

Recent Developments for Poverty Measurement in U.S. Official Statistics

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The Panel on Poverty and Family Assistance of the U.S. Committee on National Statistics was charged to review the U.S. measure of poverty. (The U.S.A. is one of the few countries with an official poverty measure.) In its report issued in spring 1995, the panel recommended a revised measure for use in official statistics. The panel's proposed measure revises both the poverty threshold, or standard of need, and the definition of family resources to compare to the threshold to determine poverty status. This article summarizes the panel's recommendations, presents revised estimates of their effects, and briefly describes research stimulated by the panel's report, leading to a recent publication by the U.S. Census Bureau on experimental poverty measures for research use.

Key words: Income; inequality.

1. Introduction

The U.S. measure of poverty is an important statistic that affects not only public perceptions of well-being in America, but also policies and programs. Although many countries have undertaken poverty measurement, the United States is one of the few countries with an official poverty measure. (Poverty concepts for the European Union member states and Canada are discussed in Eurostat 1994, 1998, and Wolfson and Evans 1989, respectively.)

The current U.S. measure was originally developed in the early 1960s as an indicator of the number and proportion of people with inadequate family resources (defined as before-tax money income) for needed consumption of food and all other goods and services. At that time, the poverty "line" for a family of four had broad support. Since then, the

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Several U.S. agencies provided funding or assistance to the panel in obtaining needed data and analyses: U.S. Bureau of the Census, U.S. Bureau of Labor Statistics, Administration for Children and Families, Agency for Health Care Policy and Research, Food and Nutrition Service, and the Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services.

U.S. poverty measure has been widely used for policy formation, program administration, analytical research, and general public understanding in the United States. It has also been used in international comparisons (see, e.g., Blackburn 1998).

Reflecting growing concerns in the 1980s about the continued validity and usefulness of the official U.S. poverty measure (see, e.g., Ruggles 1990), Congress requested that a panel of the Committee on National Statistics, National Academy of Sciences, review the current measure and alternatives to it. The Panel on Poverty and Family Assistance conducted its work in 1992–1994. In its report (Citro and Michael 1995), the panel concluded that the current U.S. measure needs to be revised. The panel proposed a new measure that ascertains poverty status by determining the adequacy of families' disposable money and near-money income for needed consumption of food, clothing, shelter, and other necessities. The proposed measure provides a more accurate picture of poverty among population groups and geographic areas in the United States today. Equally important, it will more accurately describe changes in the extent of poverty over time that result from new public policies and social and economic change.

In this article we do the following: summarize the panel's evaluation of the current U.S. measure of poverty; describe the panel's recommendations for a revised measure and place those recommendations in the context of the literature on poverty measurement; present revised empirical analyses of the effects of the proposed measure, based on revised estimates of out-of-pocket medical care expenditures; and briefly review research that has been stimulated by the panel's work and that may lead to a revised official U.S. poverty measure.

2. Problems with the Current U.S. Poverty Measure

The current U.S. poverty measure has a set of thresholds (dollar amounts) that are compared with families' resources to determine whether or not they are poor. (Families are defined as people living in the same household who are related by blood, marriage, or adoption. People living alone and unrelated individuals living with others in a household are treated as single-person families.) The thresholds are updated annually for the change in the Consumer Price Index (CPI). They differ by the number of adults and children in a family and, for one-person and two-person families, by whether the family head is over or under age 65. A family's poverty status is determined by comparing its poverty threshold to its annual before-tax money income, which is measured for the preceding calendar year in the March income supplement to the Current Population Survey (CPS), a large survey of about 50,000 households. Official poverty statistics are published by the U.S. Census Bureau (see Bureau of the Census 1998a, b); a variant of the official poverty thresholds (the "poverty guidelines") is used to determine eligibility for benefits in a wide range of federal and state government assistance programs.

The official poverty thresholds were originally developed in 1963 by Mollie Orshansky of the U.S. Social Security Administration (see, e.g., Orshansky 1965). The thresholds for families of three or more persons represented the cost of a minimum diet times three to allow for expenditures on all other goods and services. The thresholds for one-person and two-person families were constructed somewhat differently (see Fisher 1992, for a history of the U.S. poverty measure).

The minimum diet was developed by U.S. Department of Agriculture (USDA) analysts by examining the food spending patterns of low-income households in a 1955 survey and adjusting the food amounts for nutritional balance. The USDA developed several food plans at varying cost levels; the one used as the basis of the poverty thresholds was the “Economy Food Plan,” the lowest cost plan designed for “temporary or emergency use when funds are low.” The multiplier of three represented the after-tax money income of the average family in 1955 relative to the amount it spent on food.

The central threshold for 1963 for a family of four (two adults and two children) was about 3,100 USD. The equivalent 1998 threshold for a two-adult/two-child family, based on annual updating with the CPI, was 16,530 USD.⁴

From the beginning the poverty measure had weaknesses, which have become more apparent and consequential since the mid-1960s because of far-reaching changes in the U.S. society and economy and its government policies. These changes and their implications for the poverty measure include the following:

- Because the current poverty measure defines family resources as gross, before-tax money income, it does not reflect the effects of important government policy initiatives that have significantly altered families’ disposable income and, hence, their poverty status. For example, the U.S. Social Security payroll tax, which reduces disposable income for workers, has more than doubled since the 1960s, but that change has not been reflected in official poverty statistics. The growth in near-money food stamp benefits, which raise disposable income for beneficiaries, and the recent expansion of the Earned Income Tax Credit, which is designed to offset income and payroll taxes for low-earning working families, have also not been reflected in official poverty statistics. Moreover, the current poverty measure cannot reflect the effects of future policy initiatives that may have consequences for disposable income, such as changes in the financing of health care, further changes in tax policy, and efforts to move welfare recipients into the work force.

- Because of the increased labor force participation of mothers, there are more working families who must pay for child care, but the current poverty measure does not distinguish between the needs of families in which the parents do or do not work outside the home. More generally, the current measure does not distinguish between the needs of workers and nonworkers.

- Because of differences in health status and health insurance coverage, different population groups face significantly different medical care costs, but the current poverty measure does not take account of them.

- The poverty thresholds are the same across the nation, although significant price variations across geographic areas exist for such needs as housing.

- The family size adjustments in the poverty thresholds are anomalous in many respects, and changing demographic and family characteristics (such as the reduction in average family size) underscore the need to reassess the adjustments.

⁴ The intent of the official updating procedure was to maintain purchasing power equivalence over time; however, the CPI overstated inflation prior to 1983 due to the treatment of home ownership costs, so the official thresholds have in fact increased somewhat in real terms. Use of an alternative price index, the CPI-U-X1, would result in thresholds for 1998 that are about eight percent lower than the official thresholds.

– Changes in the standard of living call into question the merits of continuing to use the values of the original thresholds updated only for inflation. Historical evidence suggests that poverty thresholds – including those developed according to “expert” notions of minimum needs – follow trends in overall consumption levels (Fisher 1995). Because of rising living standards in the United States, most approaches for developing poverty thresholds today would result in levels that are higher than the current thresholds.

Given these problems with the official U.S. poverty measure, the Panel on Poverty and Family Assistance recommended that it be revised. Without revision, and in the face of continuing socioeconomic change as well as changes in government policies, the measure will be increasingly less able to inform the public or to support research and policy making.

It is not easy to specify an alternate measure. There are several poverty concepts, each with merits and limitations, and there is no scientific basis by which one concept can be indisputably preferred to another. Ultimately, to recommend a particular concept requires judgment as well as science. The panel’s recommended changes are based on the best scientific evidence available, its best judgment, and three additional criteria. First, a poverty measure should be acceptable and understandable to the public. Second, a poverty measure should be statistically defensible. In this regard, the concepts underlying the thresholds and the definition of resources should be consistent. Third, a poverty measure should be feasible to implement with data that are available or can fairly readily be obtained.

