The World Bank's New Poverty Estimates

Digging Deeper into a Hole

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The World Bank recently revised its poverty threshold upward by 25 percent. The new definition of being poor is now anyone who lives on the equivalent of what $1.25 a day buys in the United States, up from a mere dollar. But that adds some 400 million people to the poverty rolls in the world. Does the World Bank have it right now? In a word, no, says this author.

THE WORLD BANK, late in the summer, released what it referred to as "updated" global poverty estimates.[1] These changed numbers are based on a new worldwide price survey and a new international poverty line benchmark of $1.25 per day. The number is based on purchasing power parity (PPP–intended to capture a constant level of purchasing power across countries) computed for 2005 by the International Comparison Program, a multinational initiative of statistical agencies that periodically conducts price surveys.

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The new $1.25 poverty line replaces earlier benchmark poverty lines (of PPP of $1.08 in 1993 and $1.00 in 1985, both widely referred to as "$1 per day") corresponding to earlier base years. The revised figures purport to estimate world absolute poverty for a range of years since 1981, and thus they crucially affect our understanding of the world over the past quarter-century of globalization. In the bank's own words, the new poverty estimates "reveal" that "1.4 billion people in the developing world (one in four) were living on less than $1.25 a day in 2005, down from 1.9 billion (one in two) in 1981." These figures contrast with the bank's earlier claim that 969 million people in the developing world (less than a fifth) were living on less than $1 a day in 2004, down from 1.47 billion (somewhat more than one in three and less than two in five) in 1981.[2]

The bank says the two poverty lines are representative of poverty lines in poor countries. Why did it revise its own poverty estimates so drastically? Because the methodology it employs compelled it to take into account the results of a recent worldwide price survey that made the former $1-a-day benchmark appear to be outdated (being defined in terms of prices that prevailed fully fifteen years ago). Unfortunately, in the process of making the changes, the World Bank's approach has become inconsistent and incoherent.

Many aspects of the global order, such as the movement toward freer trade, as well as national institutions and policies, are frequently defended—not least in the corridors of power—by referring to their effect on the poor. The bank's poverty estimates are thus central to the assessment of economic policies. Moreover, the first Millennium Development Goal of the United Nations is defined in terms of these estimates, making this revision of great importance for determining whether the world is on track to reduce poverty by the amount sought.

Can the bank's new estimates be trusted? Can they be trusted more than its own earlier, greatly lower poverty estimates, which they are intended to replace? Unfortunately, the new estimates are based on the same methods used earlier and are undermined by the same problems as the earlier estimates.

Two problems are foremost, as noted in a widely cited critique by Thomas Pogge (that this author first circulated in 2002).[3] The first is that the bank's chosen international poverty line is far too low to cover the cost of purchasing basic necessities. Contrary to the bank's claims, a person could not live in the United States on $1.25 a day in 2005 (or $1.40 in 2008) nor on an equivalent amount elsewhere. Note that the adjustment for PPP is used to determine the equivalent needed in a local currency to buy what $1.25 buys in the United States. Unsurprisingly, after the PPP conversion is applied, it is self-evident that this benchmark is far too low to account for the cost of purchasing basic necessities not only in the United States but in many other countries. One's daily income can be a great deal higher than $1.25 and still leave one unable to fulfill basic nutritional requirements, let alone the other requirements of a minimally decent life. Because the international poverty line is defined in PPP terms, it is reasonable to ask for the poverty line to have the same absolute purchasing power in the base country as it has elsewhere. That it does not in the United States causes an incoherence that is not easy to overcome. If the poverty line is clearly insufficient in the United States, how could its PPP equivalent be sufficient in poorer countries?

The second problem concerns the PPPs used to determine equivalent purchasing power. Consider the question of how many rupiahs are needed in Jakarta to possess the purchasing power of a dollar in Washington, DC. The question cannot be answered without first establishing the purpose to which the money is to be put. If the purpose is to purchase the goods needed to escape severe poverty (such as staple foodstuffs, which are internationally tradable at prices that tend more closely to reflect market exchange rates), the rate of equivalence may differ from a purpose to buy domestic services (which are typically relatively cheaper in poor countries, as labor is not similarly internationally mobile). We argue that the rates of equivalence typically used by the bank substantially understate the relative cost of purchasing in poor countries the goods needed to escape poverty.

