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Revising the poverty measure

Poverty statistics are expressed as apparently simple numbers—for example, "One in four children under five lives in a poor family." This simplicity is deceptive. The poverty numbers are, in reality, the product of complex layers of pragmatic political and methodological compromises, extending back over three decades. When the U.S. government began tracking poverty, in the 1960s, the measure then introduced was seen as provisional, pending the development of more matured strategies. That same measure is still used today, even though the soundness of the concepts and methodology from which the official numbers are derived has been questioned from the very beginning.

In 1992, questions about the poverty measure gave rise to a National Academy of Sciences (NAS) study panel, established at the request of Congress. In 1995 the panel issued a final report and recommendations for change, *Measuring Poverty: A New Approach.* These recommendations, the possible consequences of making the changes, and the research necessary to document those consequences were discussed in a 1995 seminar organized jointly by IRP and the Office of the Assistant Secretary for Planning and Evaluation in the U.S. Department of Health and Human Services.

Over the succeeding three years, a research agenda has steadily been forged to explore the recommendations of the NAS study panel and the seminar discussions. Some issues in revising the poverty measure are close to resolution or can be easily resolved; others still present complex methodological and political questions. There is not even a conceptual agreement, for example, on how medical expenses and owner-occupied housing should be estimated.

The articles in this *Focus* lay out some underlying choices, explore important technical issues, and clarify potential effects of the suggested new poverty measure. The difficult ethical and political decisions that arise in changing a measure so deeply embedded in federal and state government activities are part of the reason that the present official measure has remained in essence unchanged for so long. But the coming of welfare reform has given new urgency to the call for revision. ■

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Improving the measurement of American poverty

The official measure of poverty in the United States is framed in terms of family income. It uses an absolute threshold, altered only for inflation, to distinguish those who are poor from those considered to have enough for the necessities of life.[1] The 1995 panel of the National Academy of Sciences (NAS) that studied the poverty measure made specific and serious criticisms:

It excludes in-kind benefits, such as food stamps and housing assistance, when counting family income.

It ignores the cost of earning income, including child care costs, when calculating the net income available to families with working members.

It disregards regional variation in the cost of living, especially the cost of housing, in determining a family's consumption needs.

It ignores direct tax payments, such as payroll and income taxes, when measuring family income.

It ignores differences in health insurance coverage in determining family income, and medical care needs in determining family consumption needs.

It has never been updated to account for changing consumption patterns of U.S. households. For example, expenditures for food accounted for about one-third of family income in the 1950s, but they now account for as little as one-seventh.[2]

If the NAS panel report gave authoritative expression to analysts' dissatisfaction with the official poverty measure, events of the last three years have brought greater urgency to discussion about replacing it. Strong political and social trends appear to be fundamentally altering the nature of government, devolving responsibility for social welfare away from the center. If we are to comprehend the consequences of these trends, we must have better measures of well-being.

Welfare reform is but the most concrete expression of this move away from the center. In the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996, Congress changed the organization and financing of important parts of the social safety net. The act restricted the eligibility of particular groups and individuals for several means-tested programs and essentially turned over to the states responsibility for designing a new system to provide cash aid to poor families with children. Many Americans will judge the success or failure of the new law by its effect on the number of children and parents who are poor.

The existing poverty measure can give only flawed and incomplete answers to questions about the effects of the new welfare regimes. Because the measure ignores in-kind benefits in calculating family resources—especially near-cash equivalents such as food stamps—official statistics will not reflect any decline in well-being that occurs if food stamp benefits are reduced or tighter restrictions are placed on eligibility for Medicaid or Supplemental Security Income (SSI). They do not capture the benefits provided to many poor families by the Earned Income Credit (EIC). Nor will they capture noncash benefits and services that states may now provide as part of Temporary Assistance for Needy Families (TANF). Because the official measure takes no account of work-related expenses, $5,000 in wage income will be treated as equivalent to $5,000 in welfare benefits. Under the new law, moreover, the Secretary of Health and Human Services must assess the performance of the states in part by their success in reducing poverty among children. If states continue to use the traditional measure of poverty, the reliability of their information on child poverty will be open to question.

To remedy the defects in the poverty measure, the NAS panel members made three central recommendations: change the measure of income, change the poverty threshold, and change the survey used to determine the percentage and distribution of the poor.

To change the income measure from the current money income definition, they proposed to add noncash benefits and to subtract taxes and work expenses (including child care), child support paid, and medical out-of-pocket expenses.

In place of the existing poverty threshold, which is based on the cost of food multiplied by three (to account for other expenses), they proposed a new threshold based on food, clothing, shelter, and "a little bit more," and suggested new ways of estimating the poverty level for families of different size and composition, allowing also for geographic variation. They further proposed that the threshold be updated annually to keep pace, not merely with inflation, but with growth in median expenditures on basic goods (food, clothing, and shelter).

Finally they recommended that the government no longer use the March Current Population Survey (CPS) as its source of income and poverty-related data, instead drawing those data from the Survey of Income and Program Participation (SIPP).[3]

This article is based upon two unpublished reports: Gary Burtless, Tom Corbett, and Wendell Primus, "Improving the Measurement of American Poverty," Brookings Institution and IRP, 1997, and Daniel H. Weinberg and Charles T. Nelson, "Changing the Way the United States Measures Income and Poverty: A Progress Report," U.S. Bureau of the Census, 1997.

Crafting a research agenda for an alternative poverty measure

Each recommendation of the NAS panel invoked complex technical problems and policy issues. Since 1995, a research agenda to translate the panel's recommendations into reality has been developed through intensive discussions among organizations that strongly believe in the need for a more accurate measure of impoverishment. The main movers in this venture have been the Census Bureau, the Bureau of Labor Statistics (BLS), the Office of Management and Budget, IRP, and the Brookings Institution.

In its early stages at least, the research agenda is based upon two central assumptions. First, it advocates a new approach to defining poverty *for statistical purposes only*. The newly calculated poverty statistics or a newly defined poverty threshold would not be used to allocate funds or determine eligibility. For the foreseeable future, the Census Bureau will continue to calculate the poverty threshold and tabulate the number of poor families using the present official definition. Indeed, the NAS panel did not recommend a specific poverty threshold to replace the existing measure. This decision, they believed, is an inherently subjective one, with major policy implications that needed to be fully explored.

Second, the research agenda assumes that it is crucial to define a poverty measure that will yield approximately the same number of poor people for a reference year as does the current measure (the NAS panel used 1992, the latest year for which they had data). The reason for this is in large part pragmatic. How might the public, Congress, and the administration react to a new poverty measure that showed millions more (or fewer) persons than the current measure? Securing acceptance for any new definition will surely be easier if the new index is "chained" to the old. There are two ways in which this might be accomplished. First, one might define the measure so as to leave the *poverty rate* for the reference year unchanged. Second, one might choose to leave the average *poverty threshold* unchanged, while calculating poverty rates for each family type and geographic region using the NAS recommendations instead of present procedures.[4]

Whatever thresholds are chosen should be the result of a carefully specified process that cannot be changed arbi-

The official U.S. poverty measure

The official U.S. measure of poverty has a set of lines, or thresholds, that are compared with families' resources to determine whether they are poor. The thresholds differ by the number of adults and children in a family and, for some family types, by the age of the family head. The resources are families' annual before-tax money income.

The current thresholds were developed as the cost of a minimum diet times three to allow for expenditure on all other goods and services. 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, the year in which the measure was developed, was about $3,100 for a family of four (two adults and two children). Since 1965 the threshold has been adjusted annually only for inflation. Thus the 1998 threshold value of $16,450 for a family of four represents the same purchasing power as the 1963 threshold value.

IRP and the Brookings Institution Forums on Child Poverty and Well-Being

The articles on revising the poverty measure in this *Focus* are in part intended as an important resource for a series of three meetings being jointly sponsored in Washington, DC, by IRP and the Brookings Institution and supported by the Annie E. Casey Foundation. The first of these meetings was held on April 7, 1998. Moderated by IRP Director Barbara Wolfe, a panel of experts set the overall framework for measuring child well-being and poverty by providing an overview of the recommendations of the National Academy of Science for poverty measurement and a rationale for changing the current measure. David Betson (University of Notre Dame) presented his recent work focusing on simulations of poverty rates using four different versions of the poverty measure, examining the issues it raises for measuring poverty and changing the ratios among groups within the population. Dan Weinberg (U.S. Census Bureau) described ongoing work at the Census Bureau and the Bureau of Labor Statistics. Bill Hoagland (U.S. Senate Budget Committee Staff) and Katherine Wallman (OMB) provided brief commentaries and additional information that were followed by open discussion.

Forum 2, on April 24, will examine the measurement of poverty at the state and substate levels, and will review the advantages, disadvantages, and costs of some of the Census Bureau's current efforts in this area, including the Small Area Income and Poverty Estimates and the American Community Survey, described in this *Focus*. The forum will be moderated by Gary Burtless, Senior Fellow in Economic Studies at the Brookings Institution. Participants include Allan Schirm, Senior Researcher at Mathematica Policy Research, Inc., Cynthia Taeuber and Charles H. Alexander, both of the Demographic Statistical Methods Division of the U.S. Census Bureau. Tony McCann, Majority Staff Director of the House Appropriations Committee, and David McMillen, a member of the Minority Staff of the House Government Reform and Oversight Committee, will comment.

Forum 3 in the series is scheduled for May 8 and will focus on the measurement of child poverty.

trarily from year to year. Yet it should be possible to update them at reasonable intervals as economic, demographic, and social circumstances change. The NAS panel suggested that annual adjustments should be calculated to reflect changes in consumption of the basic goods and services in the poverty budget—food, clothing, and shelter—as measured by the Consumer Expenditure Survey (CEX).

This recommendation was perhaps the most controversial of the panel's suggestions. The current poverty measure is an absolute standard, intended to represent the level of resources necessary to maintain a minimal standard of living. It is updated only for changes in overall prices, using the Consumer Price Index. The panel's suggestion is an effort to introduce some deliberate relativity into the poverty measure. Over time, use of CEX data could cause the poverty thresholds to increase more than if they continue merely to be adjusted for price changes. And can we be confident that the CEX data are representative enough and high enough in quality to make the survey an appropriate arbiter of the poverty level?[5]

With the passage of PRWORA, a new set of measurement issues has come to prominence. In the years ahead, many important policy decisions regarding welfare will be made in state capitols. Trends in poverty within states are, therefore, likely to take on greater policy significance. Information about pre- and post-transfer poverty rates will be helpful to analysts attempting to understand and interpret changes in the numbers and distribution of people receiving food stamps, SSI, and TANF.

