A Consistent Measure of Real Poverty:

A Reply to Ravallion

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In 1961, the United States Department of Agriculture published an Economy Food Plan carefully designed "as a nutritionally adequate diet for short-term or emergency use" for poor people. This diet was updated and later re-branded as the Thrifty Food Plan. The lowest cost stated for this minimal diet was $80.40 per person per month in 1999.

The relevant equivalent of the World Bank's $1 a day poverty line is $37.75 per person per month in 1999, and $49 today. This is clearly not enough to cover the basic nutritional and other needs of human beings in the US.

Is an equivalent to these amounts enough in poor countries? Obviously not, if "equivalent" means equally capable of meeting basic human needs. The $1 a day measure, however, relies on another notion of equivalence, which involves two conversions: converting any amount in local currency units (LCUs), via the national consumer price index (CPI), into its equivalent in some base year (currently 1993), and then converting the result, via 1993 purchasing power parities (PPPs), into 1993 US$s.

Imagine a simple world with three commodities: *necessaries*, *discretionaries*, and *services* (always in this order). If their prices do not move in lockstep, the CPI will reflect a weighted average of their price movements, based on the national spending pattern. By relying on the CPI, the $1 a day measure loses track of the price of necessaries. Falling prices of discretionaries (e.g., consumer electronics) may lead to a falling CPI even while rising biofuel demand is raising food prices. Poor people on constant incomes become poorer relative to what they need to buy, yet richer by the calculations of the $1 a day method.

Suppose the prices of the three commodities are LCU 5, 6 and 1 in some poor country and $3, $4 and $9 in the US. What is the PPP? Here again the answer depends on the spending pattern—in *both* countries. Suppose this pattern, in per cent, is 30, 50 and 20 in the poor country and 10, 50, and 40 in the US. This yields a PPP of 1.55; so the $1 a day measure will take each LCU to be equivalent to $1.55. But in reference only to necessaries, priced at LCU 5 and $3, each LCU is worth only 60 cents! Again, many who are very poor, relative to what they really need to buy, may not show up in the $1 a day statistics.

What is going wrong? Intuitively, income poverty (in the rock-bottom sense here at issue) is a function of what necessaries a person can buy. Through its reliance on CPI and PPP calculations, the $1 a day measure allows far too much influence to the prices of non-necessaries consumed in the same society. Through its reliance on PPPs, it also allows far too much influence to spending patterns in the US (and indeed in all other countries included in the PPP exercise). In our example, one LCU, though it buys only 60

cents worth of necessaries, is assigned much greater value because services are so expensive in the US ($9 versus LCU 1) and because US residents spend a lot on services. But should a poverty criterion be influenced so heavily by facts about prices and consumption of services that the poor do not need and do not consume?

Perhaps the best evidence one can have against any method is that its applications can deliver massively divergent results. The two notions of equivalence invoked in CPI and PPP calculations rely on very different (national and global) spending patterns. As a consequence, the comparison of two amounts in different years and countries varies with the base year chosen for the PPP conversion. One can use the CPIs of the two countries to convert into 1993 amounts and then compare via 1993 PPPs. Or one can use CPIs to convert into any other year and then do the comparison in PPPs of that year. One can get as many different results as there are PPP exercises.

The magnitude of the base-year effect is observable, because the Bank has actually worked with two base years. Before 2000, $1 a day was defined in terms of $31 PPP 1985, after 1999 as $32.74 PPP 1993. This switch of base year has caused large shifts in the relative position of national poverty lines. For example, using 1993 rather than 1985 as the base year raises all Chinese amounts—prices, incomes, consumption expenditures—in all years by 31 per cent relative to all Bangladeshi amounts in all years. And conversely, using 1985 rather than 1993 as the base year raises all Bangladeshi amounts in all years by 31 per cent relative to all Chinese amounts in all years. The $1 a day poverty assessment depends then on yet another irrelevancy: on the arbitrary choice of PPP base year.

Given the first Millennium Development Goal, millions of lives are at stake in counting the poor. Doing this requires a much more direct method than the $1 a day—a method that considers only the income a household has and the prices of the necessaries it might buy. A household is income-poor if it has no way of spending its money so that the basic needs of its members are fulfilled.

Ravallion is right; there are multiple ways of reaching 2100 calories. But this is irrelevant if the direct method focuses solely on the *cheapest* way each household has to get there.

Ravallion is also right to insist on a uniform criterion of income poverty, focused on the real income of the poor. Only the direct method achieves a consistent focus on what really matters: sufficiency for meeting basic human needs.

References:

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