In addition, the PPPs calculated for each country inappropriately reflect information about the pattern of consumption in countries other than the country in which the price level is being assessed and the base country with which prices are compared (the United States). This is because the worldwide pattern of consumption determines the weights placed on different commodities when assessing the price level in each country. The resulting problem of country irrelevance compounds the problem of commodity irrelevance just noted. The bank's new $1.25 poverty line is itself based on an average of poverty lines allegedly used in poor countries. However, as before, many of these poverty lines have been defined by the bank itself, and they are translated into common units using the very PPPs whose application is in question. The claim that the international poverty line (whether the new or the old one) is representative of standards prevailing in poor countries is untenable.

Within the bank's current approach, these problems can be mitigated but not overcome. The underlying source of the problems is the lack of a clear criterion for identifying the poor, and that basic deficiency remains unaddressed. The features that supposedly constitute improvements in the bank's estimates lead only to increased confusion. We have no basis for concluding that the new set of PPPs employed by the bank to generate poverty estimates is closer to the "truth," despite its rhetoric to this effect. Rather, we can only conclude that they are distorted in different ways than the earlier ones were. The direction and extent of the new distortion likely varies from country to country, making it all but impossible to determine which set of estimates is more accurate. The bank's declarations mask the fact that it has been building castles with sand.

The new PPPs produced by the International Comparison Program do indeed incorporate certain methodological improvements—but these are largely improvements that have little benefit for poverty assessment. For instance, the better measurement of the quality of government services, which is an important source of the discrepancies between the most recent PPPs and the last, is quite important for assessing real national incomes but largely irrelevant in determining who is poor.

Even if the latest PPPs present a better picture of relative prices in

2005, that does not make them a better basis for judging poverty across countries in the previous years in order to assess trends over time. In fact, as Pogge and I have shown in our work, the relative extent of poverty in different countries and years, and the estimated trend, is so dependent on the base year chosen for the exercise that there is no convincing basis to pick the estimates corresponding to one base year over those corresponding to another.

These fluctuations are inherent in how present PPPs are constructed, because PPPs reflect, as noted, the relative costs for a worldwide pattern of consumption prevailing at only one moment in time, and this pattern is constantly changing. The notion that the new PPPs constitute merely an "update" that better captures the reality over the entire period being assessed is mistaken. Rather, even if we accept that they represent the relative cost of goods needed to escape poverty, they merely present a snapshot of relative prices across countries at one point in time, and this is no more authoritative for intervening years than similar snapshots of the relative prices across countries taken at points closer to those years.

To monitor trends over time, the bank needs not only to convert its international poverty line across countries (which it does using PPPs) but also to convert it across years, for which it uses national consumer price indexes (to identify the local equivalent of the international poverty line in years other than the base year). Unfortunately, this further step additionally diminishes the meaning of the international poverty line, by making it even less comparable across countries and years. Why? Because each national consumer price index (CPI) refers to the price of a local basket of goods with a composition often very different from the pattern of world consumption that is used to calculate price differences across countries in the base year (measured by PPPs).

The discrepancies resulting from this combination can be substantial. The bank implicitly admits this by noting that its new international poverty line cannot be "derived" from its old one using the U.S. CPI (just as it cannot in other countries). It thus substitutes the new $1.25 international poverty line for the 2005 U.S. equivalent of its 1993 $1.08 poverty line (which is close to $1.45 in 2005 prices).

How can two international poverty lines that may not be "equivalent" as judged by the CPI in any country equivalently capture absolute poverty globally? Even according to the bank, there is no such equivalence, and the old estimates should be discarded in favor of the new ones. However, as can be seen most acutely by taking the standpoint of "equipoise" in a year that is at the midpoint between the base years, there can be no such presumption. Estimates of the level of poverty in each country and of the relative extent of poverty in different countries depend so greatly on the choice of base year (and associated international poverty line) that the result is rampant confusion.