The research agenda proposes a three-part study of the development of state poverty estimates. First, analysts need to specify the rationale for and the cost of developing state-by-state estimates for important demographic groups every year or so. If the cost of such estimates proves to be prohibitive, less ambitious options should be explored—state-by-state estimates for all states with at least 3 million residents, for example (in 1997, there were 29 such states). The second part of this study should describe and explain an ongoing Census Bureau project to develop poverty estimates for small areas (see this *Focus*, pp. 53–55), analyzing the implications of applying this methodology when a new measure of poverty has been developed. Finally, the feasibility of using state administrative data to obtain reliable state-by-state poverty estimates must be explored.

Completion of the research agenda laid out here is the necessary underpinning of any effort to implement and popularize an alternative to the official poverty measure. When the crucial methodological decisions have been made and reliable numbers are available, it should be possible to answer three sets of policy questions: 1. What are the consequences for current government programs of relying on a flawed poverty measure? 2. What are the effects of using a defective poverty measure for our interpretation of the historical record? Has the United States done a better or a worse job in reducing poverty than the official statistics suggest? 3. How would adoption of an improved poverty standard affect the operations of government in the foreseeable future? What would be the consequences of the new measure, if embodied in law, for the distribution of government benefits among geographic regions and population groups?

The consequences of official poverty statistics for government operations and program administration

Official poverty statistics are used in a variety of ways to administer public programs. In some cases, public resources are divided among states or other political jurisdictions on the basis of the number of people or proportion of the local population officially classified as poor. In other cases, family eligibility for a particular public benefit may depend on whether the family's income is below the official poverty threshold or some multiple of it.[6] Have program operations been adversely affected by the defects in the current poverty measure? What have been the effects on budget allocations among different jurisdictions? Have some population groups been deprived of benefits or have others received excessive benefits under the flawed poverty measure?

An important step in answering such questions as these will be the creation of interim public-use files that will contain microdata for a large, representative sample of households for selected years, and that will be linked to one or more variants of the new poverty measure. These data will be readily accessible to a wide spectrum of users, including researchers and policy makers. Preparation of these files awaits resolution of issues that are discussed in the next article.

The effects of a flawed poverty measure on assessing progress against poverty

According to conventional wisdom, U.S. antipoverty programs have not "worked." This perception is apparently confirmed by official statistics, which show that poverty continued to rise even as public spending on the poor increased. Although the numbers of the poor are down, those who are poor have fallen further and further behind mainstream American families.

But the official statistics measure only cash household income. A picture of poverty for these decades that included other kinds of income would look somewhat different. Food stamps and other nutrition programs have improved the diet of many poor households. Medicaid has increased the access of many poor families to adequate health care. Public housing programs have subsidized decent housing for many people who would otherwise find themselves at risk of homelessness. These programs have all tempered the hardship of being poor, yet none of their contribution is reflected in the official poverty statistics.

This defect in the poverty measure might have been unimportant if cash and in-kind government benefits for poor families had risen at the same rate. In fact, the rate of growth has been very unequal. In the early 1960s more than $8 out of $10 in public means-tested benefits was transferred to poor people as cash, less than $2 as in-kind benefits. By the early 1990s, more than $7 out of $10 was transferred as in-kind benefits. Official poverty statistics, therefore, mask the full extent to which poverty has been reduced by programs to ameliorate it, because they exclude the consumption gains that result from in-kind transfers. They also exclude the effects of taxes on family well-being. These effects cut two ways. Ignoring income and payroll taxes and work expenses may overstate the living standard that low-income families can afford. But it may also understate their well-being, because such families often qualify for refundable Earned Income Credits that substantially boost their after-tax income.

A more accurate poverty measure, along with the public-use datafiles described earlier, will thus make it possible, for the first time, to lay out the consequences of the mismeasurement of poverty. Has the nation made greater progress in relieving destitution than is suggested by the official statistics? Which groups have benefitted the most? Who has been passed by? These questions have practical relevance for much of the current discussion of social welfare policy in the United States.

The effects of changing the official definition of poverty

The official poverty measure exists in two forms, poverty thresholds and poverty guidelines. The differences between them are explained in the box on p. 6. Because the poverty guidelines are used to determine eligibility or allocate resources in many different programs, changing the official measure on which they are based is likely to produce unpredictable and wide-ranging effects. For example, the NAS study panel proposed that the measure take into account work-related expenses in families where at least one person is employed. Such a change could have important implications for the allocation of federal funds between local areas where the proportions of working and nonworking families differ. Including geographic variations in housing costs might have similar far-reaching effects. Before introducing a new poverty measure for program purposes, policy makers must determine whether the resulting redistribution of resources will be more equitable, or will have unexpected and capricious effects. ■

[1]The NAS panel report is C. F. Citro and R. T. Michael, eds., *Measuring Poverty: A New Approach* (Washington, DC: National Academy Press, 1995). The report and the seminar were summarized in *Focus* 17, no. 1 (Spring 1995): 2–28. In April 1997 the General Accounting Office also issued a report on the panel recommendations, *Poverty Measurement: Issues in Revising and Updating the Official Definition*, GAO/HEHS-97-38, Washington, DC.

This is not the only way that poverty might be measured. The government might have chosen, for example, to use family expenditure data to create a measure based on consumption. Or they might have based their estimates of poverty on surveys, by asking people what it means to be poor. Both these approaches have strong constituencies in their favor, and are discussed briefly in this *Focus*, for instance, in the article by Peter Saunders, "Toward a Better Poverty Measure."

[2]Citro and Michael, eds., *Measuring Poverty*, pp. 27–31.

[3]For a brief summary and comparison of these surveys, see p. 11.

[4]Adopting this second procedure would likely produce *higher* poverty rates than the current measure. The reason is that the NAS panel's budget concept includes only basic items that every family needs (food, clothing, shelter, and a little more). Necessities that only some families have—child support payments, child care, or work expenses, for example—are treated as deductions from the income of the family. In contrast, the official budget concept includes all needs averaged over all families of a given type and size. Thus to keep the same poverty threshold with a new definition of resources is, in effect, to raise that threshold in real terms. For the 1992 data that the panel analyzed, keeping the same threshold would definitely result in a higher poverty rate under the NAS measure than under the official measure. On this issue, see the article by Short and colleagues, "Putting the Experimental Poverty Measure into Practice," in this *Focus*.

[5]BLS research using the CEX is reported in D. Johnson, S. Shipp, and T. I. Garner, "Developing Poverty Thresholds Using Expenditure Data," *Proceedings of the Government and Social Statistics Section, American Statistical Association* (Alexandria, VA: ASA, 1997), pp. 28–37.

[6]For example, the federal government now requires that states offer Medicaid to all children born after September 1983, if their family incomes are below the poverty threshold.

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Edited by Jan Blakeslee.

Poverty thresholds and poverty guidelines

Since December 1965, there have been two slightly different versions of the federal poverty measure: the poverty thresholds and the poverty guidelines.

The *poverty thresholds* are the statistical version of the poverty measure and are issued by the Census Bureau; they are used for calculating the number of persons in poverty in the United States or in states and regions.

The *poverty guidelines* are the administrative version of the poverty measure and are issued by the Department of Health and Human Services (HHS); they are a simplification of the poverty thresholds and are used in determining financial eligibility for certain federal programs.

A major reason for issuing guidelines distinct from the poverty thresholds is that the thresholds for a particular calendar year are not published in final form until late summer of the following calendar year. If poverty guidelines were not issued, HHS and other agencies would have to use two-year-old data in determining eligibility for programs during the first half of each year.

Both the poverty thresholds and the poverty guidelines are updated annually for price changes using the Consumer Price Index for All Urban Consumers (CPI-U).

The HHS poverty guidelines are used in setting eligibility criteria for a number of federal programs. Some programs actually use a percentage multiple of the guidelines, such as 125 percent, 150 percent, or 185 percent. This is not the result of a single coherent plan; instead, it stems from decisions made at different times by different congressional committees or federal agencies.

Some examples of federal programs that use the guidelines in setting their eligibility criteria are:

In HHS: Community Services Block Grant, Head Start, Low-Income Home Energy Assistance

In the Department of Agriculture: Food Stamps, Special Supplemental Nutrition for Women, Infants, and Children (WIC), Emergency Food Assistance (TEFAP), the National School Lunch and School Breakfast programs

In the Department of Energy: Weatherization Assistance

In the Department of Labor: Job Corps, some other employment and training programs under the Job Training Partnership Act

In the Legal Services Corporation: Legal services for the poor

Certain relatively recent provisions of Medicaid use the poverty guidelines; however, the rest of that program (accounting for roughly three-quarters of Medicaid eligibility determinations) does not use the guidelines.

Absent from the list of programs using the guidelines are Supplemental Security Income, the Earned Income Tax Credit program, the Social Services Block grant, the Department of Housing and Urban Development's means-tested housing assistance and, while it existed, Aid to Families with Dependent Children (AFDC), although about a dozen states linked their AFDC need standards at least nominally to the poverty guideline.

Some state and local governments have chosen to use the federal poverty guidelines in some of their own programs and activities. Examples include state health insurance programs, financial guidelines for child support enforcement, and determination of legal indigence for court purposes. Private companies such as utilities, telephone companies, and pharmaceutical companies have also adopted the guidelines in setting eligibility for their services to low-income persons.

This description is adapted from Gordon M. Fisher, "Disseminating the Administrative Version of the Federal Poverty Measure in the 1990s," paper presented June 6, 1996, at the annual meeting of the Sociological Practice Association, Arlington, VA. Gordon Fisher, a program analyst in the Office of the Assistant Secretary for Planning and Evaluation in the Department of Health and Human Services, has been responsible since 1982 for preparing the annual update of the poverty guidelines.

Definitional issues in establishing a new poverty measure

It seems fair to say that no one in the administration or in Congress now has the knowledge or capacity to impose a particular definition of poverty. Much of the groundwork for change has been laid, but some vital technical tasks remain to be completed. This article reviews some of the more difficult questions of definition. Later articles discuss perhaps the most difficult—taking account of medical needs and expenses, and valuing owner-occupied housing.

Defining income

We cannot separate the measurement of income from the definition of poverty. To define the level of resources needed in order not to be poor, we must determine what is to be counted as income, yet there is no "official" definition to offer guidance. In effect, what is included as "income" will depend upon the questions asked. In 1947, when the Census Bureau first began tracking income, it asked two simple questions: "How much did you earn in wages and salaries in this year?" and "How much income from all sources did you receive in this year?" Today, the Census Bureau reports income data using 15 different definitions, encompassing about 20 possible sources of income. These different definitions serve different purposes. "Money income" represents command over the resources to purchase the necessities of life in the open market and to meet obligations of citizenship, such as taxes. Other definitions attempt to approximate the resources that would be available to people if government did not intervene, or to take into account taxes and private transfers, public transfers (cash or in-kind), and relative intangibles such as the value of owning one's own home versus renting.