3. Recommendation: A New Poverty Measure

The panel recommended that a revised U.S. poverty measure have the following features:

- The poverty thresholds should comprise a budget for food, clothing, and shelter (including utilities), and a small additional amount to allow for other common needs. Actual expenditure data, rather than expert judgment about diets or other needs, should be used to develop a threshold for a reference family of four–two adults and two children.
- Each year, the reference family threshold should be updated to reflect changes by two-adult/two-child families in spending on food, clothing, and shelter.
- The reference family threshold should be adjusted for different family types by using an equivalence scale and for geographic areas of the country by using an index of differences in the cost of housing.
- The resources of a family or individual that are compared with the appropriate threshold to determine poverty status should be consistently defined as money and near-money *disposable* income that is available for basic needs that are common to all families. Thus, resources should include most in-kind benefits (e.g., food stamps) and exclude income and payroll taxes and certain other expenses that are nondiscretionary for the families that incur them (work expenses, child support payments, and out-of-pocket medical care expenses).
- Family resources should be estimated with the Survey of Income and Program Participation (SIPP), which obtains more complete reporting of income than does the March

CPS income supplement. (SIPP is a continuing longitudinal survey; the 1996 panel of about 37,000 households was interviewed at four-month intervals over a four-year period.)

- The official poverty measure should continue to be derived on an annual basis, although it would also be useful to develop measures for periods shorter and longer than a year.
- The official measure should continue to use families and unrelated individuals as the units for which thresholds are defined and resources aggregated. The definition of “family” should be broadened to include cohabiting couples as a single unit.
- In addition to the basic poverty counts and ratios for the total population and groups – the number and proportion of poor people – the official poverty series should provide statistics on the average income and the distribution of income of the poor.

The panel recommended that the proposed measure be adopted for official government use. To facilitate the transition, it recommended that, for a time, the Census Bureau should produce concurrently a poverty series with thresholds updated for price changes only and a series with thresholds updated with the recommended procedure. The Census Bureau should also produce concurrent series from the March CPS income supplement and the SIPP.

Finally, the panel urged the Statistical Policy Office in the U.S. Office of Management and Budget to establish a mechanism for regular review of the poverty measure on a ten-year cycle to identify improvements in concepts, methods, and data that may be needed. Other important U.S. government statistics, such as the CPI, are regularly reviewed and revised; it is no less important to have such a process for the official poverty measure.

3.1. Setting and updating the poverty threshold

The panel proposed that the poverty-level budget for the reference family start with a dollar amount for the sum of three broad categories of basic goods and services – food, clothing, and shelter (including utilities). The amount should be determined from actual Consumer Expenditure Survey (CEX) data as a percentage of median expenditures on food, clothing, and shelter by two-adult/two-child families. (The CEX is a continuing survey of detailed expenditures for about 5,000 households, recently expanded to 7,700 households, that is used to develop the market basket for the CPI.) This sum should then be increased by a modest additional amount to allow for other necessities. The allowance for “other expenses” is intended to cover such commonly needed goods and services as personal care, household supplies, and non-work-related transportation. However, it does not include such largely nondiscretionary expenses as taxes and child care and other costs of working, which differ among types of families and may be affected by government policies. These expenses are treated as deductions from the income of the families incurring them (see Section 3.5).⁵

Once a new reference family threshold is determined, the panel proposed that it should be updated each year with more recent expenditure data. To smooth out year-to-year

⁵ Deducting nondiscretionary expenses from income for the families that incur them makes possible a more accurate measurement of poverty and simplifies the construction of the poverty thresholds. The alternative would be to have a much larger number of thresholds for different family situations.

fluctuations and to lag the adjustment to some extent, the updating should be carried out for each year by averaging the most recent three years' worth of data from the CEX, with an adjustment for inflation so that the data represent the current year. The recommended updating procedure will automatically, over time, reflect real changes in the consumption of basic goods and services without the need for a periodic and, inevitably, disruptive readjustment in the level.

3.2. Reevaluating the current official threshold

As part of implementing the proposed poverty measure, the panel recommended that the current official U.S. threshold be reevaluated in light of the proposed threshold concept, which treats certain expenses as deductions from income rather than as elements of the poverty budget. That evaluation should also consider the real growth in the standard of living that has occurred since the current threshold was first set for 1963.

The panel did not recommend a specific threshold with which to initiate the new poverty measure. Ultimately, that decision is a matter of judgment. It did, however, suggest a range for that initial threshold. The suggested range represents its own judgment, informed by analysis of thresholds developed from other commonly used concepts, such as expert budgets, relative thresholds expressed as one-half median income or expenditures, and thresholds derived from responses to sample survey questions about the poverty line (termed 'subjective' thresholds).

The panel believed that a reasonable range for the initial threshold for the reference family of two adults and two children would be 13,700 USD to 15,900 USD in 1992 dollars.⁶ The lower number equals 78 percent of the median expenditures for food, clothing, and shelter (11,950 USD) in the 1989–1991 CEX by two-adults/two-children families (30% of such families spent less than this amount), with a multiplier of 1.15 for other needed expenditures. The higher number equals 83 percent of the median expenditures for food, clothing, and shelter (12,720 USD) in the 1989–1991 CEX by two-adults/two-children families (35% of such families spent less than this amount), with a multiplier of 1.25 for other needed expenditure.

The suggested range reflects a high percentage of median expenditures on food, clothing, and shelter by the reference family type. However, food, clothing, and shelter are less than half of total consumption, and the proposed multiplier is much smaller than the current multiplier. Hence, the suggested range results in poverty thresholds that are about the same or lower than most other recently-developed thresholds, when those thresholds are converted to the panel's concept in which certain expenses are treated as deductions from income.

Below are illustrative U.S. thresholds for two-adults/two-children families in 1992 dollars, converted to the panel's concept (see Citro and Michael 1995, Tables 1–4 and Chapter 2, for derivation). All of the recently-developed thresholds are higher than the official threshold when it is converted to the panel's concept – 12,000 USD in 1992 dollars – because the official threshold has reflected only price changes since it was first developed and not also changes in the standard of living.

⁶ For reasons of data availability, the panel conducted its analysis for 1992.

Alternative thresholds converted to the panel's concept, 1992 U.S. dollars

USD

- 18,100 – U.S. Department of Housing and Urban Development Fair Market Rent times multiplier of 3.3 (from Ruggles 1990).
- 17,400 – Orshansky approach (minimum diet times multiplier of 4.4, reflecting more recent expenditure data).
- 16,800 – One-half average expenditures of four-person consumer units.
- 15,600 – Expert budget developed by Schwarz and Volgy (1992).
- 15,100 – One-half median after-tax income of four-person families.
- 14,900 – Subjective threshold developed from Gallup Poll public opinion data (from Vaughan 1993).
- 13,700–15,900 – Range proposed by Panel on Poverty and Family Assistance on the basis of expenditures on food, clothing, and shelter with a multiplier to add a small amount for other common needs.
- 13,100 – Expert budget developed by Renwick and Bergmann (1993).
- 12,000 – Official 1992 thresholds (14,228 USD) converted to panel's concept.

With regard to changes in the thresholds over time, the panel expected that its proposed updating procedure would result in smaller increases in the threshold in real dollar terms compared with other methods (except that of adjusting the thresholds simply for price changes). The reason is that food, clothing, and shelter are necessities in the economic sense; that is, real spending on them has historically increased at a slower rate than has real total consumption. There is not a consistent time series of consumer expenditure data prior to 1980 with which to determine the behavior of the panel's proposed updating procedure over the past 35 years. However, for the period 1980–1991 the panel estimated that the reference family poverty threshold would have increased by 7 percent when updated by the change in expenditures on food, clothing and shelter.⁷ In contrast, relative thresholds expressed as one-half median after-tax four-person family income increased by about 11 percent over the same period. Subjective poverty thresholds developed from Gallup Poll data increased by about 9–10 percent over the same period.

