



Understanding Poverty

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Measuring Poverty

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Abstract and Keywords

This essay addresses a number of question regarding poverty: How do we know who is poor and who is not? Is poverty the same as hunger? What is the relationship between economic growth and poverty reduction? How will we know whether the first Millennium Development Goal has been met, or whether world poverty is falling at all? It considers the issue of poverty as a lack of income or consumption, and the broader view of poverty as the absence of one or more of the basic capabilities needed to achieve minimal functioning in society, such as food, clothing, education, and political participation. The measurement of poverty in the world is also discussed.

Keywords: poor, income, economic growth, consumption, measurement

As the name suggests, economic development was originally thought of as economic growth, but in recent years it has increasingly come to be thought of as poverty reduction. The World Bank proclaims that “Our dream is a world free of poverty,” and increasingly works to direct all of its activities toward poverty reduction. In 2000 the General Assembly of the United Nations adopted a set of “Millennium Development Goals,” the first of which is to eradicate extreme poverty and hunger—more specifically, to “reduce by half, between 1990 and 2015, the proportion of people whose income is less than \$1 a day.” How do we know who is poor and who is not? Is poverty the same as hunger? What is the relationship between economic growth and poverty reduction? How will we know whether the first Millennium Development Goal has been met, or whether

world poverty is falling at all? These are some of the questions that I address in this essay.

LOCAL AND NATIONAL POVERTY

Everyone has some idea what poverty is, and most people have little difficulty answering the question “Do you consider yourself poor?,” although some people need a moment or two to think about it. Nor do people find it hard to answer the same question about their neighbors or other people they know. Yet these simple ideas turn out to be hard to extend to countries, and harder still to the world as a whole.

A participatory rural assessment, usually known by its acronym PRA, is a procedure often used by researchers and by nongovernmental organizations (NGOs) working in villages in poor countries. The researchers sit with the **(p.4)** villagers at the local gathering place and find out about the village, mapping its houses, the school, the water supply, its agricultural activities, and who lives where. It is common to ask the villagers to say who is well off, who is not so well off, and who is poor, and in most cases, villagers have no difficulty in making the identification. No doubt there are some mistakes, and some people conceal some assets from their neighbors, but the results usually make sense. The poor are often people who cannot work because they are ill or suffer from a long-term disability or are elderly. There are also poor and vulnerable groups in specific locations, such as Indian widows who are unfortunate enough not to have sons to support them. Such information can sometimes be used as part of poverty relief efforts. In India, one scheme, the Antyodaya (Last Man First) food program, relies on local councils to identify the very poorest of rural households, who receive subsidized food rations. There is a similar scheme in Indonesia. But it is possible to push this local poverty identification too far. If the sums to be distributed are large enough, they become worth misappropriating, and there is an incentive for people to identify their friends and relatives (or themselves) as poor. Similarly, some NGOs have discovered that if they use the poverty identification to enroll people in employment or training schemes, then after a few visits *everyone* is reported to be poor.

National poverty counts are also used for allocating funds. In the United States and many other countries, some government benefits are confined to poor or near-poor people. In India, the central government subsidizes food provision to state governments according to the fraction of the population that is poor. The South African government transfers funds to municipalities according to estimates of the fraction of their population that is poor. Thus we can't always rely on a poverty measurement system in which people self-identify their poverty. Even so, there is much to be learned from asking people what constitutes poverty. For example, the Gallup Poll in the United States has regularly asked people to report what is the smallest amount of money a family of four, two adults and two children, would need “to get along in this

community.” Although some people give fanciful answers, the central tendency of these reports provides a sensible measure of the “poverty line,” the amount of income that is the border between poverty and nonpoverty. Yet if the national poverty line were to be set using the results of such a poll, it is easy to imagine interest groups asking people to inflate their answers with the expectation of higher benefits.