There are three central measurement issues in defining income: valuing and counting noncash income, subtracting taxes, and reducing survey underreporting and sampling errors. A linked question is whether to continue to base official estimates on the Current Population Survey (CPS) or to switch to a newer survey designed to collect better income information, the Survey of Income and Program Participation (SIPP).

Noncash income

A comprehensive income measure would place a value on in-kind government transfers, such as food stamps, which typically go to low-income families. It would also value nonwage compensation, such as employer-paid health insurance or company cars, that may go to earners at all income levels. In the past quarter-century, the growth of government benefits to the poor has been paralleled by growth in the noncash income of all U.S. families, in part because of tax laws exempting nonwage compensation, such as health insurance, from income and payroll taxes.

Disposable income

For the official measure, poverty has always been calculated using pretax income because of the limited information collected by the CPS. In the 1960s, this was less important than it is now, because the poor were virtually exempted from federal income taxation, and very few states taxed low-income families. The only tax most of the poor paid on their income was the Social Security payroll tax, at approximately 3 percent of earnings. Today, the poor are subject to considerably higher federal and state taxes.[1] After-tax income, therefore, is clearly a better measure of their ability to meet the daily necessities of life. Also important in calculating disposable income is the cost of work, especially transportation, child care, and clothing. The Census Bureau and the Urban Institute have already developed procedures for imputing income and payroll tax liabilities, but analysts still need to generate good estimates of child care and other work-related costs and decide how these expenses can be obtained or imputed for households interviewed in the CPS and the SIPP.

Correcting the income estimates

Research matching household survey responses with federal income tax returns and national income accounts has shown that income from some sources—though not wages and salaries—tends to be underreported. For example, up to 30 percent of the benefits from means-tested programs is not reported in Census Bureau surveys. Efforts to correct for such underreporting have been only partially successful. Also poorly reported are investment income and "underground," "nonmarket," or "black market" income from legal and illegal activities. Researchers

This article is based upon three unpublished reports: Gary Burtless, Tom Corbett, and Wendell Primus, "Improving the Measurement of American Poverty," Brookings Institution and IRP, 1997; Daniel H. Weinberg and Charles T. Nelson, "Changing the Way the United States Measures Income and Poverty: A Progress Report," U.S. Bureau of the Census, 1997; and David M. Betson, "'Is Everything Relative?' The Role of Equivalence Scales in Poverty Measurement," 1996.

The U.S. Bureau of the Census maintains a World Wide Web site where technical papers pertaining to experimental poverty measures are posted in full. They are to be found in the Poverty section, at <http://www.census.gov/ftp/pub/hhes/www/poverty.html>.

are so far from measuring underground income accurately that including it in official statistics would be quite difficult.[2]

Which survey to use?

The panel of the National Academy of Sciences (NAS) studying the poverty measure recommended that the new poverty threshold be based upon data from the SIPP, which obtains very much more complete income reporting than the CPS.

Compared to the CPS, the SIPP has had several drawbacks.

In the first place, the SIPP design consists of one four-year longitudinal panel followed by another; there is no overlap between them. It therefore faces problems of bias, due to sample attrition, that cannot be consistently corrected with current methods.[3] The CPS sample, in contrast, is constantly refreshed with new families, making it better suited for generating a consistent time series of annual national income or poverty estimates.

Second, the SIPP sample was only one-third the size of the CPS, and data were released more slowly because of the much greater complexity of the survey. The version of the SIPP implemented in 1996 has, however, a substantially greater sample and it oversamples low-income households. Its national estimates may well now be more accurate than those of the CPS, which has shrunk to 48,000 households and is inefficient for national estimates because it uses a state-based design.[4]

In effect, the two surveys may prove to be complementary. If microsimulation modeling using administrative records can be developed to correct for underreporting in both surveys, they would then give the same aggregate statistics. The CPS could be used for a quick snapshot, consistent with data collected since 1947. The SIPP could be used for more detailed estimates, for subannual and multiyear estimates, and for understanding many other dimensions of poverty.

Setting thresholds to define poverty

It is quite possible to determine what is absolutely necessary for survival in terms of food, clothing, and shelter. But even the most apparently "absolute" measure of poverty is in fact relative. The "minimum" diet on which the official poverty measure is based was a minimum diet *for the United States in the 1950s.* There really is no "scientific" way to decide which set of thresholds is appropriate for determining who is poor in a particular society, especially in the developed world; that is essentially an ethical and political decision.[5] Social science can, however, specify which thresholds are consistent with our general knowledge of the economic status of households in that society and, by establishing that particular thresholds are both reasonable and equitable, can confer legitimacy upon them.

The NAS panel proposed setting poverty thresholds by first selecting a level of need for a reference family unit and then using a set of equivalence scales to create thresholds for other family types. These recommendations immediately evoke complex technical issues. How do we establish a family's needs, including minimum levels of consumption for specific commodities? What family type constitutes a "suitable" reference family? How do we establish equitable equivalence scales to correct for differences in family size and composition? How should we correct for cost-of-living differences across time and geographic areas?

Minimum consumption levels

In theory, an expert panel might establish minimum consumption standards for all necessary commodities, but any attempt to do so would immediately enter a minefield of subjective decision making about the commodities to include as "necessary."[6] And although a household's resources may be objectively estimated, the same cannot be said of its needs. David Betson observes: "At what point in the continuum of household consumption does a household move from 'not having enough' to 'having enough?'"[7]

A more feasible approach, taken by the NAS panel, is to define minimal consumption standards for a limited number of essentials upon which all can fairly readily agree—food, clothing, and shelter—and to obtain a poverty threshold by using a small multiplier to account for other unmeasured (and unspecified) necessities. The panel did not recommend a single number; instead, it set a lower bound based on 78 percent of median expenditures for food, clothing, and shelter, with a multiplier of 1.15, and an upper bound at 83 percent of the median with a multiplier of 1.25 (the multiplier is the "little bit more" often mentioned).

Researchers from the Census Bureau and the Bureau of Labor Statistics (BLS) have explored this approach using actual expenditures of a two-parent, two-child family from the Consumer Expenditure Survey (CEX, described on p. 11). Their findings, which, for the first time, make use of the SIPP, are reported elsewhere in this *Focus*.

Choosing a reference family and adjusting for family size and composition

In principle, any family type could be chosen as the reference family. The single individual may seem to be the simplest, and is indeed used in some countries. The Organization for Economic Cooperation and Development, for example, begins by setting a value of one on a single individual and adding 0.70 for each additional adult and 0.50 for each child in the unit. The Low-

Income Thresholds used in Canada also set a value of one on a single individual, but add 0.40 for the second individual (adult or child) and 0.30 for each additional family member thereafter. These easily understandable scales are not thereby more reasonable. Expert efforts in this country to estimate scales, using different criteria, have also varied greatly. For example, estimates for the cost of adding one extra adult to a single-person household with an elderly head range from 23 percent to 83 percent, depending on the basis of the calculation.[8]

The NAS panel recommended that a family of four be used, on the ground that choosing a family unit more central to the distribution of family types would reduce the sensitivity of the thresholds to the choice of equivalence scales.

The equivalence scales incorporated into the official poverty thresholds are based solely on relative food costs as they existed nearly four decades ago. They are open to considerable question. The equivalence scale between two-adult and one-adult families, for example, incorporates higher economies of scale than can be considered reasonable, and the scales understate spending on children relative to adults, to judge by other data on the cost of raising children.[9]

Establishing the bases for new equivalence scales involves many judgment calls. How, for example, should we estimate the needs and resources of a family consisting of two adults and one child under 5, versus those of a single-parent family with two teenaged children? Common sense tells us that their needs and resources are likely to be very different. How should the scales account for differences in family circumstances—the needs of families owning a house versus those of renters, for instance? Which is the more useful basis for determining poverty: the household (those living in a housing unit) or the family (those in one household related by blood or marriage)? How should cohabiting couples be weighted, compared with married couples?

The choice both of reference family and of equivalence scales has clear consequences for the overall count of who is poor and for the composition of the poverty population. Examining six differently constructed scales, David Betson found that three of them led to an increase in the number of the poor, three to a reduction. The elderly population was particularly sensitive to the choice of equivalence scale. For example, five of the experimental equivalence scales lowered the poverty thresholds for elderly single individuals, but all six created higher thresholds for elderly couples—resulting in increases ranging from 25 to 49 percent in the incidence of poverty among such couples.[10]

Cost of living differences over space and time

In a country as large and diverse as the United States, there are significant local differences in the cost of living. Alaska and Hawaii, for example, have very much higher living costs than the 48 contiguous states. At present, no officially published statistics permit comparison of prices across geographic areas. The NAS panel developed an interarea price index only for shelter, basing it on methods used by the Department of Housing and Urban Development for administering rental housing subsidies. BLS researchers have produced some experimental indices of prices, based on monthly Consumer Price Index (CPI) data for 1988–89, that comprise about 85 percent of consumer spending, but this research is still in progress.[11]

To update poverty thresholds over time, the NAS panel proposed using a three-year moving average of actual consumption of the basic goods and services contained in the poverty budget, using CEX data. But the information on actual consumption needed to calculate a poverty-line level of consumption in each broad category of basic goods and services may not be available on a timely basis. It will be necessary, therefore, to develop methods of updating the thresholds that are both practical and consistent with the approach recommended by the NAS panel. One reasonable compromise might be to respecify and re-estimate the minimum-consumption list of basic goods at regularly scheduled intervals, say every ten years, and to use the CPI for interim adjustments.[12]

The table that begins on p. 12 lists federal government research projects that address the technical problems of introducing a new poverty measure. Two issues are still largely unresolved, both conceptually and practically. These are the treatment of medical out-of-pocket costs, and the valuation of owner-occupied housing. ■

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[1]C. F. Citro and R. T. Michael, eds., *Measuring Poverty: A New Approach* (Washington, DC: National Academy Press, 1995), p. 29.

[2]It has been suggested that consumption is a better measure of well-being than income, but the collection of accurate consumption or expenditure data presents many difficulties. See, for example, the article by Peter Saunders, "Toward a Better Poverty Measure," in this *Focus*.

[3]Both the CPS and the SIPP are described on p. 11.

[4]Estimates using both CPS and SIPP are presented in the article by Short and colleagues, "Putting the Experimental Poverty Measure into Practice," in this *Focus*.