Indeed, the Gallup Poll data, which extend back to 1947, strongly support a quasi-relative concept of poverty, in which the percentage change in the poverty line is somewhat smaller than the percentage change in median income. Prior to 1957, the relative and subjective thresholds were below the official threshold in real terms; in 1963, all three concepts targeted the same level of about 3,100 USD; subsequently, both the relative and subjective thresholds exceeded the official threshold. Over the entire time span, the subjective threshold increased at a somewhat slower rate than the relative threshold (Citro and Michael 1995, Fig. 1-1).

3.3. Adjusting the reference threshold for family type

Given a poverty threshold for a reference family of two adults and two children, the next step is to develop appropriate thresholds for families with more and fewer members and

⁷ The updating is accomplished by determining the specific percentage of the median and applying the specific multiplier. Alternatively, once a starting threshold is determined, the updating can be accomplished by applying the change in median food, clothing, and shelter expenditures to that threshold.

different numbers of adults and children. The panel recommended that the reference family threshold be adjusted by means of an “equivalence scale” to determine thresholds for other family types.

The official poverty thresholds were not developed by use of a formal equivalence scale, but the implicit scale that can be constructed from them has several anomalies, which Ruggles (1990) and others have documented. For example, in some cases single-parent families have higher thresholds than married-couple families of the same size, implying that children cost more than adults in certain size families. Also, the increment in the thresholds for an added family member does not always decline, implying that larger families do not always realize economies of scale (e.g., from their ability to buy food and other items in bulk and jointly use many durable goods).

While there is no consensus in the scientific literature on the precise form of an appropriate equivalence scale, many such scales have the properties that children on average are assumed to consume less than adults and that each adult (or adult equivalent) family member is assumed to add a decreasing amount to the scale value. Based on the literature and its own research with expenditure data, the panel recommended the following scale for adjusting the reference family poverty threshold: children under 18 are treated as consuming 70 percent as much as adults on average; economies of scale available to larger families are computed by taking the number of adult equivalents in a family (i.e., the number of adults plus 0.70 times the number of children) and raising this number to a power of from 0.65 to 0.75. For example, when the economy of scale factor is 0.75, the scale values for a two-adult/two-child family and a one-adult/one-child family are 2.5 (3.4 adult equivalents raised to a power of 0.75) and 1.49 (1.7 adult equivalents raised to a power of 0.75), respectively. Reflecting the economies of scale when the family doubles in size from one adult with one child to two adults with two children, the poverty threshold increases by only 1.68 ($2.5/1.49$) rather than by 2.

3.4. Adjusting the thresholds for geographic areas

Evidence of cost-of-living differences among geographic areas in the United States – such as between metropolitan and nonmetropolitan areas – suggests that the poverty thresholds should be adjusted accordingly, but inadequate data make it difficult to determine appropriate adjustments. As a first and partial step, the panel recommended that the housing component of the poverty thresholds be indexed to reflect geographic variations in housing costs. This adjustment can be made by analyzing U.S. decennial census data with the methodology developed by the U.S. Department of Housing and Urban Development to estimate gross rents (including utilities) for comparable apartments in different localities. The available data for 1990 support reasonable adjustments of the housing component of the thresholds for several population size groups of metropolitan areas within each of nine regions.

The panel did not recommend adjustments for other budget items at this time because good data for such adjustments are lacking and because the available research suggests that variations in the costs of other budget items are not large. However, the panel urged that research be conducted to develop refined methods and data by which to adjust the poverty thresholds more accurately for geographic cost-of-living differences

for housing and other goods and services and to make such adjustments more frequently than every ten years.

3.5. *Defining family resources*

It is important that family resources are defined consistently with the threshold concept in any poverty measure. The current measure violates this principle, most notably in that the thresholds were developed on the basis of after-tax expenditure data, whereas the resource measure has always been defined as before-tax money income. Some recent work to investigate alternative measures has also violated the consistency principle. Examples are measures that add the value of public and private health insurance benefits to families' resources without adjusting the thresholds to account for increased medical care needs.

For consistency, the panel recommended that family resources be defined as *money and near-money disposable income* that is available for basic needs that are common to all families, such as food, clothing, and shelter. Specifically, resources should be calculated as follows:

- estimate gross money income from all public and private sources for a family or unrelated individual (which is income as defined in the current measure);
- add the value of near-money nonmedical in-kind benefits, such as food stamps, subsidized housing, school lunches, and home energy assistance;
- deduct out-of-pocket medical care expenditures, including health insurance premiums;
- deduct income taxes and Social Security payroll taxes;
- for families in which there is no nonworking parent, deduct actual child care costs, per week worked, not to exceed the earnings of the parent with the lower earnings or a cap that is adjusted annually for inflation;
- for each working adult, deduct a flat amount per week worked (adjusted annually for inflation and not to exceed earnings) to account for work-related transportation and miscellaneous expenses; and
- deduct child support payments that are made to another household from the income of the payer.

Researchers have generally supported the panel's recommended adjustments to income (see, e.g., Institute for Research on Poverty 1999). The only important area of disagreement concerns medical care benefits and expenses. (Medical care can be ignored for purposes of poverty measurement in countries that have comprehensive national health insurance but not in the U.S.A.)

The panel concluded that trying to account for private and public medical insurance benefits – important as they clearly are – in the same way as in-kind benefits for such items as food and housing would greatly complicate the poverty measure and cloud its interpretation. A chief reason is the wide variation in health care needs among the population: some people have high medical costs; some have none. Hence, the proposed poverty measure does not include an allowance for medical expenses, either those that might be covered by insurance or paid for out of pocket; for consistency, the proposed resource definition does not add the value of health insurance. Also for consistency, the proposed definition subtracts out-of-pocket medical care expenses from income: even

with insurance, many people must pay out of pocket to obtain that insurance or to receive care, and such expenses reduce disposable income.

Although the proposed poverty measure excludes medical care from both the thresholds and resources, it will reflect changes in health care policy that affect disposable income. For example, if changes in health care financing reduce out-of-pocket medical expenditures and thereby free up resources for food, housing, and other consumption, the proposed measure will show a lower poverty rate; the current measure will not show this effect.

The panel recommended that one or more separate indicators be developed of the extent to which families lack or have inadequate health insurance and are thereby at risk of not being able to afford needed treatment. Such measures assess medical care risk prospectively, whereas the economic poverty measure looks retrospectively at the effects of families' actual medical care expenditures on their disposable income during the measurement year.

4. The Proposed Poverty Measure in Context

There are many forms of deprivation, such as social isolation, lack of physical or psychological well-being, and poor living conditions (e.g., living in a high crime neighborhood). The panel recommended that indicators be developed and analyzed for all of these different dimensions of deprivation, but the focus of its work was on economic deprivation, narrowly defined: what many call material poverty.

This concept of poverty is distinguished from "welfare" and "well-being." Welfare is a term for certain government assistance programs. More generally, the term welfare is sometimes used to mean well-being, which is a much broader term capturing the overall condition of a person. In contrast, "economic poverty" refers to a low level of material goods and services or a low level of resources to obtain those goods and services.

It is not easy to specify in a precise manner what it means to be economically deprived, even in a narrow sense. The general idea appears intuitive and transparent. For instance, Adam Smith as far back as 1776 linked economic poverty to the want of "necessaries," which he defined as "not only the commodities which are indispensably necessary for the support of life, but whatever the custom of the country renders it indecent for creditable people, even of the lowest order, to be without." More recently, Townsend (1979, 1992) has given a social dimension to economic deprivation, arguing that economic poverty should be defined as the lack of sufficient income for people to "play the roles, participate in the relationships, and follow the customary behavior which is expected of them by virtue of their membership of society."