SCIENCE AND POLITICS

There is a long tradition of setting “scientific” poverty lines by calculating the cost of a minimal standard of living, with a particular focus on having enough to eat. The poorest people in poor countries spend most of their money—in some places as much as three quarters—on food. For them, not having enough money is much the same thing as not having enough food. **(p.5)** Yet even the poorest buy things other than food—clothing and housing, most obviously—as well as an increasing number of goods that are not usually classified as necessities. For example, the average household in rural India spent 70% of its budget on food in 1983, but only 62% in 1999–2000, by which time 31% of households owned a radio and 19% a television. As people become better off, and even while they are still poor by most standards, they spend a smaller fraction of their budgets on food—a regularity known as Engel's Law, after Ernst Engel, who first noted it in 1857—so that economic growth makes it increasingly difficult to think of poverty *entirely* in terms of food, certainly in rich countries such as the United States, where in 2001 the typical household spent only 13.5% of its budget on food, but also increasingly in poor countries that are becoming less poor, such as India.

Even so, the rhetorical link between hunger and poverty remains strong, and many countries calculate poverty lines by calculating how much it costs to obtain enough food, usually in terms of meeting a calorie norm of around 2,000 calories a day (as suggested by nutritional experts at the Food and Agricultural Organization of the United Nations), or by some local nutritional council or institute. Sometimes these norms are set differently for people doing agricultural labor, who typically need many more calories, perhaps 4,000 a day. Sometimes there are even separate standards for men and women (women apparently need less energy, though such distinctions are rarely made today) and for children. Although people need protein as well as calories, it is usually assumed that someone who is getting enough calories through a normal diet will automatically get enough protein. Even so, certain micronutrients remain a concern, and the lack of some of these trace elements can result in disease and disability; for example, iodine deficiency—often remedied through iodized salt—can result in mental retardation, goiters, and problems during pregnancy.

How is the cost of calories calculated? One way is to pose the question formally, in terms of the cost of subsistence. Given all the foods in the market, as well as the calorie content and prices of each, what is the smallest amount of money that is needed to buy a bundle containing 2,000 calories? This solution of this

problem played a role in the development of the mathematical technique of linear programming. But when George Stigler first worked out the answer in 1945, he discovered a diet that was monotonous and uninteresting and that no one could reasonably be expected to eat. (Animal feed is another matter, and linear programming is often used to set cost-effective diets for animals in feedlots.) Such a mathematical solution takes no account of the fact that people care about other things than just nutrients, including variety and flavor, and that what people want to eat is affected by their preferences and by the society in which they live. To escape Stigler's conclusion, calories can be converted into money by looking at what people actually spend and finding the income (or total expenditure) level at which, on average, people get 2,000 calories. This can be done by plotting what is called the "calorie Engel curve," a graph with income or total expenditure along the horizontal axis and the average calories of households at that income or expenditure level on the vertical axis. The 2,000 calorie point on the vertical axis is then traced to the corresponding point on the horizontal axis, which becomes the income or expenditure poverty line. People living in households with less than this amount are classified as poor and people with more as nonpoor.

There are variants of the calorie method. In the United States, the poverty line was set by starting not from a calorie norm but from an economy food plan recommended by the Department of Agriculture, which was then multiplied by three to allow for goods other than food. (Though according to some accounts, the food plan was "adjusted" in order to ensure that the poverty line was close to a value already in use by the administration of the day, so that the science was at least partly window dressing for the politics.) Some allowance must also be made for the fact that different households contain different numbers of people. The simplest method is to do all of the calculations on a per capita basis, plotting calories per capita on the vertical axis and income or expenditure per capita on the horizontal axis. Alternately, as in the United States, different poverty lines can be drawn up for different household types.

Calorie-based poverty lines are widely used around the world. The association with food appears to be attractive, in part because poor people do indeed spend much of their budget on food, but perhaps also because there is more political support for antipoverty programs that involve food than for measures based on goods that are seen as less meritorious. The right to food is more compelling than the right to other consumer goods. The nutritional basis and the involvement of nutritional scientists in setting the norms also appear to add legitimacy to the lines and the counts that are based on them.