[5]This may not be true in developing societies or societies in transition and chaos, where an argument can be made for using anthropometric measures of children's growth to assess the well-being of the population: if the children show signs of stunting and wasting, one can make direct inferences about the welfare of the society as a whole. See, for example, S. Ismail and J. Micklewright, *Living Standards and Public Policy in Central Asia: What Can Be Learned from Child Anthropometry?* Innocenti Occasional Papers, EPS 62 (Florence: UNICEF, 1997).

[6]Is a telephone, for example, a necessity? Under the conditions of American society today, the lack of a telephone is a serious obstacle to those who are looking for a job.

[7]D. M. Betson, "'Is Everything Relative?' The Role of Equivalence Scales in Poverty Measurement," unpublished paper, 1996.

Child Poverty and Deprivation in the Industrialized Countries, 1945–1995

Edited by Giovanni Andrea Cornia and Sheldon Danziger

From the Introduction

The living standards and social well-being of children throughout the industrialized world improved remarkably between the end of World War II and the early 1990s. For instance, infant mortality declined over the past fifty years at a dramatically faster pace than during the interwar period, thus saving millions of children's lives. However, child welfare is now at a turning-point, most clearly in Eastern Europe but also—more subtly—in the West. . . . Uncertainties about the future of welfare state programmes that have helped protect children and families from the vicissitudes of the economy in the post-war period raise concerns that the beginning of the twenty-first century may represent an era of retrogression and inequality.

The chapters in this volume carefully review trends in the economy, public policies, and the family in advanced industrial countries—the market economies of the West and the formerly centrally planned, but now transitional, economies of the East. Each chapter analyses how these trends have interacted to affect child poverty, child health, and child well-being.

About the editors

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"Definitional Issues," notes continued

[8]Betson, "'Is Everything Relative?'" pp. 23–24.

[9]Betson, "'Is Everything Relative?'" p. 11.

[10]Betson, "'Is Everything Relative?'"

[11]The BLS publishes the CPI and a series of average prices for selected commodities separately for 44 geographic areas in addition to the average national index. These indices can show different rates of change in prices across areas, but do not permit interarea comparisons. For instance, the December 1988 CPI for food-at-home in Chicago was 121.4, while that in Baltimore was 121.9. This shows that such costs had risen faster in Baltimore than in Chicago, but provides no information about whether price levels were relatively higher in Baltimore either in the base period (1982/84 = 100) or in 1988. Moreover, the CPI samples are rather restricted in size, and products may vary somewhat from region to region. A preliminary report of the BLS experiments in interarea price comparisons is M. Kokoski, P. Cardiff, and B. Moulton, "Interarea Price Indices for Consumer Goods and Services: An Hedonic Approach Using CPI Data," Working Paper 256, Bureau of Labor Statistics, July 1994; see also D. Johnson, S. Shipp, and T. I. Garner, "Developing Poverty Thresholds Using Expenditure Data," *Proceedings of the Government and Social Statistics Section, American Statistical Association* (Alexandria, VA: ASA, 1997), pp. 28–37.

[12]The market basket used for the CPI is itself reviewed and respecified once every ten years or so.

The CEX, CPS, and SIPP surveys

The Consumer Expenditure Survey (CEX)

This is a continuing survey of households that primarily collects data on consumer expenditures through a quarterly Interview Survey and a 2-week Diary Survey about the U.S. civilian noninstitutionalized population, including military in civilian housing, students in college housing, and group homes. The CEX is sponsored by the Bureau of Labor Statistics (BLS) and conducted by the Bureau of the Census. The Interview Survey sample size is 6,800 "consumer units" interviewed in person at 3-month intervals for 5 quarters; each month, one-fifth of the sample is new, and one-fifth is completing its final interview. The Diary Survey sample is an additional 6,000 consumer units, each of which records daily expenditures for 2 consecutive weeks. "Consumer units" are defined as a single person living alone or sharing a household with others but financially independent; family members sharing a household; two or more persons living together who share responsibility for two of three major expenses—food, housing, and other expenses.

The CEX Interview Survey includes data on demographic characteristics, work experience, and job characteristics in the previous 12 months, for unit members aged 14 and over. Detailed expenditure data are collected quarterly on rent, housing assistance subsidies, mortgage and home equity loan payments, and other home ownership and maintenance costs, including utility expenses; purchases of major household items, clothing and accessories; transportation and automobile costs; insurance premiums and health care costs and benefits (e.g., from Medicare and Medicaid); educational expenses; trips; and gifts. Global or usual expenditures are obtained for cultural and leisure activities; expenses for food and food stamps or other food-related benefits; and a range of miscellaneous expenses, such as work-related expenses and contributions (including alimony, child support, and charitable contributions). Very complete asset, income, and tax data are obtained.

The Current Population Survey (CPS)

This is a monthly survey of households that collects primarily labor force data about the U.S. civilian noninstitutionalized population. BLS sponsors the core of the CPS, which is designed to provide monthly unemployment rates. The Bureau of the Census sponsors the March Income Supplement to the CPS, in which respondents are asked supplementary questions about money income received in the previous calendar year. The CPS sample size was about 60,000 households (now 48,000); households are considered in the sample for 4 months, out of the sample for 8 months, and in again for 4 months. The sample is updated continually to account for new residential construction and periodically to incorporate information from the decennial census. The March CPS supplement includes military people living in civilian housing and an additional sample of 2,500 housing units with residents of Hispanic origin.

The core CPS interview elicits information on demographic characteristics and labor force participation (such as hours worked, reason for part-time work, industry, and occupation in which subjects worked in the prior week, usual hours, and usual earnings). The March CPS supplement includes information on labor force participation and job history in the prior calendar year for each household member aged 15 or older; private and public health insurance coverage; annual income for each household member aged 15 or older by detailed source, earned and unearned, private and governmental; and participation in noncash benefit programs, such as energy assistance and food stamps.

The Survey of Income and Program Participation (SIPP)

This is a continuing panel survey conducted and sponsored by the Bureau of the Census. The sample covers the U.S. civilian noninstitutionalized population and members of the armed forces living off post or with their families on post. The reporting unit is the household. Until 1996, each person in the original sample of households (panel) was interviewed every 4 months for 28, 32, or 36 months, and the sample size varied from 12,500 to 23,500 households per panel; new panels were introduced every year from 1984 through 1993. Under the SIPP's current design, implemented in 1996, a new panel will be introduced every 4 years (that is, with no overlap across panels); panel members will be interviewed every 4 months for 48 months, and the panel size will be increased to 36,700 households. Because of concerns with unexpectedly high attrition in the 1996 panel, the Census Bureau is considering making future panels 36 months in length, beginning every 3 years. Beginning in June 1999, it has been proposed in the President's FY 1999 budget request to supplement each large SIPP panel with additional three-year overlapping panels of 11,500 households to improve the measurement of poverty.

The current SIPP core interview elicits the following: demographic characteristics; monthly information on labor force participation, job characteristics, and earnings, on public and private health insurance coverage, on sources and amounts of income from public and private transfer payments, and on noncash benefits; and information for the 4-month period on income from assets. In total, about 65 separate sources of cash income, and benefits from 7 in-kind programs, are identified for each household member aged 15 or over; for a few sources, annual amounts are obtained in special interview supplements called "topical modules." Data are also collected, once or twice in each panel, on a wide range of subjects, including annual income and income taxes; educational financing and enrollment; eligibility for selected government programs; housing costs and financing; and assets.

Adapted from *Poverty Measurement: Issues in Revising and Updating the Official Definition*, GAO Report HEHS-97-38, Washington, DC, April 1997, pp. 33–35, which is a summary of the description of the three surveys in C. F. Citro and R. T. Michael, eds., *Measuring Poverty: A New Approach* (Washington, DC: National Academy Press, 1995), pp. 391–420.

Research in Federal Agencies Related to the Measurement of Income and Poverty

Project Title	Agency/ NGO[a]	Researchers; Contact	Data Set[b]	Time Period	Issue[c]	Description of Research: Objective, Methods, Results	Status/Resources Needed[d]
Poverty Measurement Research Using Consumer Expenditure and SIPP Data	Census/BLS	Kathleen Short Martina Shea David Johnson Thesia Garner	SIPP CPS CE	1991 1991-96 1991-96	Th, MI, D, EQ	Continuing research that builds on the previous BLS/Census joint project and the recommendations of the NAS Panel to use SIPP and CE data in measuring resources/income.	Presented at 1998 AEA meetings
Experimental Poverty Measurement in the 1990's	BLS/Census	Thesia Garner Geoffrey Paulin Stephanie Shipp Kathleen Short Charles Nelson	CE CPS	1990-95	Th, MI, MI_B, S, Ti	Replicates method in NAS report using recent data and new methods of imputation. Produces thresholds using alternative methods.	Forthcoming MLR March 1998 www
The Development and History of the U.S. Poverty Thresholds—A Brief Overview	HHS	Gordon Fisher	Historical papers	1960-92	Ti, Th, V	Provides a detailed account of how the poverty thresholds were developed and their subsequent history, including changes made in them and changes recommended but not made.	Paper 1992; Summary 1997
From Hunter to Orshansky: An Overview of (Unofficial) Poverty Lines in the United States from 1904 to 1965	HHS	Gordon Fisher	Historical papers	1870-1965	Ti, Th	Provides an account of over 40 poverty/low-income lines and minimum subsistence budgets during this period, with some discussion of budgets at higher levels; successive poverty lines and subsistence budgets rose in real terms over time as the real income of the general population increased.	Paper and summary 1993
Developing Poverty Thresholds Using Expenditure Data	BLS	David Johnson Stephanie Shipp Thesia Garner	CE CPS	1990-95	Th, EQ, Ti, G, MI_H	Calculates alternative thresholds using methods recommended in NAS report and finds similar thresholds, examines the imputed value of homeownership, the method of updating the thresholds over time, the method of adjusting for geographic differences in the cost-of-living, and the impact of different equivalence scales. Poverty rates using CPS money income.	Presented at 1997 ASA meetings www
Changing the Way the United States Measures Income and Poverty: A Progress Report	Census	Dan Weinberg Charles Nelson	SIPP CPS	1990-95	MI	This is a summary of the issues and current research and is geared toward an international audience.	Draft completed www
Census Bureau Poverty Redefinition Research	Census	Charles Nelson Kathleen Short	CPS SIPP	1990-95	MI,D, V,S, Ti	Summarizes Census Bureau research efforts on issues relating to redefining poverty in the U.S.	Presented at 1997 ASA meetings www
Shifting Family Definitions: The Effect of Cohabitation on Measures of Poverty	Census/HHS	Kurt Bauman	SIPP	1990-92	U, MI	Examines how the measurement of poverty is affected by the rise in cohabitation and explores issues related to cohabitation and poverty.	IRP small grants conference draft www
Valuing Housing Subsidies in a New Measure of Poverty: SIPP	Census	Martina Shea Mary Naifeh Kathleen Short	SIPP AHS	1991	MI_S	Evaluates effect of using new housing subsidy model with SIPP data.	Presented at 1997 ASA meetings www