Whether one uses Smith's or Townsend's or another concept of economic deprivation, the key issue is how to move from the general to the particular by defining such terms as "necessaries" or "customary behavior." The panel's approach to the task of definition was pragmatic. It concluded that the current U.S. poverty measure was no longer satisfactory as a barometer of economic deprivation. It reviewed the properties of some common alternative measures to determine which of them could represent an improvement. Its goal was not to develop the ideal poverty measure on which everyone would agree (which may not exist), but to propose a measure that is a marked improvement over the current one – just as the official measure, when first developed by Mollie Orshansky, was regarded as a marked improvement over competing measures at that time.

4.1. *Threshold concepts*

The panel reviewed concepts of economic poverty thresholds expressed in monetary terms, including expert budgets, relative thresholds (e.g., one-half median expenditures or income), and subjective thresholds developed from survey data. The current U.S. thresholds represent a type of expert budget, in which experts set allotments for one or a few categories of expenditures with a large multiplier to allow for other needed expenditures. (In contrast, detailed expert budgets include amounts for a larger number of specific expenditure categories; see, e.g., Expert Committee on Family Budget Revisions 1980.)

The panel sought a concept that retained the attractive features of the original concept, namely, its understandability (food times three) and grounding in familiar basic commodities. Its approach builds the poverty threshold for a reference family on expenditures for three basic categories of goods and services plus a small additional amount for other commonly needed items.

Of course, judgment is required to determine the specific values of the two components of the panel's recommended threshold concept, namely, the percentage of median expenditures on food, clothing, and shelter and the multiplier, but that is true of any approach, including the approach of having experts set levels of basic needs. Inevitably, experts look at actual spending levels in a society – for example, the USDA nutritionists who specified the Economy Food Plan included meat sources of protein in the diet in addition to beans. The panel believed it best to minimize the number of judgments required in deriving the reference family poverty threshold, and hence it recommended direct use of expenditure data.

The fact that experts inevitably refer to societal consumption patterns in specifying basic needs is one of many pieces of evidence that the concept of poverty is inherently *relative* to time and place. The panel concluded that updating poverty thresholds to reflect real changes in living standards is inevitable. The question is how often and how much to do so and not whether to do so. A relative threshold concept would automatically and regularly update the thresholds in real terms as new data became available. However, the panel believed that a completely relative concept would find little public support for two reasons. First, it makes no reference at all to a budget and, hence, gives no sense of what a poverty standard entails. (Yet it still involves judgment to specify the percentage of median income or expenditures that represents deprivation.) Second, and more important in the panel's view, a relative threshold concept will update the poverty thresholds for real changes in total consumption, which includes luxuries as well as necessities. The panel recommended a quasi-relative updating procedure, in which the thresholds are regularly adjusted to reflect changes in spending on food, clothing, and shelter.

It is important to note that relative and quasi-relative updating procedures that tie the poverty thresholds to a percentage of median income or expenditures do not carry any necessary implications for the poverty rate. In particular, the poverty rate may decline with the use of relative or quasi-relative thresholds that increase in real terms just as it may decline with the use of absolute thresholds that remain fixed in real terms (see Wolfson and Evans 1989).

From the perspective of public acceptability and the view that poverty is inherently relative to a particular society, there are arguments for deriving poverty thresholds subjectively from sample survey data. The panel concluded that methodological problems (e.g., sensitivity of the results to question wording) made this approach unsuitable for determining the official U.S. poverty thresholds, but it favored further work with subjective thresholds to provide time series, similar to the Gallup Poll data, that could help evaluate the official thresholds.

4.2. Definitions of resources

The panel reviewed two main definitions of family resources: disposable money and near-money income (the panel's recommendation), and actual consumption or expenditures. The panel also reviewed a hybrid definition that adds to disposable income the value of some kinds of asset holdings that could be used to finance consumption over a short period – sometimes termed a “crisis” definition of resources (see, e.g., David and Fitzgerald 1987). The panel argued against such a definition as taking a very short-term view of poverty because the assets that are counted as available for consumption can only ameliorate a family's poverty situation temporarily.

The two main resource definitions have somewhat different implications for who is counted as poor. A consumption resource definition, in contrast to an income definition, will include in the poverty count people who are income-rich but consumption-poor – that is, people who through preference or anticipation of income loss (e.g., an imminent layoff) spend at levels below the poverty threshold when they actually have incomes above that level. Conversely, an income resource definition, in contrast to a consumption definition, will include in the poverty count people who are income-poor (e.g., because they lost a job or went back to school) but who sustain their consumption at a level above the poverty threshold by such means as increasing their credit card charges or decreasing their savings.

What one thinks of these differences depends on one's view of the meaning and purpose of a poverty measure. One view is that the poverty measure should reflect the actual level of material well-being in the society, regardless of how that well-being is attained (see, e.g., Mayer and Jencks 1993). After all, people derive material well-being from the actual consumption of goods and services rather than receipt of income per se; hence, it is appropriate to measure their consumption directly. Another view is that the poverty measure should reflect people's ability to obtain a level of material well-being above the threshold through the use of their own income without having to beg, borrow, steal, or lose their homes.

In a somewhat different vein, a focus on consumption accords with the view that poverty is appropriately assessed in terms of families' long-term or permanent income, of which current consumption is a better measure than current income. Among people with low levels of current income there is a disproportionate number of those with temporary income reductions who can be expected to maintain their spending in anticipation of higher long-term income.) Alternatively, a focus on income accords with the view that there is policy interest in a poverty measure that provides a more timely warning signal to policy makers of economic distress. For example, an income-based measure could

signal situations in which an increasing number of people are income-poor on a longer-term basis even though they are able to sustain their consumption temporarily through such means as unsecured borrowing.

The panel believed that there are merits to the conceptual arguments on both sides of the debate. On balance, many members of the panel found more compelling the arguments in favor of a consumption definition that attempts to assess actual levels of material well-being. However, in the United States today, adequate data with which to implement a consumption-based resource definition for use in the official poverty measure are not available. Despite the considerable value of the CEX, it does not have adequate sample size with which to provide needed poverty measures for population groups; the data are released on a slower schedule than the March CPS income data; the CEX design is problematic in several respects for purposes of poverty measurement; and research has documented some quality problems with the data (see, e.g., Silberstein 1989).

Of course, income surveys also have quality problems, such as underreporting of income sources and amounts, which can be severe. Indeed, several studies using a consumption or expenditure resource definition have found lower overall poverty rates than those using an income definition (e.g., Cutler and Katz 1991; Slesnick 1991). One reason for the differences is that the comparisons have not used the best available income data. Thus, poverty rates based on CEX or March CPS income data are higher than those based on CEX expenditure data, but poverty rates from the improved income data in SIPP closely approximate CEX expenditure-based rates. The panel recommended basing U.S. poverty statistics on a disposable money and near-money income definition of family resources using SIPP. It also called for a comprehensive review of the CEX to assess ways in which the survey could be improved for a broad range of economic analyses.

5. Revised Estimates of Effects

To consider the effects of the proposed measure, the panel estimated poverty rates for 1992 under both the current and the proposed measures with data from the March 1993 CPS, supplemented with data from SIPP and other sources. In one comparison, the panel kept the overall poverty rate the same for both measures – 14.5 percent in 1992 (36.9 million people). This analysis showed important distributional difference in the makeup of the poverty population under the two measures. In another comparison, the panel used the midpoint of the suggested range for the two-adult/two-child family threshold – 14,800 USD. This analysis showed an increase in the overall poverty rate, as well as the distributional effects of the “equal rates” analysis.

Revised estimates of the composition of the total and poverty populations and of poverty rates for population groups under the “equal rates” scenario (i.e., that in which the total poverty rate is 14.5% under both the current and proposed measure) are shown in Tables 1 and 2.⁸ The scale economy factor for adjusting the reference family threshold for different family sizes is 0.70, the midpoint of the panel’s recommended range. The

⁸ The revised estimates in this article use corrected data for out-of-pocket medical care expenditures, including Medicare premiums for the elderly and readjusting the proportion of expenditures between the elderly and nonelderly (see Betson 1995b; Citro and Michael 1995, Tables 5-6, 5-7, 5-8 contain the original estimates). Revised estimates for the analysis with a reference family threshold of 14,800 USD are available from the authors.

