

Can We Really Measure Poverty?

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1. What is particularly challenging about poverty measurement?

The World Bank's 2000/1 World Development Report, *Attacking Poverty*, estimates there to be 1.2 billion people currently living on less than \$1 a day, and a 2.8 billion living on less than \$2 a day—almost half the entire population of the world. Recent UN global development conferences are united in advocating that a world free of poverty is the key development goal for the 21st century, and a group of poverty reduction targets (the International Development Goals) has gained currency. Setting such targets without appropriate strategies for poverty reduction and without the necessary monitoring systems would clearly be something of a sterile exercise. The 2001 WDR builds on the now well-accepted view that poverty encompasses multiple dimensions, going beyond material deprivation. It broadens the notion of poverty to include vulnerability, insecurity, voicelessness and powerlessness. This presents significant challenges.

First, it increases the dimensions of wellbeing that need to be measured. Second, it raises questions about the relative weight of each dimension. Third, it requires that account be taken of the *qualitative* aspects, which by their very nature can be very difficult to measure. Many people who consider themselves as poor might not be judged so in quantitative analysis, and discrepancies often arise between objective measures of trends in poverty and perceptions on the ground. What is needed is a better mix of approaches.

2. The Measurement Issues

Two key steps in poverty measurement are first the construction of a measure of wellbeing; second, the identification of a poverty line. Given the context-specific nature of poverty, both these steps call for a combination of quantitative and participatory analysis. Qualitative participatory data can help solve two important problems that arise in poverty analysis: the *identification problem* of how to select and weight the different aspects of individual welfare; and the *referencing problem* of identifying the benchmark below which people are considered poor. The former concerns step one, and the latter step two.

The measure of economic wellbeing: At the outset, the analyst needs information on which of the various dimensions of wellbeing people in any given society are most concerned about. Is it the level of income, the variability of this income, the vulnerability to health shocks, the lack of voice, helplessness and isolation?

For both conceptual and practical reasons, most analysts of economic poverty prefer to use consumption (as opposed to income) as the welfare measure. This raises particular challenges for the statistician. Consumption is not an easy flow to measure. The quality of household

consumption estimates is highly dependent on the survey instrument and on the enumeration methodology adopted. Consumption poverty depends on both the mean and the variance of consumption in any population. So to get acceptable consumption poverty estimates, surveys must produce accurate means and variances of real consumption. Typically one-visit survey designs with short recall periods produce upward bias to estimates of the variance in (annual) income. Such biases can be quantitatively important in poverty measurement.

The context specific nature of poverty creates serious problems for international comparisons. The sensitivity of poverty estimates to survey design should counsel considerable caution in pushing inter-country comparability, given the variation in survey designs. But more profoundly, different societies may emphasize different dimensions of wellbeing (or weight them differently). And they may give different answers to the referencing question. There is some evidence that above a certain threshold, poverty lines are systematically and positively related to the overall standard of living of the society (while the poverty line below that threshold appears to be an absolute nutrition-based standard). Even if the poverty line for international comparisons purposes is to be absolute in nature, there remains the knotty problem of currency conversion. Purchasing Power Parity estimates are commonly used to generate the familiar PPP\$1/day poverty estimates, but these estimates are only as good as the price data (from the International Comparisons Project) on which they are based. These data are weak, and often do not reflect the cost of living of the poor in rural areas of the developing world.

Finally, some comment must be made about the recent discussion on the apparent conflict between estimates of economic wellbeing derived from the system of national accounts, and those coming from nationally representative household surveys. Obviously there are measurement errors on both sides, and resolving differences will not be easy. The evidence is mixed on the direction of bias. Whereas in India the national accounts estimates give a much more rapid decline in poverty than the repeated surveys, that is not the case in Uganda and Ghana, where it seems the opposite applies. There is a clear need to bring the survey and the national accounts data closer together.

The poverty line: Some countries (India is an example) have clearly defined and generally accepted income poverty lines, that are routinely used in analysis. For statements such as ‘x percent of the population lives below the poverty line’ to have any policy significance, the poverty line must have general acceptance. But in many developing countries poverty lines have typically been selected arbitrarily—often defined as a given proportion of mean income. Setting the poverty line calls for both robust quantitative analysis and the participation of key agents in the process.

3. Broadening the poverty measurement paradigm

Despite the difficulties described above, the use of an income (or consumption) based measure still remains central to poverty analysis, and a robust household budget survey must inevitably feature as a core element of any national poverty monitoring effort. But poverty monitoring is a continuously evolving process and complementary new approaches and techniques are beginning to be applied with growing regularity. We would like to mention two.