Valuing Housing Subsidies in a New Measure of Poverty: CPS	Census	Mary Naifeh T.J. Eller	CPS AHS	1995	MI_S	Evaluates effect of using new housing subsidy model with CPS data.	Presented at 1997 ASA meetings www
Poor Old Folks: Have Our Methods of Poverty Measurement Blinded Us to Who Is Poor?	HHS/Notre Dame	David Betson	CPS	1992	EQ	Describes the medical out-of-pocket (MOOP) imputation in the NAS report.	Draft completed www
Alternative Sources of Information on Out-of-Pocket Medical Expenditures	Census	Pat Doyle Meg Johantgen			HC	Lays out a short-term and long-term approach to the problem of integrating information on MOOP expenses with information on income and other aspects of poverty measurement.	Complete for the 1996 ARC www
How Can We Deduct Something We Do Not Collect? The Case of Out-of-Pocket Medical (MOOP) Expenditures	Census	Pat Doyle	NMES	1992	HC	Tests alternative methods of imputing MOOP costs to surveys like CPS and SIPP and evaluates the impact of each on alternative measures of poverty, the poverty gap, and characteristics of the poverty population.	Presented at 1997 ASA meetings www
Work Related Expenditures in a New Measure of Poverty	Census	Kathleen Short Martina Shea T. J. Eller	CPS SIPP	1987 1991 1992	WC	Evaluates effect of different valuation methods for work-related and child care expenses on poverty estimates.	Presented at 1996 ASA meetings www
The Two-Parameter Equivalence Scale and Inequality Between and Within Households	BLS	David Johnson	CE CPS	1980 1994	EQ, U	Estimates the two-parameter scale using expenditure data and fits the two-parameter scale to other current scales. Illustrates that inequality and poverty measures are sensitive to the parameters.	Draft completed
Family Unit Incomes of the Elderly and Children, 1994	SSA	Daniel Radner	CPS	1994	EQ, MI	Shows that the definition of income and the choice of equivalence scales change the poverty rates of the elderly and children.	Draft compl eted
Is Everything Relative: The Role of Equivalence Scales in Poverty Measurement	HHS/Notre Dame	David Betson	CPS	1992	EQ, U	Provides suggestions on what are reasonable equivalence scales and examines the effect of the choice of equivalence scale on poverty rates and the composition of the poor.	Draft completed www
Effect of Home Ownership on Poverty Measurement	HHS/Notre Dame	David Betson	CE CPS	1988-89 1992	MI_H	Proposes a method for estimating value of home ownership in determining whether or not a household would be counted as poor.	Draft completed www
Poverty Measurement: Adjusting for Geographic Cost-of-Living Differences	GAO	Kathleen Scholl	None	1994-95	G	Experts' advice on cost-of-living adjustments and geographic differences in poverty thresholds.	GAO report GAO/GGD-95-64 March 1995
Who's at Risk? Designing a Medical Care Risk Index	Census/HHS	Pat Doyle Ted Anagnoson	NMES	1987 1994	MI_B, HC, MCRI, U	Refines the concept of a Medical Care Risk Index (MCRI), develops a proposal to implement the proposed MCRI, and tests alternative implementation strategies. The project outcomes include valuation of health insurance plans as well as a determination of the adequacy of insurance plans held at a particular point in time.	Report complete www

(table continues)

Project Title	Agency/ NGO[a]	Researchers; Contact	Data Set[b]	Time Period	Issue[c]	Description of Research: Objective, Methods, Results	Status/Resources Needed[d]
Poverty Measurement: Issues in Revising and Updating the Official Definition	GAO	Stephanie Shipman	None	1995-97	Th, MI, Ti	Describes expert opinion about family's economic resources, a minimally adequate standard of living, and updating thresholds.	GAO report GAO/HEHS-97-38; April 1997
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	HHS	Gordon Fisher	Historical papers	1789-1993	Ti, Th	Assembles an extensive body of evidence from the U.S., Britain, Canada, and Australia showing that successive poverty lines developed as absolute poverty lines rise in real terms as the real income of the general population rises; the U.S. evidence includes expert-devised minimum budgets prepared over six decades, "subjective" low-income figures in the form of national responses to a Gallup Poll question over four decades, and the recorded common knowledge of experts on poverty lines and family budgets from about 1900 to 1970; explains the social processes underlying this quantitative phenomenon.	Paper and summaries – 1995, 1996
Updating the Poverty Thresholds	OMB	Richard Bavier	CE	1972-73 to 1994	Th, Ti	Examines proposals for threshold levels and updating methods in connection with changes in expenditures on basics and consumer price index corrections.	www
Measuring the Trends in Inequality of Individuals and Families: Income and Consumption	BLS/Syracuse U	David Johnson Tim Smeeding	CE CPS	1980-95	C,MI,U	Compares inequality using income and consumption. Shows that both have increased since 1980.	Completed
Alternative Poverty Measures	GAO	Kathleen Scholl	None	1947-89	C, EQ	Evaluates a consumption-based measure of poverty proposed by Daniel Slesnick.	GAO report GAO/GGD-96-183R; Sept 1996
Data Comparability Project	BLS	Bill Passero Thesia Garner	CE CPS SCF SIPP	1996	D, MI, U, I	Compares surveys based on sponsorship, timing, coverage, and other methodological factors. Focus is on comparable economic data and core questions related to socioeconomic variables.	In progress; matrix completed as of December 1996
Evaluating the Quality of Income Data Collected in the Annual Supplement to the March CPS and the SIPP	Census	John Coder Lydia Scoon-Rogers	CPS SIPP		I, MI	Describes differences in income measurement between the CPS and the SIPP.	SIPP working paper 215
Small Area Income and Poverty Estimates	Census	Paul Siegel	CPS Census Administrative records	1979, 89, 93, 95, 97	St	Model-based post-censal estimates of the number (and percent) of persons in poverty (all persons of all ages, all persons under age 18, related persons ages 5 to 17 years) and median household income for states and counties. Post-censal estimates of numbers of related persons ages 5-17 in families in poverty for school districts for school years 1995-96, 1997-98, and beyond.	1993 estimates released www

Constructing Household Specific Consumer Price Indices	BLS	Rob Cage Thesia Garner Javier Ruiz-Castillo	CE CPI	1980-81 1986-87 1990-91	Th, G, Ti, St	Constructs household-specific consumer price indexes for consumer units using CPI and CE data. Data from Diary allocated to Interview consumer units to produce 207-item bundle based index. Indices for rural areas imputed. Will examine differences in indices across different socio-demographic groups over time.	Presented at NBER Summer Workshop 1997; revision in progress
The Influence of Demographics and Household-Specific Consumer Price Indices on Expenditure Based Inequality and Welfare: A Comparison of Spain and the U.S.	BLS	Thesia Garner Javier Ruiz-Castillo Mercedes Sastre Garcia	CE CPI	1980-81 1986-87 1990-91	EQ, C	Examines the influences of household size and household-specific price indices on the distribution of expenditures over time.	Statistics Institute 1997; SEA meetings 1997
Interarea Price Indices	BLS	Mary Kokoski Brent Moulton Pat Cardiff	CE CPI	1988/89	G, Ti	Continuing research on interarea price indices for consumer goods and services: A hedonic approach using CPI data. Constructs interarea price indices for shelter, utilities, food, apparel, medical care, and private transportation for 44 areas.	BLS Working Paper 256
An Experimental Consumer Price Index for the Poor	BLS	Thesia Garner David Johnson Mary Kokoski	CE CPI	1982-84 1992-94	Ti	Experimental price indexes calculated for poor consumers show that there are minimal differences between these indexes and the index for the general population.	Paper published in MLR
Subjective Assessments of Economic Well-Being	BLS Census	Thesia Garner Linda Stinson Stephanie Shipp Kathleen Short Robert Kominski	CE SIPP Cognitive lab tests	1982 1996 1997	MI, EQ, C, Th	Part 1: Conduct cognitive work to better understand the responses obtained (especially as related to what is "necessary" for income and expenditures), and to make suggestions concerning possible better question wording. This may provide insight about what might be included in a basic bundle. Part 2: Examine 1996 SIPP data regarding minimum income and related questions. Part 3: Compare 1982 CE data (examined in earlier published paper) with 1996 SIPP data on the minimum income question.	CE-SIPP comparison began autumn 1997. Cognitive work completed; report available from Stinson
Who's Poor Now? Assessing the Impact by Citizenship of New Poverty Measures Recommended by a NRC Panel	NICHD	Rose Maria Li Amy Cox	CPS	1994	MI, U, S	Shows how the poverty profile of native-born, naturalized, and non-citizens changes if the NRC proposal is used to measure poverty. The poverty rate of naturalized citizens increases the most.	Paper presented at PAA meetings

[a]BLS: Bureau of Labor Statistics; HHS: Department of Health and Human Services; SSA: Social Security Administration; GAO: General Accounting Office; OMB: Office of Management and Budget; NICHD: National Institute of Child Health and Human Development. AEA: American Economic Association; ARC: Annual Research Conference of the U.S. Census Bureau; ASA: American Statistical Association; MLR: *Monthly Labor Review*; PAA: Population Association of America; SEA: Southern Economics Association.

[b]SIPP: Survey of Income and Program Participation; CPS: Current Population Survey; CE: Consumer Expenditure Survey; NMES: National Medical Expenditure Survey; AHS: American Housing Survey; SCF: Survey of Consumer Finances.

[c]MI: General measurement of income; MI_B: Measurement of health benefits; MI_H: Measuring the value of homeownership; MI_S: Measuring the value of housing subsidies; EQ: Equivalence scale; C: Using consumption; D: Choice of survey; Th: General threshold measurement; V: General valuation of in-kind benefits; S: General measurement of subtractions from income; WC: Measuring work expenses and child care; HC: Measuring the cost of health care; TX: Measuring the level of taxes; I: Income under-reporting; G: Geographic and cost-of-living adjustments; Ti: Adjusting threshold over time; St: State and small area estimates; U: Unit of analysis.

[d]www = available on Census poverty measurement web site at www.census.gov.

