 1993 poverty line in the United States. In 1993, households in the United States with two adults and two children were deemed poor if their income fell below \$14,654 per year—or \$10.04 per day per person.¹⁰ The per-year figure for the US is thus ten times higher than the international benchmark.

Another limit of the \$1/day line involves the translation of the international line (denominated in US dollars) into country-specific poverty lines (denominated in local currency). The simplest approach would be to use official exchange rates. But many

⁹ The poverty line was originally set at \$1 per day per person valued at 1985 international prices but was subsequently updated to \$1.08 per day in 1993 international prices. The line is still referred to as the \$1/day measure, however.

¹⁰ See, <http://www.census.gov/hhes/poverty/threshld/thresh93.html>.

goods consumed by the poor are not traded, and official rates can also be distorted by government interventions. It is thus broadly accepted that official exchange rates cannot be relied on to give the appropriate conversion of purchasing power when welfare comparisons are made. These issues have led to a search for alternative methods of conversion.

The United Nations and World Bank use a set of exchange rates calculated as part of the International Comparisons Project. These rates are designed to be used for comparing national income in different countries, and similar to consumer price indices, these rates are calculated based on the relative prices of a set basket of goods in each country. The idea is to calculate conversion factors that aim to equalize the purchasing power of currencies in different countries (which is why they are termed “purchasing power parity”—or PPP--adjustments).

In principle, if a certain kind of man’s shirt costs \$10 in the United States, then \$10 converted via the PPP-adjusted exchange rate should allow a person to have exactly enough money to buy the same shirt in any other country. In practice, the PPP numbers are difficult to calculate, and corrections and refinements to the method continue. A set of numbers is available for a large number of countries, however, and the UN and the World Bank rightly favor them over official exchange rates.

Differences between PPP and official exchange rates are considerable. In late 2003, for example, the ratios of official rates to PPP rates in Brazil, Nigeria, and India

were 2.3, 1.4, and 3.3, respectively. This overvaluation of official rates means that the PPP-adjusted figures raise the value of \$1/day poverty lines when denominated in local currencies—and thus the PPP method shows more poverty in the world than would a \$1/day line translated into local currencies at official exchange rates.

While they are more accurate than official exchange rates, PPP exchange rates were not originally designed for adjusting poverty lines. In particular, they are not based on a bundle of goods typically consumed by the poor. Researchers have worried about (and demonstrated) the potential biases that result from including cars and color televisions and other goods typically consumed only by richer citizens, and ongoing work aims to create a set of PPP rates that better reflect the spending patterns of poor populations.

An alternative approach would be more painstaking but more consistent with the conceptual basis for poverty measurement described above. The idea would be to focus on a set of capabilities that people throughout the world can agree are necessary for living free from the worst deprivations. Elements would likely include having adequate nutrition, health inputs, shelter, and clothing. Each element would be specified carefully in the spirit of the “cost of basic needs” approach described above. The components would be achievable through access to different bundles of goods in different places, recognizing that eating and living patterns vary considerably the world over. The task for statisticians would be to construct locally-relevant commodity baskets that reflect the

international consensus on these basic capabilities—and to price the baskets using local costs, avoiding the need to use international exchange rates of any sort.

One advantage of this approach is that region-specific poverty lines could be easily accommodated, free of reliance on PPP numbers. The project would no doubt require considerable international coordination and consultation (unlike current practice), but the reward would be the first truly global poverty approach. Setting new international poverty lines would be a critical first step.¹¹ As highlighted throughout this handbook, coordinating survey techniques and practices would be the second major step toward this ultimate goal.¹² For now, though, many countries will continue to rely upon the \$1/day and \$2/day per-person poverty lines. They have proved highly effective in focusing attention on world poverty, and they provide a rough benchmark on global trends. But at the same time, their limits should be kept in mind, particularly when completing disaggregated analyses.

2.3 Toward harmonization

A key goal of this handbook is to find common ground in approaches to poverty measurement, to better understand differences in approaches, and to sharpen assessment practices overall. While money-based measures no longer have exclusive hold on our attention, they remain central to analyses. The past two decades of experience, though,

¹¹ Debate around the \$1/day poverty line is described in UNDP papers (2004), as well as in Reddy and Pogge (2002), Ravallion (2002), and Deaton (2001). Reddy and Pogge (2002) describe (and advocate) the alternative approach described above.

¹² In approaching the second step, there would be much to learn from initiatives like the World Bank's Living Standards Measurement Survey program and from the Luxembourg Income Studies.

reinforce the value of collecting health and education data, as well as other social indicators that describe broader conditions of poverty. Increasingly, researchers also find value in asking about subjective views of poverty and in seeking input on poverty through participatory exercises that involve participants from local communities. Direct measures of access to basic services and infrastructure also provide important inputs in the policy-making process.

Results from the 2005 United Nations Statistical Division survey on approaches to poverty measurement show a wide range of practices. The diversity partly reflects differences in national conditions and policy needs, but there remain substantial areas where greater uniformity will raise the overall quality of poverty measure and improve comparability of measures across time and location. The \$1/day poverty line approach incorporated into the United Nations Millennium Development Goals demonstrates the power of uniformity, and this chapter points to ways of going further.

Several steps to consider in achieving greater comparability and transparency include decisions to:

- Base poverty measurement on expenditure data rather than income data;
- Establish standards for how poverty lines are set, including how to determine both food and non-food portions of poverty lines (where the “cost of basic needs” approach is taken);
- Select a standard set of adjustments for adult equivalence;

- Select a standard adjustment for economies of scale;
- Create shared guidelines for household survey methods used to collect important consumption items;
- Create uniform ways of handling missing data and implausibly low values of income and consumption; and
- Establish guidelines on whether and how to use data from national income accounts to adjust data from household surveys (many experts will suggest not doing so at all).

These simple steps, which are discussed further in this handbook, will bring statistical offices closer toward a common method of measuring poverty. No set of uniform rules and procedures will be superior for everyone all the time, but achieving greater uniformity will be a vast improvement over today's widely varying practices.

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