Table 1. Composition of the total and poverty populations under the current and proposed measures, with total poverty rate held constant at 14.5 percent, 1992

| Population | Percent of total population | Percent of poor | |
|--|-----------------------------|------------------------------|-------------------------------|
| | | Current measure ^a | Proposed measure ^b |
| Age | | | |
| Children under 18 | 26.3 | 39.6 | 36.0 |
| Adults 18–64 | 61.5 | 49.6 | 49.5 |
| Adults 65 and older | 12.2 | 10.8 | 14.5 |
| Race | | | |
| White | 83.6 | 66.8 | 70.6 |
| Black | 12.5 | 28.6 | 24.6 |
| Other | 3.9 | 4.6 | 4.9 |
| Ethnicity | | | |
| Hispanic | 8.9 | 18.1 | 19.1 |
| Non-Hispanic | 91.1 | 81.9 | 80.9 |
| Family Type^c | | | |
| Unrelated individual | 14.5 | 21.7 | 19.6 |
| Childless family | 25.4 | 7.0 | 12.8 |
| Two-parent family | 45.5 | 31.6 | 33.0 |
| One-parent family | 14.0 | 37.2 | 32.1 |
| Other | 0.7 | 2.6 | 2.5 |
| Welfare Status of Family | | | |
| Received cash assistance | 9.9 | 40.4 | 30.2 |
| Did not receive cash assistance | 90.1 | 59.6 | 69.8 |
| Weeks Worked of Primary Earner | | | |
| No weeks worked | 19.1 | 50.2 | 46.8 |
| 1–26 weeks worked | 5.5 | 16.4 | 14.2 |
| 27–47 weeks worked | 7.9 | 10.9 | 10.5 |
| 48–52 weeks worked | 67.5 | 22.5 | 28.4 |
| Health Insurance Status of Family | | | |
| No health insurance | 13.7 | 30.1 | 29.4 |
| Some health insurance | 86.3 | 69.9 | 70.6 |
| Region of Residence | | | |
| Northeast | 20.0 | 16.9 | 19.0 |
| Midwest | 24.0 | 21.7 | 20.9 |
| South | 34.4 | 40.0 | 36.2 |
| West | 21.6 | 21.4 | 23.9 |

^a A threshold of 14,228 USD for two-adult/two-child families.

^b A threshold of 12,406 USD for two-adult/two-child families, which produces the same total poverty rate as the current measure, with a 0.70 scale economy factor (the midpoint of the panel's recommended range) and corrected data for out-of-pocket medical care expenses.

^c Childless families include childless married couples and other families of related adults; two-parent families include a small number of father-only families; one-parent families are mother-only families; other families are unrelated subfamilies.

SOURCE: Tabulations prepared by David Betson, member of the U.S. Committee on National Statistics Panel on Poverty and Family Assistance, from the March 1993 Current Population Survey, with imputations for taxes, in-kind benefits, and work-related and medical care expenses.

Table 2. Poverty rates by population group under the current and proposed measures, with total poverty rate held constant at 14.5 percent^a

| | Poverty rate (%) | | Percentage point change | |
|--|------------------------------|-------------------------------|-------------------------|---------------------------|
| | Current measure ^b | Proposed measure ^c | Actual | Standardized ^d |
| Age | | | | |
| Children under 18 | 21.87 | 19.86 | -2.01 | -1.33 |
| Adults 18-64 | 11.70 | 11.67 | -0.02 | -0.03 |
| Adults 65 and older | 12.90 | 17.38 | 4.47 | 5.04 |
| Race | | | | |
| White | 11.60 | 12.25 | 0.66 | 0.82 |
| Black | 33.15 | 28.43 | -4.72 | -2.07 |
| Other | 17.39 | 18.47 | 1.08 | 0.90 |
| Ethnicity | | | | |
| Hispanic | 29.43 | 30.98 | 1.56 | 0.77 |
| Non-Hispanic | 13.06 | 12.90 | -0.15 | -0.17 |
| Family type^c | | | | |
| Unrelated individual | 21.75 | 19.67 | -2.08 | -1.39 |
| Childless family | 4.01 | 7.31 | 3.30 | 11.94 |
| Two-parent family | 10.09 | 10.54 | 0.45 | 0.65 |
| One-parent family | 38.49 | 33.23 | -5.26 | -1.98 |
| Welfare Status of Family | | | | |
| Received cash assistance | 59.39 | 44.41 | -14.98 | -3.66 |
| Did not receive cash assistance | 9.60 | 11.24 | 1.64 | 2.48 |
| Weeks Worked of Primary Earner | | | | |
| No weeks worked | 38.24 | 35.67 | -2.57 | -0.98 |
| 1-26 weeks | 43.29 | 37.42 | -5.88 | -1.97 |
| 27-47 weeks | 19.90 | 19.33 | -0.57 | -0.42 |
| 48-52 weeks | 4.85 | 6.12 | 1.27 | 3.81 |
| Health Insurance Status of Family | | | | |
| No insurance | 31.95 | 31.15 | -0.80 | -0.36 |
| Some insurance | 11.76 | 11.88 | 0.13 | 0.16 |
| Region of Residence | | | | |
| Northeast | 12.29 | 13.86 | 1.57 | 1.86 |
| Midwest | 13.10 | 12.64 | -0.46 | -0.51 |
| South | 16.89 | 15.26 | -1.62 | -1.40 |
| West | 14.39 | 16.03 | 1.65 | 1.66 |

^a The poverty rates are for individuals: They are determined by comparing the income of their family (or one's own income if an unrelated individual) to the appropriate threshold.

^b A threshold of 14,228 USD for two-adult/two-child families.

^c A threshold of 12,406 USD for two-adult/two-child families, 0.70 scale economy factor, and corrected out-of-pocket medical expense data.

^d See text for derivation.

^e See Table 1.

SOURCE: Tabulations prepared by David Betson, member of the U.S. Committee on National Statistics Panel on Poverty and Family Assistance, from the March 1993 Current Population Survey, with imputations for taxes, in-kind benefits, and work-related and medical care expenses.

changes in poverty rates for population groups in Table 2 are expressed as actual and standardized percentage point differences between the rates under the current and proposed measures. Standardized differences permit comparisons across population groups: they represent the percentage point change for each group that would result if the group had the same official poverty rate (14.5%) as the total population. (To standardize the rate, the ratio of the official total poverty rate to the official rate for the group in 1992 is applied to the group's actual percentage point change under the proposed measure.) Some key findings are summarized below.

5.1. Age

Children are a larger share of the poverty population than of the total population; however, their share of poor people decreases from 39.6 percent under the current measure to 36 percent under the proposed measure. The reverse is true for the elderly, whose share of poor people increases from 10.8 percent under the current measure to 14.5 percent under the proposed measure, a higher percentage than their share of the total population. Correspondingly, comparing the current and the proposed measures, the poverty rate for children decreases from 21.9 percent to 19.9 percent, while that of the elderly increases from 12.9 percent to 17.4 percent. The primary reason for the increase in the poverty rate for the elderly has to do with their expenses for Medicare, other health insurance premiums, and out-of-pocket expenses (e.g., prescription medicines) not covered by insurance.

5.2. Welfare status

People in families receiving cash welfare benefits (Aid to Families with Dependent Children or Supplemental Security Income for the low-income elderly or disabled) are a much larger share of the poor population than of the total population; however, their share of the poor population decreases from 40.4 percent under the current measure to 30.2 percent under the proposed measure. Correspondingly, comparing the current and proposed measures, the poverty rate for people in welfare families decreases from 59.4 percent to 44.4 percent. The primary reason for the decrease in the rate is the inclusion of values for such in-kind benefits as food stamps in disposable income. (Even with the inclusion of in-kind benefits, a large proportion of people in welfare families remain poor, and the rest are in the near-poor category with incomes of 100–150% of poverty.)