Putting the experimental poverty measure into practice

Kathleen Short, Martina Shea, David Johnson, and Thesia I. Garner

Kathleen Short and Martina Shea are in the Housing and Household Economic Statistics Division of the Census Bureau; David Johnson and Thesia I. Garner are in the Division of Price and Index Number Research, Bureau of Labor Statistics.[1]

In offering a set of recommendations for changing how the U.S. government measures poverty, the study panel convened by the National Academy of Sciences (NAS) followed three ground rules, namely that any new measure must be statistically defensible, broadly acceptable and understandable, and operationally feasible.[2] Without advocating a specific threshold, panel members laid out a methodology and a series of procedural steps that they believed were within these ground rules. In place of the old thresholds, based on 1950s information on food consumption patterns and updated only for changes in the rate of inflation, they argued for a new set of thresholds. These thresholds should be based on the expenditures made by consumer units for basic items of consumption. These they defined as food, clothing, and shelter (including utilities) from the Consumer Expenditure Survey (CEX), plus "a little bit more" for other expenses, adjusted for geographic area and family composition and regularly reviewed and updated. Instead of defining family resources as before-tax cash income, they recommended a definition that included cash and near-cash sources. Panel members also recommended changing the data set used in constructing the poverty measure. As the main source of data, they proposed the Survey of Income and Program Participation (SIPP) instead of the March Current Population Survey (CPS).

The NAS panel recognized that its recommendations for major changes in an important statistical measure would require extensive testing, while keeping the existing measures in place.[3] How exactly might these recommendations be put into practice? What would be the potential consequences for counting the poor and for policy? Would the changes have consequences unanticipated by the panel, especially over longer periods of time?

Such testing began almost immediately after the panel's report appeared. In this article we present estimates from several working models of the new poverty measure.[4] We constructed experimental poverty thresholds using CEX data for 1989–91 and estimated family resources using data from the 1991 panel of the SIPP and the March 1992 CPS. We compared the resulting poverty rates with those based on the official measure. To examine the behavior of the experimental poverty measure over time, we present other estimates for 1991–96. These estimates are solely based on the CPS, which offers more recent data than the SIPP. The NAS panel had used the CPS only in examining the experimental poverty measure. The estimates we present here are the first to use the panel's recommended survey, the SIPP.

Steps in defining the thresholds

1. As the NAS panel recommended, we selected, as the reference family unit, a consumer unit consisting of two adults, married or unmarried, and two children.[5]

2. We used CEX data for 1989 through 1996 to establish median expenditures for food, clothing, shelter, and utilities (FCSU) for the reference unit. Our procedures then broadly followed the recommendations of the NAS panel. The thresholds are determined by using percentages of median expenditures that reflect the 30th and 35th percentiles of the distribution of FCSU expenditures. These percentiles translate to 78 and 83 percent of the median. The panel concluded in their study that these percentiles seem to represent a "reasonable range" for the FCSU component of the reference family's threshold. For other expenses we used the multiplier range suggested by the panel (1.15 and 1.25).[6]

We also made adjustments to reflect geographic differences in costs. Following the panel, we used interarea housing cost indexes, calculated from 1990 census data on gross rents for certain types of apartments and adjusted for the share of housing in the proposed poverty budget (the panel set this share at 44 percent). Geographic variation is substantial. We found that the threshold for a two-adult, two-child family in a large metropolitan area is 27 percent higher than the national average, whereas for a similar family living, say, in rural Arkansas or Oklahoma it is 15 percent lower than the national average.

3. Based on our reference family, we calculated thresholds for families of different types, taking into account both the differing needs of children and adults and the economies of scale that come from living in a larger household.[7] Using this procedure, the threshold for a single individual is about 45 percent of the threshold for the two-adult, two-child reference unit.

4. The NAS panel members recommended that the thresholds be updated each year with more recent expenditure data, a procedure that would automatically, over

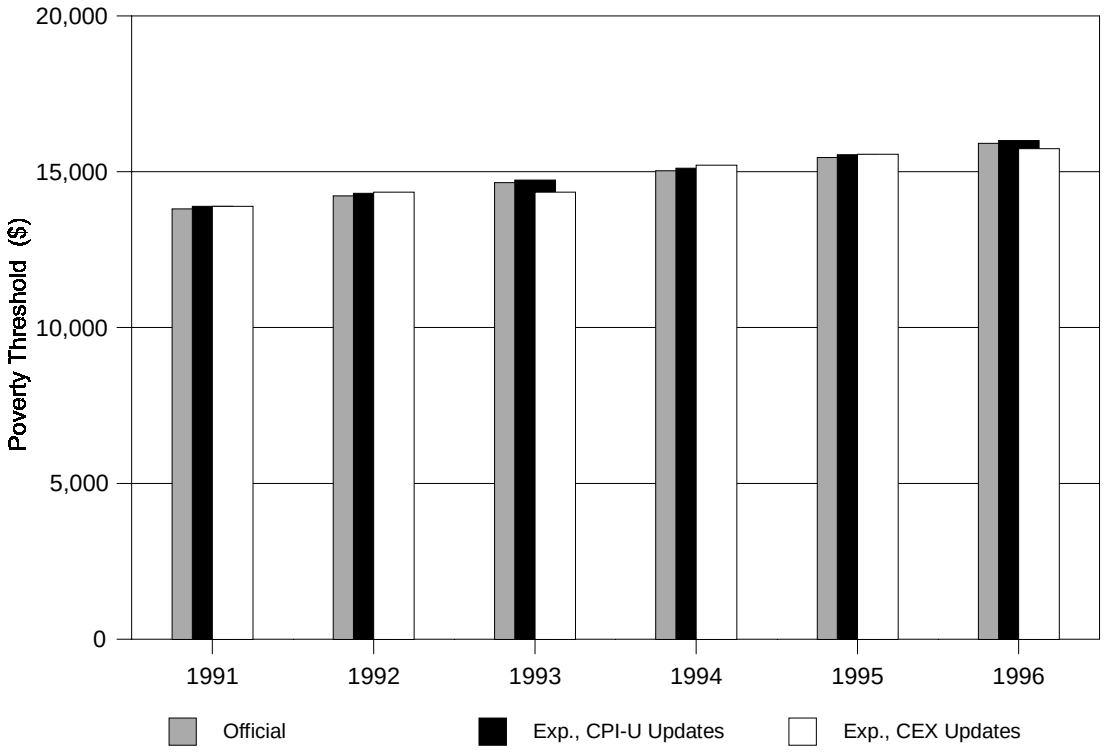

Figure 1. Poverty thresholds for two adults and two children, 1991–1996. Official U.S. Census Bureau poverty thresholds and experimental thresholds, updated by price changes in the CPI-U and by changes in median expenditures for necessities from the Consumer Expenditure Survey, respectively.

time, reflect real changes in the expenditures for basic goods and services. As an alternative, they suggested updating for price changes only, although this would not capture changes in levels of living. We used the second procedure, with 1991 as the base year.

Following the steps outlined above, we created two sets of experimental thresholds for the years 1991 to 1996, updating one by annual price changes in the Consumer Price Index for All Urban Consumers (CPI-U), the other by the rise in median expenditures for the basic necessities from the CEX (see Figure 1). The NAS panel expected that using median expenditures would give a greater increase in poverty than if the inflation rate were used. We found, however, that the thresholds using median expenditures increased by only 13.3 percent between 1991 and 1996, whereas the CPI-based thresholds rose 15.2 percent. But when we compared median expenditures and the CPI-U over a longer period, from 1982 to 1995, we found that during those years median expenditures did increase 4.4 percentage points more than did the CPI-U, and in general they were more volatile.[8]

Steps in defining family resources

Our experimental resource measure closely followed the NAS panel's recommendations (see this *Focus*, p. 2). It is based on money income plus the value of in-kind transfers, but it excludes taxes, child support paid, and work-related expenses. Table 1 shows what we added and deducted in estimating family income. It also provides an opportunity to compare the basic numbers derived from the SIPP and the CPS. For example, housing subsidies are almost twice as high in the SIPP figures. We based our housing subsidy estimates for the SIPP on the Fair Market Rent procedures developed by the Department of Housing and Urban Development (HUD) for its Section 8 housing subsidy program. For the CPS, we applied a different method of imputation used at the Census Bureau since 1979. The SIPP estimates produce aggregate annual expenditures on housing subsidies of $14.5 billion—a figure that closely matches HUD's own estimate of total subsidies. We are currently considering adopting the SIPP method for use with CPS data.

Experimental and official measures compared

To what extent, if at all, would the new measure change the face of poverty in the United States? Note that at this stage in analyzing the NAS panel's recommendations, the poverty rates produced by the experimental measure are less important in themselves than as a starting point for comparing the incidence of poverty and trends over time according to the two measures, official and experimental. Thus we considered poverty rates based on the experimental thresholds standardized to the 1991 official rate. Standardized thresholds are computed by applying a percentage reduction to the experimental threshold to

Table 1
Average Annual Benefits and Expenses of Poor Families, 1991: SIPP and CPS

	SIPP	CPS
Benefits		
Food stamps	$1,549	$1,089
School lunch	341	316
School breakfast	93	NA
Housing subsidies[a]	895	482
Energy assistance	85	NA
WIC	94	NA
Expenses		
Work expenses	337	327
Child care	374	418
Child support paid	11	NA
Medical expenses[a]	1,389	1,233
Federal tax	NA	13
FICA	NA	294
EIC	NA	-331

Note: The reference unit consists of a household with two adults and two children. Tax amounts for the CPS resource measure are based upon tax simulations using the March CPS annual demographic supplement and statistical summaries of individual income tax returns compiled by the Internal Revenue Service. We made no adjustment for taxes paid in the SIPP resource measure, although taxes paid are reported in a topical module of the SIPP, because we have not yet developed an appropriate method to incorporate this information into a complete tax model.

[a]Methods for computing housing subsidies and medical out-of-pocket expenses are discussed in this *Focus*, pp. 25, 31.

obtain a poverty rate for the entire population equal to the official rate. Such a procedure makes it easier for us to determine how our picture of the incidence of poverty and its trend over the years 1991–96 would actually have changed if the U.S. government had used the experimental measure instead of the official measure. In Figures 3–5 the standardized measure is used, so that the two poverty rates, experimental and official, are at the same level in 1991.

First, we take a snapshot of a single year.

Poverty in 1991

Figure 2 shows the CPS and SIPP poverty rates under the official definition of poverty, as well as the nonstandardized experimental rates. Figure 3 presents poverty rates for the total population and for various subgroups under both the official and standardized experimental definitions, using CPS and SIPP data (overall unstandardized rates are not shown in the figure). Figure 4 illustrates the resulting composition of the various poverty populations. Three consistent patterns emerge.

1. Overall poverty rates under the experimental measure are higher than under the official measure, using either the CPS or the SIPP. Using CPS data, the overall rate is 14.2 percent under the official measure; it is 18.9 percent under the experimental measure.