Even so, it is clear that the food rhetoric is mostly just that. In particular, even when a national poverty line is set using the calorie method, it is usually updated over time in a way that is inconsistent with the maintenance of the nutritional norm. In countries as widely different as the United States and India, the official

poverty lines have never been updated so as to preserve the original link with food. Although there have been minor revisions, the lines have essentially been held constant in real terms, so that the poverty lines now are simply the original poverty lines updated for general inflation. At first blush, this sort of updating might be seen to preserve the original intent, and certainly, if price inflation is correctly calculated, a household at the poverty line in India in 2000 has the same purchasing power as a household at the poverty line when it was first drawn up in 1971. Yet people at the same level of living purchase fewer calories now than they used to, perhaps because fewer of them are engaged in manual labor in agriculture and thus need less energy, so that if one were really to believe in a fixed calorie standard, the poverty line would have to be revised upward. Such revision is something for which there is typically little political support, in India or in the United States, if only because raising the poverty line would increase **(p.7)** the number of people designated as poor, which, in the absence of legislative changes, would trigger additional progressive redistribution.

There are similar problems in adapting poverty lines over space, as well as over time. Urban people are typically more sedentary than rural people, and so consume fewer calories at the same level of income. So if the same calorie standard is used for both urban and rural sectors, the urban poverty line will be higher. This sometimes leads to higher calculated poverty *rates* in cities than in the countryside, even when levels of living are clearly much lower in the latter and, indeed, when people are willingly migrating into the cities. Higher urban poverty lines make some sense because urban prices are usually higher, but once again the politics of “urban bias” often find it congenial to overstate the number of poor people in the cities to justify transfers to groups who are vocal and who live close to the seats of power. The problems of updating over time, and of different poverty lines for different places, could in principle be solved by the selection of separate calorie standards. Yet no one really knows how to set such standards, and better calorie standards would do nothing to deal with another deficiency of the measure, that it takes no explicit account of the nonfood part of consumption (should poverty lines be higher in colder places or in hilly places?), a part that is more important in cities than in the countryside and that becomes more important over time.

An alternative interpretation of national poverty lines recognizes that they are to some extent arbitrary, so that within a range, a number of different poverty lines could just as well serve the purpose. At any given time, people have an imprecise notion of what a decent minimum income is, so that a range of “scientific” lines is likely to be acceptable. But it is the science, not the notion, that will give way if there is a conflict. But once the line is set, it appears to be politically difficult to update for anything other than general price increases. Eventually, such lines move out of the range of acceptability, and there will be pressure for change. But because of the political issues involved in redistribution, lines survive

beyond the time when they can be justified, either by considerations of food or as some average of what people think a poverty line ought to be. Poverty lines are as much political as scientific constructions.

THE MICAWBER PROBLEM

In Dickens's *David Copperfield*, the character Mr. Micawber has an eloquent understanding of a poverty line. As he frequently observes, "Income twenty shillings, expenses nineteen shillings and sixpence—result, happiness. Income twenty shillings, expenses twenty shillings and sixpence—result, misery." One of the reasons Mr. Micawber's observation is so memorable is that it is nonsense. Why should everything depend on such a tiny difference? And why do we say that someone who is just below the poverty line is poor, and thus a candidate for transfers and the special attention of the World Bank, while **(p.8)** someone who is just above it, whether by sixpence or by six annas, needs no help and can be safely left to his or her own devices? Even if we could set the poverty line precisely, and even if we could precisely measure each person's income, neither of which conditions is close to being met, it makes no sense to treat such similar people so differently.

There is another good argument for not doing so. A government that cares not at all about poverty but is being held to a poverty reduction standard, or is keen to be seen to be reducing poverty, could do so by giving small amounts of money to those just below the line, just enough to lift them out of poverty. This money could even come from the very poor—once someone is poor, taking money away from him or her does nothing to add to the poverty count. This tactic is open to any government whose poverty record is judged by the fraction of people below the poverty line.