5.3. Weeks worked

People in families in which the head(s) do not work make up a large share of the poverty population: however, their share of the poor decreases from 50.2 percent under the current measure to 46.8 percent under the proposed measure. Conversely, the share of poor people who are in families in which the primary earner works full-year increases from 22.5 percent under the current measure to 28.4 percent under the proposed measure. Correspondingly, comparing the current and the proposed measures, the poverty rate for nonworking families decreases from 38.2 percent to 35.7 percent, while that for full-year working families increases from 4.9 percent to 6.1 percent. In standardized terms, the rate for full-year working families increases by a sizeable 3.8 percentage points.

Because of the large number of such families, this increase represents an additional 2.4 million working poor.

Nonworking families include those on welfare, for whom the addition of in-kind benefits to disposable income reduces their poverty rate. Other nonworking families are elderly individuals or couples who do not receive welfare and for whom the deduction of out-of-pocket medical care expenses from income increases their poverty rate. These partly offsetting effects produce a smaller decrease in the poverty rate for nonworking families than for welfare beneficiaries.

Full-year working families benefit hardly at all from in-kind benefits, and they incur taxes and work expenses that decrease their disposable income and hence increase their poverty rate. Many of them also have out-of-pocket medical care expenses that bring them below the poverty line. Analyses of more recent CPS data show decreased poverty rates for working families due to the expansion of the Earned Income Tax Credit (see Section 6.7). This source of cash income is not captured in the current poverty measure because it comes through the tax system.

6. Related Research Since Publication of the Panel's Report

Since the panel's report was published in 1995, there has been considerable research to flesh out, assess, and lay the groundwork for implementation of the panel's recommendations. We briefly summarize much of this work, which has been conducted principally by staff of the U.S. Census Bureau and the U.S. Bureau of Labor Statistics and by panel member David Betson (see also Fisher 1999; Institute for Research on Poverty 1998). The research summarized covers development and adjustment of the poverty thresholds, measurement of family resources, time series comparisons of the current and proposed poverty measures, and other areas.

6.1. Poverty thresholds: reference family threshold

Researchers at the U.S. Bureau of Labor Statistics (BLS) have undertaken extensive analyses of CEX data to implement the panel's recommendation to develop a reference family poverty threshold on the basis of expenditures on food, clothing, and shelter (Johnson, Shipp, and Garner 1997; see also Garner et al. 1998 and Short et al. 1998). They have paid particular attention to alternative methods for estimating the housing cost component for homeowners: out-of-pocket expenses (mortgage interest payments, taxes, maintenance, and repair), homeowners' reported rental values, and imputed net rent based on hedonic equations. These methods give different values for a reference family threshold, but it is not clear how the methods compare over time, which is a key consideration for the panel's recommendation for updating the thresholds.

A worrisome finding of the BLS research is the larger sampling variability in estimates of thresholds that are updated by changes in expenditures compared with thresholds that are updated by changes in the CPI. The recent expansion of the CEX sample size may somewhat mitigate this problem. Also, while the BLS research finds that, for the entire period 1983 to 1990, thresholds developed as the panel proposed increase in real dollar terms, they decline slightly in real terms for the period 1990–1995. For these reasons, Johnson, Shipp, and Garner suggest that an alternative approach might be to redefine

and reestimate the poverty level consumption bundle at, say, intervals of ten years, and use a price adjustment in the intervening years.

6.2. Poverty thresholds: equivalence scales

The panel's recommended equivalence scale for adjusting the reference family threshold for different numbers of adults and children is based largely on analysis of spending for families with children. Betson (1996) compares the panel's scale values with those of other plausible scales and reassesses the scale values for one-person families, couples, and families with a first child (see also Johnson, Shipp, and Garner 1997). Betson concludes that a preferable scale would be a "three-parameter scale," in which the first child in a one-parent family adds more to the scale value than the first child in a two-parent family and in which the scale value for a couple is fixed at 1.41 times the scale value for a single-person family.⁹

6.3. Poverty thresholds: geographic adjustments

Johnson, Shipp, and Garner (1997) report on experimental research with BLS price data for selected metropolitan areas to develop threshold adjustments that reflect geographic differences not only in housing costs, but also in costs of other categories of expenditures. Their work finds similar patterns to those in the panel's housing cost adjustments that were developed from 1990 census data. The results suggest that, with further development, the BLS data could be a promising source for regularly adjusting the poverty thresholds.

6.4. Family resources: medical care

Implementing the panel's recommendation to subtract out-of-pocket medical care costs from income requires imputations from medical expenditure surveys because income surveys, including the March CPS and SIPP, cannot ask sufficiently detailed questions in this area. Doyle (1997a) evaluates the accuracy of alternative methods of imputing out-of-pocket medical care expenditures from the 1987 National Medical Care Expenditure Survey to March CPS data and finds that the method developed for the panel's analysis by Betson (1995b) works well. There is now (since 1996) a continuing Medical Expenditure Panel Survey that will make it possible to perform more timely imputations of out-of-pocket medical care costs, and new questions on such costs in SIPP will facilitate imputations with that survey.

Bavier (1998) proposes an alternative method for treating both out-of-pocket medical care costs and work-related expenses for poverty measurement, namely, to add varying amounts for families categorized by such characteristics as age and health status to the thresholds instead of deducting incurred expenses from income. Such an approach could make it easier to implement a revised poverty measure in surveys on health, education, or other topics that do not have questionnaire space for detailed questions on income

⁹ Specifically, the scale values for single-parent families are given by $(A + c + P(K - 1))^F$, and the scale values for other families are given by $(A + PK)^F$, where A is the number of adults, c is a constant 0.8 for the first child, K is the number of children, P is 0.5, and the economies of scale factor, F , is 0.7.

and expenditures. Finally, Doyle (1997b) considers how to conceptualize a medical care risk index that could be cross-tabulated with the economic poverty measure.

6.5. *Family resources: housing*

The U.S. Census Bureau researchers (Naifeh and Eller 1997; Shea, Naifeh, and Short 1997) have conducted analyses to develop improved methods for valuing in-kind benefits from public and subsidized housing, which are more difficult to value than such benefits as food stamps or school lunches. They conclude that a new model of market rents that uses regression coefficients estimated from the American Housing Survey to impute household subsidy amounts is preferable to the method currently used by the U.S. Census Bureau.

It can be argued that homeowners also receive a type of in-kind benefit from their homes. The panel did not recommend including such benefits at this time in a revised measure of family resources, citing issues about the most appropriate method and practical difficulties of implementation with existing survey data, but it recommended research on the topic in the near term. Betson (1995a) uses March CPS data to construct rough estimates of the effects for poverty rates of an approach in which homeowners' incomes would have added an amount not to exceed the difference between the share of the proposed poverty threshold that could be attributed to mortgage payments and the homeowners' actual mortgage costs (setting negative differences to zero). This approach recognizes that homeowners with no or small mortgage payments have a greater ability to finance their needs compared with other householders with higher mortgage or rent payments, but it is not a strict imputed net rental value approach, which could add amounts that exceed the share of housing costs in the threshold.

Betson's method of accounting for home ownership is a revised poverty measure, using an "equal rates" scenario, produces a poverty rate for the elderly that is six percentage points lower than the rate for children. In contrast, the difference under the current measure is nine percentage points, while the difference under a revised measure without accounting for home ownership is only two percentage points (see Table 2). The subtraction of out-of-pocket medical care costs, which are much larger proportionately for the elderly than for families with children, narrows the gap in poverty rates substantially when moving from the current measure to the revised measure; in turn, accounting for home ownership benefits, which disproportionately accrue to the elderly, dampens this effect.

6.6. *Family resources: work expenses*

Short, Shea, and Eller (1996) evaluate the panel's estimates of work-related expenses (e.g., commuting costs) and develop alternative methods for estimating child care costs to subtract from income in a revised poverty measure. They suggest that a method in which a percentage of median child care expenses is subtracted from the income of working parents may be preferable to subtracting actual expenses, which reflect what families can afford and not necessarily what they need to spend for adequate child care.