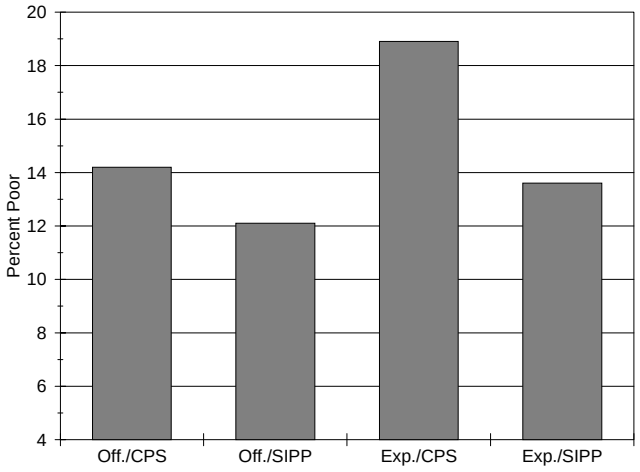

Figure 2. Official and experimental poverty rates for 1991, using data from Current Population Survey (Off./CPS, Exp./CPS) and Survey of Income and Program Participation (Off./SIPP, Exp./SIPP).

2. Poverty rates are in general lower with data from the SIPP than from the CPS, whether we use the official or the experimental measure. Using the SIPP, the overall poverty rate is only 12.1 percent under the official definition and 13.6 percent under the experimental measure, compared to 14.2 and 18.9 percent for CPS, respectively. This is in part because the SIPP was designed to collect income data more thoroughly than CPS.

3. The composition of the poor based on the experimental measure is more like the total population in its demographic and socioeconomic characteristics than that based on the official measure. The poverty rate actually falls for children, blacks, and people in female-householder families when estimates are made using the experimental measure (see Figure 3). All other groups shown are more likely to be classified as poor, including the elderly, whites, persons in families with at least one worker, and persons in married-couple families. This is true regardless of which survey we use.

We compared poverty rates using both pre-tax and after-tax values for family resources (not shown). As expected, poverty rates were lower when calculated before taxes were deducted, but the relationships among the different measures did not change. Our general conclusions regarding the SIPP and the CPS would hold true even if pre-tax values were used in both surveys.

Poverty over time

How does the experimental measure behave over time? Figure 5 shows overall poverty rates for the years from 1991 to 1996. During that time, the official rate rose from 14.2 to 15.1 percent in 1993, then fell again, to 13.7 percent by 1996. The experimental standardized rate rose from 14.2 in 1991 to 15.4 percent in 1993; it fell to 13.4 percent by 1996. Thus between 1991 and 1993 the rate at which poverty increased was higher under the experimental measure, but the trend of the two measures was broadly similar.

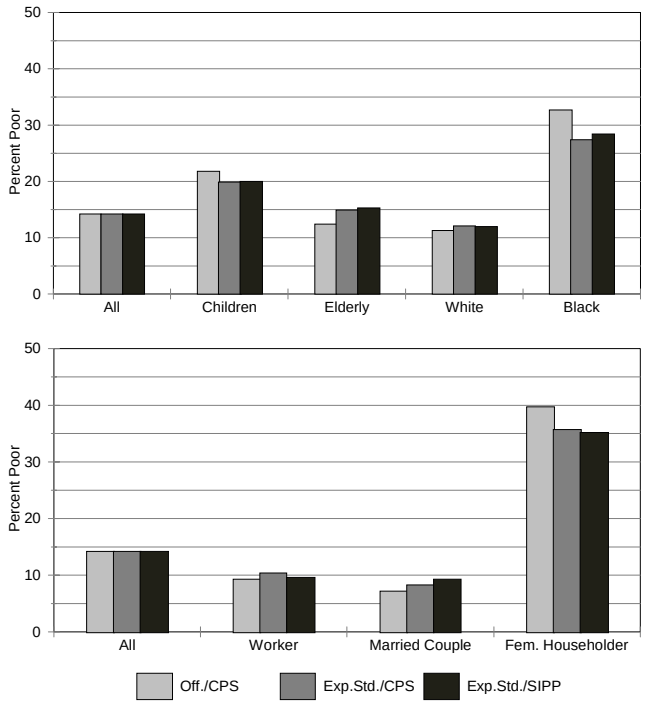

Figure 3. Poverty rates for total population and selected groups, 1991. Official U.S. Census Bureau poverty thresholds and experimental thresholds standardized to 1991 official poverty measure, using data from CPS (Off./CPS, Exp.Std./CPS) and SIPP (Exp.Std./SIPP).

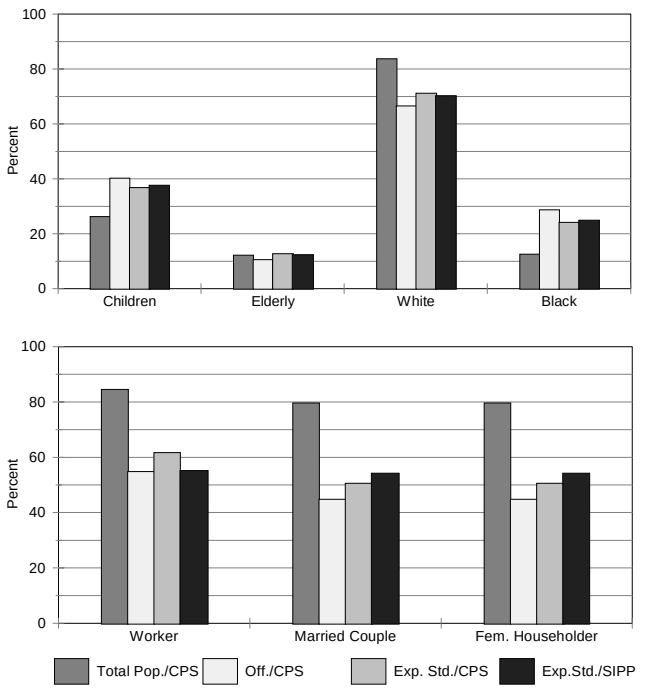

Figure 4. Composition of total and poverty populations, 1991. Total population using CPS data; poverty population according to (1) official U.S. Census Bureau poverty thresholds using data from CPS (Off./CPS) and (2) experimental thresholds standardized to 1991 official poverty measure, using both CPS (Exp.Std./CPS) and SIPP (Exp.Std./SIPP).

Some interesting differences emerged in the trend in poverty rates over time when we varied our experimental definitions slightly. Figure 5 shows the large effect of medical out-of-pocket expenses on the level of poverty. When we did not deduct them from the experimental measure, it produced poverty rates that were about 4 percentage points below the experimental standardized rate. The smaller increase in poverty rates between 1991 to 1993 when these expenses are not deducted suggests that the slightly higher rate of increase in the experimental measure over that period may be due to an increase in medical expenses, as we estimated them. There were similarly large effects for the Earned Income Credit (EIC), though in the opposite direction (see Figure 5). The effect was even more pronounced for children, blacks, Hispanics, and persons in families with one or more workers—precisely those groups most likely to have taken advantage of the EIC (not shown). For our immediate purposes here, these findings highlight the ability of the new measure to capture the effects of tax and some transfer policies.

What's next?

Further work on thresholds includes creating better geographic adjustments for housing as well as other expenditures—the procedure used here to adjust for geographic differences in housing prices is understandable and feasible, but it does not account for differences in housing quality or in costs within areas. And because equivalence scales have very large effects on the composition of the poverty population, the task of selecting and refining them is by no means complete.

In defining family resources, two large challenges remain: (1) the calculation of taxes to arrive at an after-tax income measure for the SIPP, and (2) further examination of the imputation procedures used to produce medical out-of-pocket costs and the value of housing subsidies, as noted earlier.

Two more general issues for further research are the treatment of owner-occupied housing and of cohabitants. The first is discussed elsewhere in more detail (pp. 31–36). The basic questions are whether the poverty threshold should allow for ownership of housing or just for a flow of services for comparable housing and, if so, how exactly to include this flow of services as part of family resources. As for the issue of cohabitation, the NAS panel recommended that resources and needs of cohabiting persons be pooled in order to determine their poverty status. This might be an important issue for some subgroups, especially young, single people.

Finally, the welfare reforms over the past year, at both the federal and state level, present a sizable complication. Just as we are finally attempting to incorporate government transfers, both in cash and in kind, into our

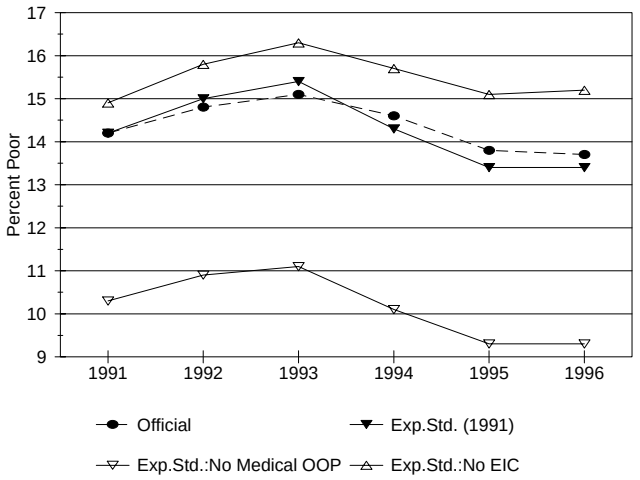

Figure 5. Poverty rates for total population, CPS, 1991–1996. Based on official U.S. Census Bureau poverty thresholds and on the experimental threshold standardized to 1991 official poverty measure. Three different definitions of family resources included: (1) all deductions and additions as in Table 1; (2) medical out-of-pocket expenses (OOP) not deducted; (3) Earned Income Credit (EIC) not added.

poverty measure, these transfer programs are changing dramatically. Capturing these changes and attempting to value new arrays of benefits present an exceptional challenge. ■

[1]The papers on which this summary is based (see note 4) are not official reports of the Bureau of the Census or the BLS; they present research that supports the official work of these agencies.

[2]C. F. Citro and R. T. Michael, eds., *Measuring Poverty: A New Approach* (Washington, DC: National Academy Press, 1995), p. 4.

[3]Citro and Michael, eds., *Measuring Poverty*, p. 7.

[4]The research summarized here is presented in K. Short, M. Shea, D. Johnson and T. I. Garner, "Poverty Measurement Research Using the Consumer Expenditure Survey and the Survey of Income and Program Participation," paper presented at the annual meeting of the American Economic Association, Chicago, IL, January 1998. Also relevant is D. Johnson, S. Shipp, and T. I. Garner, "Developing Poverty Thresholds Using Expenditure Data," *Proceedings of the Government and Social Statistics Section, American Statistical Association* (Alexandria, VA: ASA, 1997), pp. 28–37.

