
**Understanding Poverty
Rates and Gaps:
Concepts, Trends, and
Challenges**

Understanding Poverty Rates and Gaps: Concepts, Trends, and Challenges

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Abstract

I survey key developments in applied and theoretical research on poverty rates and poverty gaps over the past two decades, and provide a detailed analysis of poverty trends across a variety of income measures and poverty indexes. Included is an extensive summary of how poverty thresholds and economic resources are measured and several proposed recommendations for revision. In addition I discuss axiomatically derived alternatives to the standard poverty rate that provide estimates not only of the incidence of poverty, but also the intensity and the inequality of poverty. The empirical analysis shows that while poverty rates fell in the late 1990s, deep poverty held steady and even rose for broad income measures that include the usual private and public income sources along with in-kind transfers such as food stamps and subsidized housing, and tax credits such as the EITC. I conclude with a discussion of a number of new challenges facing poverty measurement, especially issues of data quality in the Current Population Survey, and recommendations for future research and policy on poverty measurement.

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1

Introduction

Measuring the economic status of low-income individuals and families is a central focus of poverty scholars, and is at the fore of much public policy debate. The stakes in the proper measurement of poverty are substantial as changes in poverty (and poverty thresholds) influence the scale and scope of redistributive tax and transfer programs at all levels of government. In the United States the programs directly affected by the location of the poverty line number at least 27, and include programs such as Temporary Assistance to Needy Families (TANF – formerly known as AFDC), the Food Stamp Program, Supplemental Security Income, Medicaid, Medicare (in the new prescription drug benefit), the National School Breakfast and Lunch Programs, the Supplemental Program for Women, Infants, and Children, and the Low Income Home Energy Assistance Program, among others (Citro and Michael, 1995). In the most recent fiscal year the appropriations to these programs surpassed USD600 billion. While expenditures on other key programs in the U.S. social safety net such as Social Security, Disability Insurance, Workers Compensation, Unemployment Insurance, Section 8

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and Public Housing, and the Earned Income Tax Credit do not hinge directly on the poverty line, they are affected by the distribution of income and thus by the depth of poverty. In this article I survey several developments in poverty measurement over the past two decades, including alternative measures of poverty thresholds, definitions of resources, and indexes of deprivation, and I also discuss old and new challenges in poverty measurement, especially those related to data quality.

Over the past two decades research on poverty measurement by economists has largely fallen into one of two camps – one which emphasizes methods of revising the easy-to-understand and commonly employed poverty rate (Ruggles, 1990; Citro and Michael, 1995) and one which emphasizes axiomatically derived alternatives to the poverty rate (Sen, 1976; Foster et al., 1984; Atkinson, 1987; Zheng, 1997; Jenkins and Lambert, 1997). In the first camp, most of the controversy surrounds how and where to draw the poverty line and which income sources to attribute to the family or individual in determining the poverty rate (also known as the head count rate). For example, in the United States the official definition of poverty is based on an absolute scale, rather than a relative scale as in most OECD countries (Smeeding, 2006), with the threshold updated annually only for changes in the cost of living. The implication is that the standard of living for purposes of poverty measurement in the U.S. in 2006 is the same in real terms as in 1966. Few would disagree that in the intervening four decades since the adoption of the poverty thresholds that there have been important changes in the consumption bundle of the typical family. At the same time the official definition of income for determining the poverty rate excludes the dollar value of in-kind transfers such as food stamps and housing subsidies, and also excludes tax liabilities and the refundable Earned Income Tax Credit. The EITC has grown ten-fold in real terms over the past two decades to over USD35 billion per year to exceed in dollar terms any of the means-tested cash transfers in the safety net, and has been credited with stimulating the labor force participation of single mothers and reducing poverty in the 1990s (Meyer and Rosenbaum, 2000; Grogger, 2003; Gundersen and Ziliak, 2004). Official poverty statistics do not reflect

important trends in programs like the EITC that affect the well being of the poor.¹