It is sometimes argued that Mr. Micawber was right after all, and that, if we think about it hard enough and do the supporting research, we will find some income level, or perhaps some combination of income and other things—an index of well-being—where there is a real observable jump in behavior. For example, for children at school, having a pair of shoes might make the difference between being accepted or being treated as a pariah, just as the possession of a particular brand of sneaker might have a similar effect in a better-off country. Yet decades of research into people's spending patterns and income levels has always failed to find any clear discontinuity in the data, a point at which behavior suddenly changes that we might use as the cutoff for a poverty line.

The Micawber problem can be remedied by going beyond a count of the poor and taking note of the *degree* of poverty. The *head count ratio* is the most familiar measure of poverty and is defined as the fraction of the population in poverty. We can add to this measure information about the average incomes (or expenditures) of the poor. A standard way of doing so is to compute the fraction by which each poor person is short of the poverty line, so that someone at half

the poverty line would have a value of 0.5, while someone with nothing would have a value of 1.0. The *poverty gap* measure of poverty is then obtained by multiplying the head count ratio by the average value of this fractional shortfall among the poor. Someone just below the line now counts for less than someone a long way below it, and our malevolent government can no longer cook its books by taking money from the poorest and giving it to those just below the line. In practice, only academics and a few statistical agencies calculate such measures with any regularity. Their theoretical superiority seems to be outweighed by the difficulty of explaining these measures to the press or to the public, and in truth, it seems to be rare that poverty comparisons between two places, two countries, or two dates are different if we use the better measures. Yet it is always beneficial to keep the deficiencies of the head count ratio in mind.

(p.9) POVERTY AND GROWTH

When there is economic growth, in the sense of an increase in average consumption and average income, what happens to poverty depends on what happens to the *distribution* of income and consumption. If everyone's incomes grow together, then growth at the mean goes straight into poverty reduction. If economic growth benefits only the rich, the distribution of income widens, and there will be no reduction in poverty in spite of the fact that growth among the rich means that average incomes are growing. It is sometimes argued that income distribution changes only very slowly, so that, at least in the short run, growth automatically reduces poverty. By the same argument, it is possible to *measure* poverty from data on *average* incomes or expenditures; with the distribution fixed, incomes at the bottom grow at the same rate as incomes at the mean.

These arguments are both dangerous and factually incorrect. In the 1990s, world poverty fell a good deal less than would have been expected from the relatively rapid rates of economic growth in some of the large countries such as India and China. Growth at the bottom of the income distribution was not as rapid as overall growth. There are good reasons to expect this to happen. Many countries in the world experienced increasing inequality in the 1990s, and in countries such as India, the rapid expansions in high-technology industries is likely to disproportionately benefit the well-educated, at least at first. Growth in agriculture, on which most poor people depend, has been less rapid. Beyond this, there is a general argument that, in poor countries that are growing, the growth in measured national income tends to overstate the true growth rate as more and more informal production is brought into the accounts. This informal production is better captured in the surveys used to measure poverty, if only because many of them rely on consumption, not income. I like to think of this as the "Al Capone effect"; the notorious gangster could never be convicted of murder or extortion but was brought to justice on tax evasion charges when prosecutors showed that his expenditures were wildly in excess of his income. The message here is that it is important to measure poverty directly by

collecting data on the living standards of poor people and not to *assume* that the incomes of the poor grow at the same rate as the average. Making that assumption is effectively a refusal to confront one of the central questions of the day: whether growth around the world is good for the poor.

POVERTY AND CAPABILITIES

So far I have discussed poverty as a lack of income or of consumption. But this is only one aspect of poverty. Even if you have enough goods, they are worth little if you are not healthy enough to enjoy them. Children who live in an unsanitary environment will obtain little nutritional benefit from the food they eat if they continually suffer from diarrhea. More broadly, girls **(p.10)** who are denied the opportunity to go to school experience yet another type of poverty, the poverty of not being able to read and to participate in activities that are open only to the literate. People are also poor in another sense if they lack the resources to participate fully—in Adam Smith's terms, “are afraid to appear in public”—in the society in which they live, even if their incomes would be sufficient in some other society. In recent years, Amartya Sen's has been an important voice urging that poverty needs to be seen more broadly than inadequacy of income. He argues that poverty is the absence of one or more of the basic capabilities that are needed to achieve minimal functioning in the society in which one lives. This includes not having enough income to ensure being adequately fed, clothed, or sheltered (income poverty) or being unhealthy (health poverty), as well as being denied access to education, political participation, or a full role in society. Sen also recognizes that poverty is sometimes *relative* to the norms and customs of the society in which someone lives; full participation in a wealthy society may require more money than participation in a poor one.