6.7. *Time series analyses*

Several recent analyses examine how the panel's proposed poverty measure tracks changes across time – a critical aspect for poverty measurement – in more depth than

the panel was able to accomplish in its work. Short et al. (1998) compare poverty rates under the official measure and the panel's proposed measure for 1991–1996. The comparison uses March CPS data and adjusts the 1991 threshold for the proposed measure so that the overall poverty rate is the same for the two measures in 1991 (14.2%). Thresholds for 1992–1996 for both measures are updated by the change in the CPI. The results show similar trends for the two measures, with the rate of poverty increasing from 1991 to 1993 and decreasing from 1993 to 1996. However, the decline in the poverty rate from 1993 to 1996 is larger under the proposed measure (from 15.4% to 13.4%) than under the current measure (from 15.1% to 13.7%). The principal reason is the expansion of the Earned Income Tax Credit in that period, which is reflected in the proposed measure but not in the current measure.

Betson and Warlick (1998) compare poverty rates with March CPS data for 1979, 1983, 1989, and 1994. They use the official thresholds and define family resources according to the current measure, the panel's recommended measure, and two variants. The overall trends for the current and revised measures are similar but of different magnitudes. Thus, from 1979 to 1983, a period that includes a recession, the official poverty rate and revised poverty rate increased by 30 percent and 37 percent, respectively. In the period of recovery from 1983 to 1989, the official and revised poverty rates decreased by 16 percent and 11 percent, respectively, while from 1989 to 1994, the two rates increased by 14 percent and 8 percent, respectively. The differences stem from changes in taxes, in-kind benefit programs, and out-of-pocket medical care expenditures that are not captured in the official definition of family resources. (See also Betson and Warlick 1999, who show results not only for poverty rates, but also for an index, based on Sen 1988, that incorporates a measure of depth of poverty among the poor population.)

6.8. *Other research*

Bauman (1997) and Carlson and Danziger (1998) analyze the effects on the poverty rate of defining cohabiting couples (and other household members related to them) as families for purposes of poverty measurement. Taking this approach reduces the poverty rate substantially for members of cohabiting families, although the overall effect is small for most groups because of the small number of such families. Bauman discusses some of the problems of accurately measuring cohabitation in survey data.

Short et al. (1998) compare poverty rates under the official measure and the panel's recommended measure for the March CPS and SIPP in 1991. (See also Iceland et al. 1999, who compare March CPS and SIPP poverty rates for 1992.) As expected, the results show lower poverty rates for SIPP, although the estimates for the panel's measure are not strictly comparable because a model for simulating income taxes has not yet been completed for SIPP.¹⁰ The U.S. Census Bureau is taking steps to make it possible to use SIPP for poverty measurement, including the development of a tax model and modifying the questionnaire. The Bureau has also requested funding to add a new, smaller SIPP panel each year, to supplement a larger three-year panel. Yearly

¹⁰ SIPP poverty rates are lower than March CPS rates for all population groups; the largest differences are for the elderly, primarily due to more complete reporting of Social Security benefits in SIPP (see Martini and Dowhan 1996).

panels are needed to permit estimates of year-to-year change in poverty rates in SIPP that minimize the effects of sample attrition.

7. Initiative for New Experimental Poverty Series

The research conducted since the panel published its report in 1995 laid important groundwork for implementing the panel's recommendations. The U.S. Census Bureau has now taken the next step of publishing a report in its P60 Consumer Income series that provides estimates of poverty under the panel's recommended measure and five alternative measures for 1990–1997 (U.S. Bureau of the Census 1999). (The alternative measures variously use the three-parameter equivalence scale described above, incorporate different methods of estimating child care expenses, and drop the threshold adjustments for geographic housing cost differences.) The poverty measures in the report are experimental, but they represent the first revised measure produced by a U.S. statistical agency. An interagency working group organized by the U.S. Office of Management and Budget (OMB) provided guidance to the U.S. Census Bureau in developing the P60 report.

8. Conclusion

Clearly, there are many issues involved in deriving an acceptable and feasible measure of poverty for official use. The Panel on Poverty and Family Assistance developed an integrated set of recommendations for revising the official U.S. measure. Since issuance of the panel's report, considerable work has been undertaken to assess and flesh out the implications of the recommendations. Not all issues have been resolved; however, the research conducted to date has demonstrated that revising the poverty measure is important to track both changes over the economic cycle and the effects of changes in public policy.

Major changes in the U.S. tax and transfer system in the past few years, including the expansion of the Earned Income Tax Credit and the devolution of responsibility to the states for assistance to low-income families through the 1996 Personal Responsibility and Work Opportunity Reconciliation Act ("welfare reform"), underscore the need for updating the poverty measure. However, several factors have made it difficult to effect a change. They include the measure's "official" status, and, relatedly, that it has not been changed except in minor details for over 30 years (unlike other key economic indicators, such as the CPI and gross domestic product). Also, full responsibility for the measure is not lodged with a single agency – the U.S. Census Bureau publishes the measure but OMB has the authority to define it, and OMB and others have concerns about the possible implications of a revised measure for the costs and administration of public assistance programs.

Yet the publication of the U.S. Census Bureau's P60 report containing estimates for 1990–1997 for several experimental poverty measures that broadly reflect the panel's recommendations is a milestone. (Experimental measures for income year 1998 were released in fall 1999, concurrently with the official measure.) The Bureau's report provides useful statistics for research and analysis, including comparative analysis with the official poverty statistics. As researchers and policy analysts gain experience with

the behavior of the experimental measures over time and across population groups, there will be a basis for using a revised measure for many important analytic and policy purposes.¹¹ Soon, we hope, there will also be a decision to revise the official U.S. poverty measure.

9. References

- Bauman, K. (1997). Shifting Family Definitions: The Effect of Cohabitation and Other Nonfamily Household Relationships on Measures of Poverty. Institute for Research on Poverty, working paper. University of Wisconsin, Madison.¹²
- Bavier, R. (1998). Medical Needs and the Poverty Threshold. U.S. Office of Management and Budget, Working paper. Washington, DC.¹²
- Betson, D.M. (1995a). Effect of Home Ownership on Poverty Measurement. Department of Economics, Working paper. University of Notre Dame, Notre Dame, Indiana.¹²
- Betson, D.M. (1995b). Poor Old Folks: Have Our Methods of Poverty Measurement Blinded Us to Who Is Poor? Department of Economics, Working paper. University of Notre Dame, Notre Dame, Indiana.¹²
- Betson, D.M. (1996). ‘Is Everything Relative?’ The Role of Equivalence Scales in Poverty Measurement. Department of Economics, Working paper. University of Notre Dame, Notre Dame, Indiana.¹²
- Betson, D. and Warlick, J. (1998). Alternative Historical Trends in Poverty. *American Economic Review*, 88, 2, 348–351.
- Betson, D. and Warlick, J. (1999). Reshaping the Historical Record with a Comprehensive Measure of Poverty. Paper prepared for the Conference on Poverty: Improving the Measure After Thirty Years, Robert M. La Follette Institute of Public Affairs and the Institute for Research on Poverty, Madison, Wisconsin. Department of Economics, University of Notre Dame, Notre Dame, Indiana, April.
- Blackburn, McK.L. (1998). The Sensitivity of International Poverty Comparisons. *Review of Income and Wealth*, 44, 449–472.
- Carlson, M. and Danziger, S. (1998). Cohabitation and the Measurement of Child Poverty. Population Studies Center, Working paper. University of Michigan, Ann Arbor, Michigan.¹²
- Citro, C.F. and Michael, R.T. eds., (1995). *Measuring Poverty: A New Approach*. Panel on Poverty and Family Assistance: Concepts, Information Needs, and Measurement Methods. Committee on National Statistics, National Research Council. Washington, DC: National Academy Press.
- Cutler, D.M. and Katz, L.F. (1991). Macroeconomic Performance and the Disadvantaged. *Brookings Papers on Economic Activity*, 2, 1–74.
- David, M. and Fitzgerald, J. (1987). Measuring Poverty and Crises: A Comparison of Annual and Subannual Accounting Periods Using the Survey of Income and Program Participation. Institute for Research on Poverty, Working paper. University of Wisconsin, Madison.