The new estimates of the proportion of the world's population in poverty suggest that the number of poor is almost 50 percent more than the bank had previously proposed. Although the rate of poverty reduction since 1990 is almost the same under the new estimates as the old, this result appears to be a fluke and plausibly attributable to data errors. If the final year of the comparison is moved back by just three years to 2002, for instance, the rate of reduction of world poverty appears notably less favorable under the new estimates. Moreover, much of the apparent poverty reduction since then may be a figment of the imagination, resulting from the attribution of aggregate growth in the intervening years to the poor, without any survey evidence to prove they have experienced real growth in consumption.

The only region that appears to have had a faster rate of poverty reduction under the new estimates, regardless of whether the period is taken to begin in 1980 or in 1991, is Latin America. Europe and Central Asia as well as the Middle East and North Africa have much lower rates of estimated poverty reduction than they did previously, according to the new estimates. The estimated proportion of the population that is currently poor in Latin America has barely changed under the new estimates, whereas it has risen by between 20 and 30 percent in sub-Saharan Africa and in South Asia and by multiples elsewhere (by a factor of more than four in Europe and Central Asia, greater than three in the Middle East and North Africa, and almost two in East Asia). The enormous fluctuations in the Bank's poverty estimates, of a kind that would be unacceptable for most economic statistics, make them unfit for use. The Bank has already undertaken two revisions of base year (and associated international poverty line) and wreaked havoc to its poverty estimates each time, as it has changed its conception of the international poverty line that is allegedly representative of those in poor countries as well as the manner in which it converts this poverty line into the currencies of those countries. Does it intend to continue on the same path? The next global price survey that will inevitably necessitate such a revision is scheduled for 2011. The bank at that point can choose between pulling the rug out from under itself yet again, continuing to use PPPs from an earlier base year despite their growing apparent irrelevance, or admitting that its method is wholly wrong.

What is the real number of poor people in the world? The scandal is that nobody knows, and attempts to "guesstimate" the number on the basis of the existing inadequate data and methods are currently only fool's errands. A new and more serious approach to collecting the required data is the only answer.

What about the trend, deemed so important by policymakers and ordinary citizens assessing the world order? There is reason to believe that there has been enormous poverty reduction in China. However, whether this has led to poverty reduction globally, and if so, how much, depends on how much poverty we think there was originally elsewhere, and what the trend of poverty reduction has been there. In Latin America and the Caribbean, for instance, the more well-justified (although still highly imperfect) estimates of poverty by the UN's Economic Commission for Latin America and the Caribbean suggest substantially higher absolute poverty estimates than those provided by the bank, likely raising the estimated level of global poverty in each year and lowering its rate of reduction.

The bank's failures to take criticisms seriously and to develop new poverty estimates in a transparent manner mean that the excuse that it is doing the best that can be done is increasingly flimsy. Feasible alternative methods exist. They involve careful coordination of household surveys and poverty-line construction across countries, ensuring comparability from the first and invalidating the need to use ever-shifting PPPs for the purpose. Such an effort would be along the lines of the coordination of national accounts—a previous crowning achievement of the United Nations and its member countries.[4] The subject is too important for the world to defer to unscrutinized claims of expertise.

Notes

1. See, e.g., http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:21882162~pagePK:64165401~piPK:64165026~theSitePK:469382,00.html.

2. See "Absolute Poverty Measures for the Developing World, 1981–2004," *Proceedings of the National Academy of Sciences* 104, no. 43, October 23, 2007.

3. Sanjay Reddy and Thomas Pogge, "How Not to Count the Poor," in *Debates on the Measurement of Global Poverty*, ed. J. Stiglitz, S. Anand, and P. Segal (Oxford: Oxford University Press, forthcoming).

4. Ironically, such an exercise is regularly completed by both the private sector and the international civil service, which produce estimates of the relative cost of living for executives in different cities. In light of this, the claim of infeasibility is almost risible.