The aim is not to try to combine these different aspects of poverty into a single measure, and we are clearly not always concerned with every case of deprivation in all dimensions. Even so, if we confine ourselves to income-based measures, we risk missing important features of poverty. For example, a government that raises taxes to pay for better public services or better public health may *increase* income poverty while reducing poverty more broadly. Conversely, it is sometimes argued that rapid economic growth that favors the rich, although not reducing the incomes of the poor, may reduce the access of the poor to public services that are redirected toward the rich and perhaps also the democratic rights of the poor, if money influences the political process. In consequence, and even in the absence of an adequate measure that combines all aspects of poverty, the broader perspectives have had a major effect on the way that poverty is measured. International institutions such as the World Bank and the United Nations measure not only the number of people whose income is low but also pay attention to measures of health, such as infant and child mortality rates and life expectancy, and to participation in education. Five of the eight Millennium Development Goals are about promoting health and education. The United Nations Development Programme annually publishes a Human

Development Index for each country that consists of an average of three measures: one for income, one for life expectancy, and one for literacy. And individual countries are increasingly assigning to these broader measures the prominence that was once reserved for national income alone.

It is important to note that these additional measures of well-being are not substitutes for one another, nor should it be supposed that they necessarily move together, so that one dimension can serve as a proxy for another. For example, improvements in public health, such as malaria eradication, vaccinations, and clean water, led to considerable improvements in life expectancy in many countries of Africa that were experiencing little or no **(p.11)** income growth. There were great successes in income growth and poverty reduction in India in the 1990s, as there had been in the 1980s. Yet the reduction in infant mortality rates in India was less rapid in the 1990s than in the 1980s, with the opposite true for education, where school attendance rose rapidly, especially among girls. More generally, the rate of decline in child mortality throughout the poor world was slower in the 1990s than in the 1980s, in spite of higher rates of growth of GDP per capita. While it is true that income growth is often a powerful agent for the reduction in nonincome poverty, it is neither necessary nor sufficient as we can see from the fact that health and educational poverty have been effectively eliminated in some poor places. Costa Rica, Cuba, China prior to the economic reforms, and the Indian state of Kerala are the most often cited examples. In at least some cases, public provision can reduce poverty even at low incomes.

The fact that income tends to be positively correlated with other aspects of well-being also alerts us to the fact that poor people in the world are poorer, and rich people richer, than we would recognize on the basis of their incomes alone. Africans not only have less money than Europeans and Americans, they also have lower life expectancy and less chance of ever going to school. Such associations also hold *within* countries; poorer people are more likely to lose their babies and can expect to have shorter lives, and this is as true in the rich countries of Europe and North America as it is in the poor countries of Asia and Africa. Taking a broader view of poverty gives us a more complete picture of deprivation and of the inequality within and between countries.

Thinking about poverty as the inability to participate in society leads to concepts of *relative* poverty, as opposed to the *absolute* poverty of not having enough to eat or not enjoying good health. Relative measures of poverty are often constructed by using poverty lines that move with average income, so that the minimum acceptable income is tied to what other people get. For example, the Council of Ministers of the European Community recognizes someone as poor if he or she lives in a household whose income is less than half of average household income. And although the U.S. government uses a poverty line that is fixed in real terms, the answers to the Gallup “get along” questions in the United States consistently track half of median income, so that this measure seems to

correspond well to what Americans think the poverty line should be. But relative lines are not much used in poor countries, where the main concern seems to be absolute poverty, the inability to meet basic needs of health and nutrition. In rich countries, where meeting basic needs is no longer an issue for the vast majority of households, there is a greater emphasis on social inclusion and not being too far from the mainstream of other citizens. Even among countries that do not adjust their own poverty lines, there is a tendency for middle- and high-income countries to have higher poverty lines than poorer countries. The 2001 poverty line in the United States for a family of two adults and two children was \$18,000 a year, more than ten times as much as the international “extreme poverty” **(p. 12)** line of \$1 per person per day used by the World Bank and the United Nations.