¹¹ The Annie E. Casey Foundation is providing support to the Brookings Institution and the Institute for Research on Poverty at the University of Wisconsin for conferences and other activities to encourage use of a revised poverty measure by the research community (see Institute for Research on Poverty 1998, 1999).

¹² Available on the U.S. Census Bureau’s poverty measurement website at www.census.gov

- Doyle, P. (1997a). How Can We Deduct Something We Do Not Collect? The Case of Out-of-Pocket Medical (MOOP) Expenditures. Paper prepared for the American Statistical Association meetings, Anaheim, California. U.S. Bureau of the Census, U.S. Department of Commerce, Washington, DC, August.¹²
- Doyle, P. (1997b). Who's at Risk? Designing a Medical Care Risk Index. U.S. Bureau of the Census, Working paper. U.S. Department of Commerce, Washington, DC.¹²
- Eurostat (1994). Poverty Statistics in the Late 1980s: Research Based on Micro-Data. Study carried out by A.J.M. Hagenaars, K.d. Vos, and M.A. Zaidi, Luxembourg.
- Eurostat (1998). Recommendations on Social Exclusion and Poverty Statistics. 31st meeting of the Statistical Program Committee, Document No. CPS 98/31/2, Luxembourg.
- Expert Committee on Family Budget Revisions (Watts Committee) (1980). *New American Budget Standards*. Madison: Institute for Research on Poverty, University of Wisconsin; New York: Centre for the Social Sciences, Columbia University.
- Fisher, G. (1992). The Development and History of the Poverty Thresholds. *Social Security Bulletin*, 55, 4, 3–14.
- Fisher, G. (1995). Is There Such a Thing as an Absolute Poverty Line Over Time? Evidence from the United States, Britain, Canada, and Australia on the Income Elasticity of the Poverty Line. Office of the Assistant Secretary for Planning and Evaluation, Working paper. U.S. Department of Health and Human Services, Washington, DC.¹²
- Fisher, G. (1999). An Overview of Developments Since 1995 Relating to a Possible New U.S. Poverty Measure. Office of the Assistant Secretary for Planning and Evaluation, Working paper. U.S. Department of Health and Human Services, Washington, DC, May.
- Garner, T.I., Paulin, G., Shipp, S., Short, K., and Nelson, C. (1998). Poverty Measurement in the 1990s. *Monthly Labor Review*, March, 39–61.
- Iceland, J., Short, K., Garner, T., and Johnson, D. (1999). Evaluating Child Well-Being Using a New (and Improved) Measure of Poverty. Paper prepared for the Population Association of America meetings, New York. U.S. Bureau of the Census, U.S. Department of Commerce, and U.S. Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC, April.¹²
- Institute for Research on Poverty (1998). Revising the Poverty Measure. *Focus*, 19, 2, Spring, 1–55.
- Institute for Research on Poverty (1999). Poverty: Improving the Measure After Thirty Years (a conference). *Focus*, 20, 2, Spring, 51–65.
- Johnson, D., Shipp, S., and Garner, T.I. (1997). Developing Poverty Thresholds Using Expenditure Data. Paper prepared for the American Statistical Association Meetings, Anaheim, California. U.S. Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC, August.¹²
- Martini, A. and Dowhan, D. (1996). Documenting and Explaining CPS-SIPP Differences in Poverty Measures Among the Elderly. Draft Final Report to the U.S. Social Security Administration. The Urban Institute, Washington, DC.

¹² Available on the U.S. Census Bureau's poverty measurement website at www.census.gov

- Mayer, S. and Jencks, C. (1993). Recent Trends in Economic Inequality in the United States: Income vs. Expenditures vs. Material Well-Being. In *Poverty and Prosperity in the U.S.A. in the Late Twentieth Century*, ed. D. Papadimitriou and E. Wolff, London, UK: Macmillan.
- Naifeh, M. and Eller, T.J. (1997). Valuing Housing Subsidies in a New Measure of Poverty: CPS. Paper prepared for the American Statistical Association meetings, Anaheim, Calif. U.S. Bureau of the Census, U.S. Department of Commerce, Washington, DC, August.¹²
- Orshansky, M. (1965) Counting the Poor: Another Look at the Poverty Profile. *Social Security Bulletin*, 28, 1, January, 3–29; reprinted in *Social Security Bulletin*, 51, 10, 1980, 25–51.
- Renwick, T.J. and Bergmann, B.R. (1993). A Budget-Based Definition of Poverty with an Application to Single-Parent Families. *Journal of Human Resources*, 28, 1, 1–24.
- Ruggles, P. (1990). *Drawing the Line – Alternative Poverty Measures and Their Implications for Public Policy*. Washington, DC: The Urban Institute Press.
- Schwarz, J.E. and Volgy, T.J. (1992). *The Forgotten Americans*. New York: W.W. Norton & Company.
- Sen, A. (1988). *Poverty and Families: An Essay on Entitlement and Deprivation*. Oxford, UK: Oxford University Press.
- Shea, M., Naifeh, M., and Short, K. (1997). Valuing Housing Subsidies in a New Measure of Poverty: SIPP. Paper prepared for the American Statistical Association meetings, Anaheim, California. U.S. Bureau of the Census, U.S. Department of Commerce, Washington, DC, August.¹²
- Short, K., Shea, M., and Eller, T.J. (1996). Work Related Expenditures in a New Measure of Poverty. *Proceedings of the Social Statistics Section, American Statistical Association*, Alexandria, VA.¹²
- Short, K., Shea, M., Johnson, D., and Garner, T.I. (1998). Poverty-Measurement Research Using the Consumer Expenditure Survey and the Survey of Income and Program Participation. *American Economic Review*, 88, 2, May, 352–356.
- Silberstein, A.R. (1989). Recall Effects in the U.S. Consumer Expenditure Survey. *Journal of Official Statistics*, 5, 2, 125–142.
- Slesnick, D.T. (1991). The Standard of Living in the United States. *The Review of Income and Wealth*, 37, 4, 363–386.
- Townsend, P. (1979). *Poverty in the United Kingdom: A Survey of Household Resources and Standards of Living*. Harmondsworth, UK: Penguin Books.
- Townsend, P. (1992). *The International Analysis of Poverty*. Hemel Hempstead, UK: Harvester-Wheatsheaf.
- U.S. Bureau of the Census (1998a). Measuring 50 Years of Economic Change Using the March Current Population Survey. *Current Population Reports, Consumer Income, Series P60-203*. U.S. Department of Commerce, Washington, DC.¹²
- U.S. Bureau of the Census (1998b). *Poverty in the United States: 1997*. *Current Population Reports, Consumer Income, Series P60-201*. U.S. Department of Commerce, Washington, DC.¹²

¹² Available on the U.S. Census Bureau's poverty measurement website at www.census.gov

U.S. Bureau of the Census (1999). *Experimental Poverty Measures: 1990 to 1997*. Current Population Reports, Consumer Income, Series P60–205. U.S. Department of Commerce, Washington, DC.¹²

Vaughan, D.R. (1993). Exploring the Use of the Public's View to Set Income Poverty Thresholds and Adjust Them Over Time. *Social Security Bulletin*, 56, 2, Summer, 22–46.

Wolfson, M.C. and Evans, J.M. (1989). *Statistics Canada's Low-Income Cutoffs: Methodological Concerns and Possibilities*. Analytical Studies Branch, Discussion Paper: Research Paper Series, Statistics Canada, Ottawa, Ontario.

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¹² Available on the U.S. Census Bureau's poverty measurement website at www.census.gov