

The Census Bureau's Plans for Poverty Measurement Research

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Formal measurement of poverty in the United States is less than three decades old. Not since the adoption of an official poverty measure by the Federal government in the late 1960's has there been such great interest in examining and possibly respecifying that measure. This paper first briefly describes the origins and basis of this official measure. Then we list the recommendations of the National Academy of Sciences Panel on Poverty and Family Assistance concerning revisions of the poverty measure. The third section discusses our proposed plans to implement these recommendations including the preliminary outline for a report to be published this fall. The final section presents issues for the consideration and discussion of the advisory committee.

I. History

The official poverty thresholds in use today by the U.S. Bureau of the Census to measure poverty have their basis in work by Orshansky (1963, 1965). At that time, the major attempt to quantify the number and distribution of the poor had been tabulations published from the 1960 Census, and several reports in the 1960's from the Current Population Survey (CPS) that indicated the number of families with incomes below \$3,000 and unrelated individuals with incomes below \$1,500 (see U.S. Bureau of the Census, 1965, 1969).

The key problem with the concept used in the Census and CPS tabulations was that both small and large families with, for example, \$2,900 in income were assumed to be poor. Further there was no explicit relationship to any measure of need. In contrast, Orshansky's method had thresholds that increased with family size so that larger families needed more income than smaller ones to be out of poverty.

Orshansky started with a set of minimally adequate food budgets calculated for families of various sizes and composition by the U.S. Department of Agriculture for 1961. Based on evidence from the 1955 Household Food Consumption Survey, she determined that food represented about one-third of after-tax income for the typical family. This relationship yielded a "multiplier" of three, that is, the minimally adequate food budgets were multiplied by a factor of three to obtain 124 poverty thresholds that differed by family size, number of children, age and sex of head, and farm or non-farm residence (adjustments were made for families of size one and two). One reason these proposed thresholds were viewed as reasonable was that the threshold that resulted for a family of four (close to the median family size at the time) was \$3,130, close to the \$3,000 figure used in the 1960 Census tabulations and the 1965 CPS publication.

As President Lyndon Johnson's "War on Poverty" was just beginning and there was a great interest in measuring its progress, Orshansky's measure of poverty was widely used by policy makers at the Council of Economic Advisors and other researchers. Attempts to update the poverty scale to account for inflation in the 1960's used increases in the price of food to inflate the minimal food budget, maintaining the multiplier of three. In 1969, the U.S. Bureau of the Budget (now the Office of Management and Budget) adopted the Orshansky measure as the standard government poverty measure, mandating that inflation be measured using the Consumer Price Index (CPI) published by the U.S. Bureau of Labor Statistics (BLS). With only minor modifications since then (mostly reducing the number of categories, now 48), the Orshansky thresholds still form the basis for the official poverty statistics.

The Bureau of the Census publishes statistics annually using the CPS, a household survey of roughly 50,000 households conducted monthly mainly to determine the overall unemployment rate. The annual March Demographic Supplement provides the income data necessary to determine poverty statistics. Official poverty rates show a steady decline from 1959 to 1973, decreasing from 22.4 percent to 11.1 percent. The poverty rate remained at roughly that level until 1978. From 1978 to 1983, the poverty rate increased by roughly one-third, rising from 11.4 percent to 15.2 percent. From 1983 to 1989, the poverty rate declined, reaching 12.8 percent in 1989. The peak since then was 15.1 percent in 1993, declining to 14.5 percent in 1994 (U.S. Bureau of the Census, 1995).

II. Summary of NAS Panel Recommendations¹

Beginning in 1992, a comprehensive examination of poverty measurement in the United States was conducted by the Panel on Poverty and Family Assistance of the National Research Council (NRC) of the National Academy of Sciences (NAS). This Panel published their findings in spring 1995 in a report titled *Measuring Poverty: A New Approach* (Citro and Michael, 1995). The report contained a series of recommendations on the

revision of the official poverty measure. These recommendations are summarized in the attached list and table. (See Attachment A.) The text of the report and related research can be found on the Census Bureau's poverty measurement web site: <https://www.census.gov/hhes/www/povmeas.html>.

III. Current Census Bureau Plans

There are two major activities that will take place. They are basic research on measurement methodology and fielding new panels of the Survey of Income and Program Participation (SIPP).

Research

Planned research falls into two categories and will use two separate data sets. We expect first to focus our attention mainly on experimental measures of poverty that follow the general recommendations of the National Academy of Sciences (NAS) panel but use existing data from the March supplements to the Current Population Survey (CPS). This approach will permit us to present early indicators of the effects of implementing those recommendations and also will allow comparisons with calculations based on the preferred data set (the SIPP) that was recommended as the source of data by the Panel. We also have begun research efforts, including work with the Bureau of Labor Statistics (BLS). A report presenting time series of alternate experimental measures based on the CPS will be produced by December 1998².