MEASURING POVERTY IN THE WORLD

Measuring poverty at the local level is straightforward; at the national level it is hard but manageable; and at the level of the world as a whole it is extremely difficult, so much so that some people argue that it is not worth the effort. In particular, because there is no world political authority that can set a poverty line and use it in antipoverty policies, we lack the opportunities that exist at the national level to come to some sort of political agreement on what is a useful definition of poverty. Instead, we have a measure that is useful mainly for the international organizations and for First World NGOs that are arguing for greater resource flows to poor countries. Yet the recent debate on the costs and benefits of globalization has drawn new interest to the world poverty counts and has raised wildly differing claims and counterclaims. Those in favor of globalization point to recent high rates of growth among some of the world's poorest countries and argue that growth almost always means poverty reduction. Those who are against it argue that globalization has benefited mainly the rich countries, deepening poverty for most people and countries of the world. Are our poverty measures capable of providing an answer one way or the other? And, if so, who is right?

The obvious way to make a world poverty count is simply to add up the counts from each country. But such estimates would be of little interest. In the count for 2001, the U.S. Census Bureau estimated that there were 32.9 million poor people in the United States, while the Planning Commission of the Government of India estimated that there were 260.25 million poor people in India in 1999–2000. I think there are few people who take a strong enough relativist view of poverty to argue that these poverty counts are commensurate and simply add them up. The World Bank, in constructing the world poverty data, makes no attempt to do so; indeed, it excludes the rich countries altogether. For the low- and middle-income countries, instead of using the national poverty lines, which are higher the richer the country is, the World Bank uses a common international poverty line designed to be appropriate for extreme poverty, defined as poverty in the poorest countries. A good way to think about this is

that the counts use a poverty line close to that of India, so that the basic idea is to count everyone in the world whose level of consumption is low enough for them to count as poor in India.

To put this idea into practice, we need to convert the Indian poverty line into the currency of other countries: Indonesian rupiahs, Thai bahts, Mexican pesos, Kenyan shillings, and so on. For nearly all of the countries, there are market exchange rates, although it is often convenient (especially for audiences in rich countries) to convert the Indian poverty line into U.S. dollars first, and then to convert from U.S. dollars into all the other currencies of the world. But it turns out that market exchange rates are not useful here. **(p.13)** In particular, market exchange rates make the poor countries appear too poor relative to the rich ones, compared with the real differences in their living standards. (For the same reason, it is a serious mistake to calculate measures of world inequality using official exchange rates.) The problem is that (to simplify matters a little) market exchange rates are determined by supply and demand of imports and exports; importers into India need dollars and euros, which are supplied by exporters selling Indian goods in the world market. The market exchange rate then ensures that goods that are traded into and out of India have prices in rupees that, when converted at the market exchange rate, are comparable with the world prices of those goods in dollars. But many goods that are important to poor people, including much of their food, all of their housing, and the services that they buy, are neither imported nor exported. Land, housing, and services that use cheap Indian labor (remember that India is poor) would be a great bargain in New York, but that does nothing to raise their prices, because they are in India, not New York, and it is impossible to ship such things from India to New York. The result is that an American dollar, converted into rupees at the market exchange rate, will buy a great deal more than a dollar's worth of goods in India. Equivalently, the Indian poverty line in 1999–2000, which for urban people was 454 rupees per person per month, is worth several multiples of the \$9 per person per month that 454 rupees would have brought at the market exchange rate of 50 rupees to the dollar. Instead, it is necessary to use a different set of exchange rates, called *purchasing power parity* (PPP) exchange rates, which are designed to convert currencies in a way that preserves purchasing power, and which, for the comparison between India and the United States, converts 454 rupees to around \$50 per person per month. The Indian rural poverty line is 328 rupees, which converts to \$38, a little more than one PPP dollar per person per day.