In the second camp, the focus is less on how to construct thresholds or count resources and instead is on constructing distribution-sensitive measures of economic status to capture not just the level of poverty but also the depth. This literature argues that the benefit of the transparency afforded to the head count rate must be weighed against the cost of several undesirable properties. For example, the head count rate provides the same information regardless of whether all poor people are USD1 or USD5000 below the poverty line. In addition, transfers from a poor person to a less poor person that are not sufficient enough to lift the latter person over the line leaves the head count unchanged although most would argue such transfers worsen the depth of poverty. Sen (1976), who wrote the seminal paper on poverty indexes, argued that the ideal index should indicate the incidence of poverty, the average deprivation of the poor, and the relative deprivation among the poor. The poverty rate only answers the incidence question but is silent on the important issues of poverty intensity and inequality. The latter two outcomes, however, are critical to understanding the anti-poverty effectiveness of government tax and transfer programs because most such programs do not lift families above the line but presumably reduce financial hardship. Viewed simply, the poverty rate is an absolute benchmark to gauge whether or not persons are lifted out of poverty. However, many transfer programs are designed to alleviate poverty and not necessarily eliminate it. Since Sen's article several authors have refined and/or added to his list of axioms in a bid to make axiomatic measures more robust to alternative orderings of poverty status (see the surveys in Foster (1984) and Zheng (1997)).

In this article I survey some of the key issues from both research strands in the poverty measurement literature. Like most of the literature I focus on income poverty and do not address the issues of asset

¹To the extent that the EITC stimulates labor force participation among non-workers and possibly distorts labor supply decisions among workers, and to the extent that it affects the level of participation in cash transfer programs such as AFDC and SSI, then official poverty statistics are affected indirectly by behavioral responses to the EITC. The official estimates do not include the dollar value of the EITC.

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poverty (Haveman and Wolff, 2001), consumption poverty (Slesnick, 2001), or material hardship (Mayer and Jencks 1989). I also focus on issues salient to income poverty in the United States. Given the treatises on revising the poverty line by Ruggles (1990) and Citro and Michael (1995), and the technical surveys of axiomatic measures of poverty by Foster (1984) and Zheng (1997), what is the value added of this comparatively brief survey? The two major recent books on revising the poverty line spend fewer than 10 pages on alternative poverty indexes across the more than 600 pages of text, while the major surveys on poverty indexes do not treat the substantive issues of implementing poverty lines raised in the former research. Hence one goal of this survey is to bring together the two agendas in the hopes of raising awareness to social scientists of key insights and challenges facing both.

A second goal is to discuss some recent developments in poverty indexes not covered in previous summaries. The leading example here is the powerful and intuitive ‘TIP’ curves proposed by Jenkins and Lambert (1997) that depicts in a single graph the incidence, intensity, and inequality dimensions of poverty.

The third goal of this survey is to update how the economic status of the poor in the United States has changed over the past two decades across a variety of income definitions, poverty indexes, family structures, and geographic regions. Burtless and Smeeding (2001), Iceland (2005), and Hoynes et al. (2006) recently described U.S. poverty trends across alternative income definitions, but with a focus on poverty rates. Indeed, (Hoynes et al., 2006, p. 52) state that “Although poverty can be measured in ways other than the official definition, our work, and the work of others, shows that most of these different ways will alter the level of poverty but not the trend.” The claim by Hoynes et al. (2006) may be true for different definitions of poverty rates, but I show that deep poverty in the 1990s held steady and even rose when the poverty rate declined monotonically, which suggests that common trends do not apply to alternative poverty indexes and highlights the practical importance of robust poverty measures. The trend analysis also highlights a number of important developments in the anti-poverty effectiveness of the social safety net as well as challenges facing poverty measurement, especially with regard to data quality. The increasing proportion of

sample participants in the Current Population Survey with imputed incomes challenges the efficacy of our current estimates of the poverty rate (and gaps). Moreover, in light of the 1996 welfare reform the conversion of the primary cash assistance program into a block grant that largely provides in-kind transfers suggests that official statistics are likely understating the extent to which families are being assisted by the TANF program. I conclude by offering some recommendations for future research and reforms to poverty policy analysis.

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