

Chapter 2

Basic Steps in Measuring National and Regional Poverty with the Use of International Poverty Lines

Introduction

Monitoring the incidence and severity of poverty at the national, regional, and global levels is an important step in developing and implementing policies for reducing poverty in the world. Accurate measurement and compilation of internationally comparable estimates of the incidence of poverty are essential for monitoring the performance of countries against the first and most important of the Millennium Development Goals (MDGs), that of halving absolute poverty in the world by 2015.

Measuring poverty incidence with the use of nationally established poverty lines is a common practice in many countries. An examination of the methods and practices in different countries highlights common elements as well as diversity in practices. For example, across countries there is a common thread in the methodology used for determining poverty lines. Poverty lines are generally based on food and nonfood expenditure components, with the food component essentially determined on the basis of a specific energy requirement. Household expenditure surveys (HES) are the main source of data for this purpose. However, there are subtle differences in the translation of caloric needs into monetary values. Much of the divergence in practices observed across countries is in determining the nonfood poverty line. Differences have also been observed in determining and/or translating national poverty lines for subregions of a given country.

Given the differences in national practices, it is difficult to properly assess the performance of different countries in achieving the first MDG. An obvious strategy in such circumstances is to use for all countries a single poverty line that is referred to as the international poverty line (IPL). The World Bank initiated the use of the IPL, compiling national, regional, and global poverty estimates. It has developed and popularized the use of the IPLs \$1/day and \$2/day for the purpose.

The \$1/day and \$2/day International Poverty Lines

Since the early 1990s, the World Bank has been using IPLs in estimating poverty incidence in different countries. These poverty lines may be considered as absolute poverty lines, and the approach is to simply count the number of people whose expenditure is below \$1/day or \$2/day. The estimates are then deemed comparable across countries as they all refer to a single poverty line. The World Bank procedure is a simple approach that managed to convey to the developed world the powerful message that a sizeable global population lives below \$1/day. Therefore, IPLs serve the dual purpose of providing a single yardstick for measuring poverty incidence in different countries, and at the same time creating among developed nations an awareness of the plight of the poor in those countries.

The IPL tends to give an impression of remoteness, and the general perception in different countries is usually that the \$1/day and \$2/day IPLs are not realistic and do not accurately reflect the national poverty lines actually used in different countries. Further, these poverty lines tend to convey the impression that they are kept constant over time. However, neither of these criticisms of the IPL is valid. The World Bank methodology recognizes the importance of national poverty lines. In fact, the IPLs are determined by calibrating them to be representative of the poverty lines in a large number of developing countries. Chen and Ravallion (2004 and 2007) give a detailed description of this process. This issue is further discussed in Chapter 8 of this report. It was found that many national poverty lines were close to \$1/day when they were converted using purchasing power parities (PPPs). Therefore, the decision was made to recommend the use of the IPL \$1/day as a global representative of national poverty lines. A similar procedure is employed in updating the IPL over time.²

Use of Purchasing Power Parities of Currencies for Converting IPLs

A crucial step in implementing an IPL is converting it into local currency units. The local currency equivalents of \$1/day and \$2/day poverty lines are used in conjunction with information on income distribution to arrive at global and regional estimates of poverty incidence. Market exchange rates (MER) are not used to convert the IPL, instead, conversion factors based on the real purchasing power of the currencies are used. The general reluctance of many countries to use poverty incidence estimates based on the IPL is largely due to the misconception that the IPL is converted into local currency units using the MER. A commonly observed fact is that the MER does not accurately reflect the purchasing powers of currencies in low-income countries. In fact, the PPPs of currencies with respect to the United States (US) dollar are usually well below the MER.

² IPLs are not simply updated using movements in consumer prices within the US or in any other country. Instead, a procedure similar to the one used in 1990, the year when this procedure was first implemented, is repeated. For example, in 1993, \$1.08 was found to be representative of the national poverty lines converted into US dollars using PPPs.

If PPPs are to be used for the purpose of converting the IPL, an important question that arises is which of the available PPPs should be used. PPPs are available for each of the major economic aggregates that form the GDP.³ The World Bank approach has been to use the PPP for the consumption aggregate obtained from the ICP to convert the IPL. As PPP data are available only for those countries participating in the ICP, the PPPs used were for the individual consumption expenditure by household (ICEH) aggregate of benchmark years, for all countries participating in the respective benchmark comparisons. For countries that did not participate in the ICP benchmark comparisons, and for the nonbenchmark years when ICP PPPs are not available, the World Bank mainly relied on the extrapolated PPPs reported in the Penn World Tables. In more recent years, it relied on extrapolations compiled within the World Bank for its *World Development Indicators* publication.

Main Issues with the Current Practice

Over the last few years, the PPP data used in deriving global and regional poverty estimates have attracted considerable attention, and various limitations of the current approach have been identified. Deaton (2000) and Reddy and Pogge (2003) provide a comprehensive summary of some of the relevant issues. Some of the principal issues are listed below.

- (i) The ICP PPPs are based on prices of commodities that are not representative of the consumption baskets of the poor.
- (ii) The ICP PPPs are weighted averages of commodity-specific price relatives with weights that do not adequately represent the consumption patterns of the poor.
- (iii) The aggregation methodology used does not offer a direct comparison of a fixed basket of goods and services consumed.
- (iv) The PPPs used are not consistent in their temporal movements between benchmarks.

³ For more details of the range of PPPs available, see ADB 2007b.

A related issue with the practical implementation of this approach is that the PPPs used for converting the IPL are all based on extrapolations from earlier benchmarks of the ICP. The last global comparison was for 1996 based on data collected in 1993. In addition, India last participated in the ICP in 1985. Extrapolations for the People's Republic

of China, which had not participated in any of the earlier rounds of ICP, are based on work undertaken by individual researchers.⁴ This means that PPPs used as converters are based on data at least a decade old. It is imperative that PPPs be based on current data, and the 2005 ICP Asia Pacific provides a great opportunity to compile PPPs based on recent data.

⁴ The most commonly used PPP between the US dollar and the Chinese yuan is from the work Rueon (1996) undertaken for the Organisation for Economic Co-operation and Development (OECD).