Examples of the research activities that we are planning include:

- Revising the housing subsidy valuation methodology.
- Modeling work expenses (e.g. transportation expenses, childcare costs).
- Demonstrating the effects of alternative equivalence scales.
- Implementing new tax modeling software in the SIPP processing system.
- Assessing the potential of valuing other noncash benefit programs (e.g. WIC).
- Demonstrating the effects of including cohabiting couples and housemates/roommates in the reference unit.

Longer-term research projects include:

- Beginning extensive medical expenditures research (note that work in this area is quite difficult) such as:
 - statistical matching of the 1996 SIPP panel with the Medical Expenditures Panel Survey to obtain better estimates of medical out-of-pocket costs.
 - developing a medical risk index (with the Department of Health and Human Services).
 - modeling the value of medical benefits (should the decision be to include such program benefits in income).
- Developing interarea cost-of-living indexes (with BLS).
- Examining alternate poverty thresholds and updating mechanisms (with BLS).
- Beginning work to draw new samples for 2000-2003 SIPP panels.

These research activities will be summarized and published in ongoing reports, the first of which is to be released in December 1998. The proposed outline for that report is attached (Attachment B.) As shown there, we will present the new elements of an experimental poverty measure separately and examine the impact on poverty statistics for each one. Then, several measures that combine most of the elements together in various combinations will be presented and followed over time.

New Panels of the SIPP

A primary recommendation of the NAS panel was to make the SIPP rather than the CPS the official source of poverty statistics. Methodological investigation by the Census Bureau has concluded that a time series of official statistics, such as poverty, must be based on surveys with consistent design characteristics. For a longitudinal survey like the SIPP this means that the characteristics of the sample (consisting of households which stay in sample for several years) must not change from year to year. But we know from past research that families in poverty leave the sample (attrit) at higher rates than non-poverty families. As a consequence, direct survey estimates cannot be used without accounting for and correcting the bias introduced by this differential attrition. However, we deem it unwise to base an important time series like poverty on estimates that must be corrected for bias, even if we were able to adequately model the effects of that bias (which we have not yet been able to do).

To resolve this conundrum, we recommend creating a survey design with constant attrition bias (like the BLS has done with the CPS) that lets us measure year-to-year changes accurately (if both years' estimates are biased in the same way, their difference is not biased). Constant attrition bias for an annual statistic like poverty can be obtained by starting a new SIPP panel each year (just as the CPS adds new sample each month to allow it to accurately measure month-to-month changes in unemployment and the CPS rotation scheme permits comparisons of annual averages). Specifically, we propose fielding a new SIPP panel each year, with each panel to collect data for three years.

We have proposed a sample size that is the minimum necessary to produce a time series of statistics with the same variance as the March CPS estimates. Ideally, each panel should begin in February to provide a complete

measure of calendar year income, but to reduce costs and because only the third year of the 1999 panel would enter a new official series (that could, at the earliest, begin with 2001), the proposed 1999 SIPP panel will begin in June 1999 rather than February. The plan is to supplement the existing longitudinal panel of 36,700 SIPP households with two additional panels of 11,400 households each. These additional panels will enable us to produce stable cross-section estimates and to allow time-series comparisons.

IV. Issues for Discussion

1. In anticipation of moving poverty estimation from the CPS to the SIPP, we have planned a redesign of the survey, as described above, to achieve stable cross-sectional estimates of poverty. Have we overlooked any serious shortcomings?
2. The NAS report recommended (Recommendation 4.2) excluding medical out-of-pocket expenditures, including health insurance premiums, from family resources to determine poverty status. One implementation of the method is described in Short et al (1998). As shown there, this method has a large impact on poverty rates. Are there other practical methods of treating medical care and health insurance benefits that would work better? For example, should health insurance and other medical benefits be valued and included in income and the threshold changed accordingly?
3. Recommendation 2.1 states that poverty thresholds should be based on median expenditures derived from the Consumer Expenditure Survey. Are we confident about the quality of (i.e. lack of biases in) the Consumer Expenditure Survey data (even pooling three years)?
4. We need advice on developing geographical cost-of-living variations. It is clear that the cost-of-living differs substantially from place to place, and different choices of methodology have different implications. If geographic variation is to be incorporated, some method for periodically updating the thresholds for relative price changes among areas would need to be established.
5. The NAS report recommends treating cohabiting couples like married couples, because they experience similar economies of scale. The panel also recommended new research on the extent to which housemates and roommates also share living expenses. What are the pros and cons of these approaches?

- ATTACHMENT A: Summary of NAS Recommendations
- ATTACHMENT B: P60-RD Report on Poverty Measurement: Preliminary Outline

References:

- C.F. Citro and R.T. Michael, eds., *Measuring Poverty : A New Approach*. Washington, DC: National Academy Press, 1995.
- K. Short, M. Shea, D. Johnson, T. Garner, "Poverty Measurement Research Using the CEX and the SIPP with Supporting Estimates from the CPS," Paper presented at the annual meetings of the American Economic Association, Chicago, Illinois, January 1998.

ENDNOTE

1. Citro and Michael, 1995, pp. 4-15.
2. Early work along these lines was presented in Short et al(1998).