All of this is fine in theory, but the construction of PPP exchange rates is controversial and subject to substantial margins of error. Perhaps the most serious of the criticisms is that the PPP exchange rates that are used were not constructed for the purpose of measuring poverty, so that there is no guarantee that they will accurately convert the living standards of poor people from one country to another. Another problem is the low priority that many statistical

offices give to providing numbers that have no domestic use. Perhaps in consequence, when the PPP numbers are revised or updated, there are wild swings in the poverty counts, even for broad regions of the world. PPP exchange rates are not calculated for every country, nor for every year in any country, so there is a good deal of reliance on interpolations and predictions, some of which are almost certainly quite inaccurate. So there are critics who doubt whether the PPP numbers have any value for measuring global poverty.

Even when the \$1 a day has been converted to local currency, we have not come to the end of our difficulties. The poverty count in each country is the number of people living in households whose consumption per capita (**p.14**) is less than the local version of the international poverty line. The information for that calculation comes from *household surveys*, in which a random sample of households in each country is visited and asked questions about their incomes and expenditures. There is a good deal of variability in the quality of these surveys. In some countries, such as India, where modern survey methodology was first developed, the statistical authorities are experienced and expert. But that is not always the case. And even when the surveys are well conducted, details of how the questions are asked—which are far from uniform across countries—can have large effects on the results. For example, some countries, such as most of Latin America and China, collect data on incomes, while others, such as India, Pakistan, and Indonesia, collect data on expenditures. There is no straightforward way of converting poverty counts based on one into poverty counts based on the other. Another important, although seemingly trivial, issue is the length of what is known as the reporting period. When respondents are asked how much they spent, for example on rice, the question must refer to a specific period, for example the last seven days, the last fourteen days, or the last month. In India, the statistical office has traditionally used a thirty-day reporting period for food, a choice that was based on experimental evaluations of different reporting periods carried out in the 1950s. Even so, the thirty-day period is unusually long by international standards, and an experimental survey was set up in which a randomly selected half of the households got a thirty-day reporting period, while the others got a seven-day reporting period. On average, households reported about 30% more food purchases on the seven-day questionnaire and only about 18% more on all expenditures including food—not such a large difference in itself, but enough to cut the measured number of poor in India by half! It seems that statistical poverty reduction is a good deal easier than substantive poverty reduction. While it might be argued that the choice of reporting period doesn't matter much for India itself, where everyone would adapt to the new measurement system and its associated poverty levels, the fact that reporting periods and other “details” are different in different countries undermines our ability to make comparable counts that can be added up across countries.

In spite of all the faults in the data, a fairly clear picture is now emerging of what has been happening to poverty around the world near the end of the millennium. The overall count of income-poor in the world is dominated by what has been happening in India and in China, where there has been a great deal of economic growth. Although the growth rates of income and consumption around the poverty line have been slower than growth at the mean—there has been a widening of income inequality—there has still been sufficient growth among the poor in both countries for there to be reductions not only in the fraction of people who are poor but also in the actual number of the very poorest people, those living on less than \$1 a day. (However, the number of those who live on less than \$2 a day is rising, according to the most recent estimates.) In spite of increased income poverty in much of **(p.15)** Africa, in the transition countries of Eastern Europe and the former Soviet Union, and most recently in some countries in Latin America, the huge weight of population in India and China dominates in the world counts. While it would be true to say that, apart from those two countries, poverty in the world is getting worse, it is also true that nearly half the world's population lives in places where poverty is falling. On the negative side, there is no progress or even negative progress in Africa, with increasing income poverty accompanied by falling life expectancy associated with HIV/AIDS. While few people would attribute the AIDS catastrophe to the effects of economic globalization, we must likewise be careful not to automatically attribute to globalization the success of reductions in income poverty. Indeed, the role of globalization in poverty reduction remains a hotly debated topic. **(p.16)**

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