Identifying proxy indicators of consumption: Given the cost of collecting accurate consumption data, a promising recent methodological development is the use of easier-to-collect

variables as proxies for consumption. Such an approach has several applications. It can be used to rank households by 'poverty predictor' in a survey context where the main concern is not consumption poverty per se. Examples include the Core Welfare Indicators Questionnaire and recent analysis of the Demographic and Health Surveys. Second, the idea of combining population census and household survey data is being applied to the development of poverty 'predictors' and the construction of poverty maps. This responds to the growing demand for poverty data at highly disaggregated levels resulting from the trend towards decentralization of authority to lower-level local government authorities, and the resulting need for better information to improve the targeting of interventions to the poorest and most vulnerable population groups.

Monitoring change over short time periods: The need to provide decision makers with rapid and regular feedback on the outcomes of poverty reduction strategies presents special problems. Firstly the indicators themselves have to be robust and must respond quickly and sensitively to policy changes. Secondly information systems must be set up such that they ensure that the feedback is both rapid and regular. Neither the indicator of household consumption, nor the classic household budget survey are necessarily appropriate vehicles for meeting these needs. Household consumption is not only difficult to measure but it is also a "noisy" variable. Typically, we do not know the size of the coefficient of variation in most countries, but we do know that the size of the combined sampling and non-sampling errors make the identification of a trend with even the most modest limits of range and confidence very challenging. One solution has been to make greater use of household panels, but this too has its measurement difficulties. Another has been to rely more on light annual indicators surveys to provide feedback on such leading indicators as access to, use of, and satisfaction with, public services, rather than monitoring consumption poverty outcomes directly.

4. Conclusion

These notes have focussed on some of the more challenging aspects of measuring poverty, and monitoring its change over time. At the core of most of these is the fact that poverty is essentially contextual, and its measurement must combine accurate quantitative measurement and the active participation of the society concerned. Most statistical agencies were ill equipped to handle the more qualitative aspects, involving participative processes. But there have been advances in recent years. Sample frames are now often shared so that qualitative studies are conducted in the same communities as those used for statistical surveys. Field staff with different training and backgrounds are working together and being exposed to different approaches and methods. Analysis and report writing incorporates the use of data and information from a much broader range of sources and there is a recognition of the great synergy that can exist between the different approaches. But there also remain challenges even with orthodox instruments, and we have focussed on the particular statistical problems in estimating consumption-based poverty measures.

The final challenge for monitoring poverty is not a technical nor a conceptual one, but lies in ensuring that the required institutional capacity is created to be able to perform this work. The challenge is particularly daunting in that the countries which are poorest and which most urgently

need viable poverty monitoring systems, are also the countries where statistical and analytical capacity is weakest and poverty monitoring resources are most limited.

Increasingly the International Financial Institutions are linking support to low-income countries to nationally designed Poverty Reduction Strategies. Concessional funds and debt relief are now linked to the goals of poverty reduction strategies prepared by governments in consultation with civil society organizations, the private sector and donors. The process of preparing PRSPs requires a broad participative dialogue with representatives of civil society and the private sector. Mechanisms for monitoring and evaluating progress towards the poverty reduction targets form an essential element of the strategies. Consequently, PRSPs present an unprecedented opportunity for accessing resources for strengthening weak statistical systems—not just for the specific purpose of directly monitoring poverty, but also more generally for monitoring the process of implementing and achieving broad national economic and social policies and goals.

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RESUME

Ridding the world of poverty is the most important development goal of the 21st century. Poverty is recognized as having multiple dimensions, and to be essentially context-specific. The paper discusses some of the key measurement challenges faced by the poverty statistician and analyst. It emphasizes the need to combine qualitative and quantitative tools and approaches. It concludes by signaling that the current international interest in supporting poverty alleviation strategies presents unique opportunities for securing more resources for strengthening national statistical systems. Se débarrasser de la pauvreté est l’objectif de développement le plus important de ce 21^{ème} siècle. On considère que la pauvreté a des dimensions multiples et diffère selon le contexte. Cet article présente quelques-uns des défis auxquels le statisticien et l’analyste sont confrontés. Il souligne la nécessité de combiner des approches et outils qualitatifs et quantitatifs. Il se termine en signalant que l’intérêt international actuel pour l’appui aux stratégies d’allègement de la pauvreté offre des opportunités uniques de réunir les ressources nécessaires pour renforcer la capacité des systèmes statistiques nationaux.