BOX 2.3

Measuring income poverty: where to draw the line?

The animated debate on whether the Millennium Development Goal of halving poverty will be achieved is largely driven by the lack of agreement on the best way to measure poverty. (Among the main participants in this debate are Surjit Bhalla, Angus Deaton, Thomas Pogge, Sanjay Reddy, Martin Ravallion and Xavier Sala-i-Martin.) Thus conclusions on whether the poverty Goal will be met must be qualified in terms of definitions and, more important, methodologies.

Absolute poverty is the main indicator used to assess progress towards the Goal. This indicator measures the proportion of a population surviving on less than a specific amount of income per day. This specific amount is the poverty line—arguably the most contentious issue in the debate. Shifting the international poverty line by just a few cents can alter world poverty estimates immensely, "moving" millions of individuals in or out of poverty.

Poverty rates based on national poverty lines can capture the dynamics of poverty over time in a single country. National poverty lines are generally based on the amount needed for an individual in one country to live decently. Surviving in the Russian Federation requires different minimum survival goods than surviving in Haiti. Because the costs of the consumption bundles used to estimate poverty lines vary across countries, poverty lines vary as well. The concepts and criteria used to define poverty lines also differ across countries, making national poverty lines problematic when the analytical purpose is to make international poverty comparisons—as with the monitoring of regional and global progress towards the Millennium Development Goal for poverty.

An international poverty line—messy but necessary

To compare poverty rates across countries, poverty data based on an internationally defined poverty line would be more suitable, at least in theory. To that end the World Bank uses an extreme poverty line of about $1 a day (measured in purchasing power parity terms). Behind this approach is the assumption—based on national poverty lines from a sample of developing countries—that, after adjusting for cost of living differences, $1 a day is the average minimum consumption required for subsistence in the developing world. But this approach has been assailed as being conceptually and methodologically inaccurate in capturing minimum subsistence levels across developing countries.

Some analysts see poverty as a concept set by society—implying that people are considered poor relative to their fellow citizens (Oster, Lake and Oksman 1978). This view inevitably raises the poverty line as income rises, weakening the argument for a common poverty line across countries. Reddy and Pogge (2002) provide a similar argument against the $1 a day poverty line and propose one based on locally defined minimum capabilities. Ravallion (2000, pp. 3245–52), on the other hand, defends the $1 a day poverty line based on its simplicity. One of the main benefits of this line is as a rhetorical and advocacy tool: it is intuitively appealing because it suggests the degree of deprivation of poor people in developing countries. But because of enormous methodological and conceptual inconsistencies, poverty data calculated using international poverty lines are extremely problematic and can lead to misleading poverty rates.

Problems comparing prices across countries

One of the main problems with $1 a day poverty data derives from underlying adjustments of international price differences. Assuming that $1 a day is the correct average price of the subsistence consumption bundle in developing countries—a major assumption—the price of this bundle needs to be translated into national currencies. The World Bank does this using purchasing power parity (PPP) rates: price indices that compare the price of a bundle of goods in one country with the price in another.

But the process for obtaining these rates is not entirely transparent. Moreover, they produce inaccurate poverty lines because many of the prices they are based on are for goods that poor people do not consume (Reddy and Pogge 2002; Deaton 2003). Making matters worse, these conversions do not take into account the considerable price differences between countries' urban and rural areas. Moreover, poor people have to pay higher unit prices for many goods and services because they cannot afford to buy in bulk (Ward 2003).

Using national accounts instead of income surveys—better or biased?

The World Bank's $1 a day poverty line is based on income and budget surveys that provide information on the distribution and level of income (or consumption). Given a specific poverty line, these two indicators determine the income poverty rate. There is debate on whether the income levels from these surveys should be replaced with another consumption aggregate (Sala-i-Martin 2002; UNCTAD 2002a; Bhalla 2002). Advocates point out that, for various reasons, surveys grossly underestimate the incomes of very rich people in poor countries (Székely and Hilgert 1999). One way to avoid this problem is to retain the income distribution information from surveys but to calculate poverty rates based on (usually higher) national accounts data on average consumption.

But while the national accounts approach may be more consistent across countries, income levels based on surveys are not necessarily less accurate than those based on national accounts. National accounts data on consumption may be more complete than surveys because they include goods such as financial services, imputed rents and income from employer contributions to pension funds. But poor people do not consume these goods—so while surveys may underestimate average incomes, that does not mean that they overestimate poverty. Furthermore, as countries become richer, the items missed by surveys may overstate the growth of consumption of poor people.

The end result? Using national accounts instead of income surveys to derive poor people's income levels risks overestimating the rate of poverty decline. Furthermore, using national accounts may underestimate the number of poor people in all but the poorest countries—where, conversely, poverty levels may be overstated because national accounts miss significant informal activity. Using income levels from surveys avoids these problems by directly targeting income and consumption goods relevant to poor households (food, shelter, health, education).

Still, surveys are not free of severe problems in measurement and interpretation. Most important, surveys are not very common in the countries where they are needed most because of the high costs and considerable expertise required for their design and implementation. Moreover, using survey-based poverty rates to draw conclusions on poverty levels across countries—let alone changes in poverty across countries—may be misleading because definitions, methodologies, coverage and accuracy vary across countries and over time.

Because of these concerns, more efforts should be made internationally and nationally to perfect the price collection efforts behind purchasing power parities (the World Bank is currently engaged in such an effort and expects to release new rates in 2005), to harmonize design and collection methods for income and consumption surveys and to agree on local bundles of minimum capabilities on which to base poverty figures, for which feedback and guidance from countries and communities are crucial.

Source: Sala-i-Martin 2002; Ravallion 2000; Reddy and Pogge 2002; Deaton 2003; UNCTAD 2002a; Székely and Hilgert 1999; Bhalla 2002; Oster, Lake and Oksman 1978; Ward 2003.