[5]This is no longer the predominant living unit in U.S. society, but it represents the largest number of people. The NAS panel's calculations were actually based upon the expenditures of a consumer unit composed of a married couple with two children. If we had chosen instead to use the married-couple definition, the thresholds would have been $400 higher. Consumer units as used in the CEX are defined in this *Focus* on p. 11. Issues entering into the choice of a reference family are discussed elsewhere, pp. 8–9; see also Citro and Michael, eds., *Measuring Poverty*, p. 101.

[6]The panel commented, "designating a percentile value for food, clothing, and shelter—which, when expressed as a constant percentage of the median, will drive the poverty thresholds in future years—is obviously a matter of judgment. . . . We . . . conclude that a reasonable range for the food, clothing, and shelter component of the reference family threshold would be from the 30th to the 35th percentile, or from 78 to 83 percent of the median" (Citro and Michael, eds., *Measuring Poverty*, p. 149).

[7]The equivalence scale suggested by the NAS panel is $(A + PC)^F$, where A = no. of adults, C = no. of children, and P represents the adult-equivalent value of a child (set at 0.7 of an adult). To capture economies of scale (F), we used a value of 0.65. These scales minimize the effect on overall poverty and are most similar to the current scales.

[8]In 1992, the experimental threshold updated by the CEX was 104 percent of the official threshold, but in 1996 it was only 99 percent of the official threshold. For estimated annual thresholds from 1991 to 1996, see Table 1 in Short and others, "Poverty Measurement Research."

Working around the official poverty measure

Thomas Corbett

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A number of technical and political difficulties—some of them discussed in this *Focus*—make the introduction of any *officially sanctioned* new poverty measure quite difficult. Any comprehensive change in the poverty measure would address deficiencies in *both* the establishment of the threshold, or income line that separates the poor from the nonpoor, and the calculation of available resources that are compared to that threshold. Below, we look at emerging strategies for addressing half of the question: the calculation of household resources.

Analysts impatient with the glacial pace of movement toward consensus on an improved measure are exhibiting greater willingness to use revised or alternative poverty measures, at least for some purposes. Sensitivity to the flaws in the official measure has been heightened as the consequences of using an inadequate measure become more apparent.

Salient policy and governance trends have enhanced the importance of accurately measuring key indicators of societal well-being. The devolution of responsibility over critical components of the social safety net to state and local governments and the reinvention of government through a focus on outcomes as opposed to process are fundamentally changing the way we do public sector business. We are likely to see more volatility over time and variability across jurisdictions in social welfare policies, thus introducing greater uncertainty about the circumstances of vulnerable populations.

Governance strategies that emphasize decentralization and performance-based management work best if the outcomes of interest are well considered and measured. To this end, the accurate assessment of economic well-being through indicators such as the level and trend of poverty emerges as a challenge of the greatest import. Given this, researchers and policy makers may not wait for a new measure to be sanctioned by the broader policy community. A proliferation of measures, however well justified, could generate additional confusion in the research and policy communities.

Here are two very recent examples of significant work that has also drawn wide public attention. In both, the authors employ more inclusive definitions of income than does the official measure to capture the effect of taxes and noncash transfers on the economic well-being of disadvantaged groups. These alternative measures then are compared either to the official measure or to a "latent" measure of poverty—one in which all government assistance is excluded from the calculation of resources—in order to assess the consequences of government social assistance.

The first is a report by the Center on Budget and Policy Priorities (CBPP), *Strengths of the Safety Net*. The second is a report by the National Center for Children in Poverty (NCCP), *Young Children in Poverty: A Statistical Update*.[1] Both appeared in March 1998.

Strengths of the Safety Net: Excerpts from the CBPP report

The safety net of government benefit programs lifts millions of people, mostly elderly people and children, out of poverty. Using data collected by the Census Bureau, this report describes the impact of these programs—including Social Security, cash assistance, food and housing benefits, and the Earned Income Tax Credit—on poverty.

This analysis compares the number of people who would be poor if government benefits were not counted as part of their income to the number who are poor after counting government benefits. The analysis uses two measures of poverty that differ from the official poverty definition. One measure is poverty before government benefits are counted, which is determined using the official poverty line but excluding government benefits from people's incomes when those incomes are compared to the poverty line. The other measure is poverty after government

Strengths of the Safety Net: How the EITC, Social Security, and Other Government Programs Affect Poverty, by Kathy Porter, Wendell Primus, Lynette Rawlings, and Esther Rosenbaum, can be ordered from the Publications Service, Center on Budget and Policy Priorities, 820 First Street, NE, Suite 510, Washington, DC 20002. Ph: (202) 408-1080; Fax: (202) 408-1056. It is also posted in full on the World Wide Web site of the CBPP at <http://www.cbpp.org/>.

Young Children in Poverty: A Statistical Update / March 1998 Edition, by Jiali Li and Neil Bennett, is available from the National Center for Children in Poverty, Columbia University School of Public Health, 154 Haven Ave, New York, NY 10032. Ph. (212) 304-7100; Fax (212) 554-4200. It is also posted in full on the World Wide Web site of the NCCP at <http://cpmcnet.columbia.edu/dept/nccp/>.

benefits are counted, with government cash and non-cash benefits included as income and federal income and payroll taxes subtracted from income. The difference between the poverty counts under these two measures is the number of people lifted out of poverty by government safety net programs.

The purpose of this analysis is to identify the impact of the safety net on the extent and depth of poverty and to examine the relationship between changes in safety net programs and the number of people moved out of poverty.

In 1996, some 57.5 million people—or 21.6 percent of Americans—would have been poor if government benefits were not counted as part of their income. When government benefits are counted as income, these figures drop by nearly half, to 30.5 million people, or 11.5 percent of Americans. As these figures indicate, government benefit programs lifted 27 million people out of poverty in 1996.

Safety net weakens slightly in 1996

Between 1995 and 1996, the poverty rate before counting government benefits fell. After counting government benefits, however, there was no real change in the poverty rate. One reason poverty after counting government benefits failed to decline was that the effectiveness of the safety net in reducing poverty decreased slightly in 1996, especially among children. In 1995, some 33.1 percent of all children who would have been poor without government benefits were lifted from poverty by those benefits. In 1996, this percentage slipped to 31.9 percent.

Most of the reduction between 1995 and 1996 in the number of children lifted out of poverty by safety net programs was due to a decline in the impact of the food and housing programs, primarily food assistance. The number of children moved out of poverty by these programs dropped from 2.2 million in 1995 to 1.9 million in 1996. The impact of cash assistance programs, primarily AFDC, on the depth of poverty among children also declined. These changes correspond to reductions in the number of poor children receiving AFDC and food stamps between 1995 and 1996.

EITC now lifts more children out of poverty than any other program

In recent years, the impact of the Earned Income Tax Credit on poverty among children has increased substantially. The EITC now lifts more than two million children out of poverty. Since its creation in 1975, the EITC has been expanded several times and has become more effective in moving children out of poverty.

In 1989, federal income and payroll taxes pushed more families with children into poverty than the EITC lifted out of poverty. The net effect of federal income and payroll taxes and the EITC that year was to push 400,000 children from low-income working families into poverty. By 1993, the impact of the EITC was large enough to offset fully the negative impact of income and payroll taxes on poverty among families with children and to move a small number of children out of poverty. In 1994, the final phase of the EITC expansion enacted in 1990 took effect and a further expansion approved in 1993 began to phase in. With a larger EITC, the net effect of federal income and payroll taxes and the EITC was to lift 600,000 children out of poverty.

The number of children moved out of poverty due to the combined effect of federal income and payroll taxes and the EITC increased to 1 million in 1995 and 1.2 million in 1996. Separating out the impact of the EITC from the rest of the federal tax system shows that the EITC now lifts more children out of poverty than any other government benefit program. The EITC lifted 2.4 million children out of poverty in 1996. This constituted 37.3 percent of all children moved out of poverty by government programs that year. No other category of government benefit programs lifted as many children out of poverty as the EITC.

Because the EITC is designed to benefit low-income working families, it is no surprise that the EITC is most effective in reducing poverty among children from families with a parent who works at least half-time. Among children in families with at least one half-time worker, the EITC moves 30.2 percent of those who would otherwise be poor out of poverty.

The EITC is especially effective for Hispanic children. The EITC lifted 800,000 Hispanic children out of poverty in 1996. This was nearly one-fifth—18 percent—of Hispanic children who were poor before counting government benefits. Nearly half of the Hispanic children who were lifted out of poverty by government benefit programs in 1996 were lifted out by the EITC. The EITC has such a large effect in reducing poverty among Hispanic children because the proportion of poor children living in families with a full-time worker is larger for Hispanics than for either whites or blacks.

The effectiveness of the EITC in lifting children out of poverty varies by region, with its greatest impact in the South. In 1996, the EITC lifted from poverty 17.6 percent of children in the South who were poor before government benefits were counted—more than one in every six such children. (From the Executive Summary.)

Young Children in Poverty: A Statistical Update: Excerpts from the NCCP report

Judging the impact of programs and policies: The power of alternative poverty measures

In choosing a particular poverty measure to gauge the economic well-being of young children in the United

States, it is necessary to ask what kinds of income should be counted in determining who should be considered poor. The official poverty measure adopted by the federal government and used in the first part of this Update takes account of a variety of income sources such as wages and salary, earnings from self-employment, AFDC, General Assistance, Social Security, interest, dividends, and disability, just to mention a few.

The official measure, however, is deficient in that, in many instances, it does not reflect sources of income influenced by changes in policy and programs, for example, food stamps and the Earned Income Tax Credit (EITC).

NCCP has conducted analyses using an alternative measure of poverty to obtain a more complete picture of the economic impact of programs and policies on low-income families. This measure incorporates the same income sources as the Census Bureau does, but in addition includes cash equivalents of the following "near-cash" benefits: food stamps, housing subsidies, school lunch benefits.[2] Further, NCCP includes income derived from the Earned Income Tax Credit and subtracts federal, state, and payroll taxes from income.

What do we learn about trends and distributions of young child poverty from the alternative poverty measure?

Using the alternative measure in 1996 cuts the extreme poverty rate by over one-half, reduces the poverty rate by one-fifth, and significantly increases the near poverty rate. As Figure 10 illustrates, the official and alternative poverty measures paint somewhat different pictures. The underlying reason for these differences is that at very low income levels—namely, below 50 percent of the poverty threshold—near-cash benefits contribute significantly to overall income. Also, taxes play a minimal role. Thus, the alternative measure of poverty yields significantly fewer extremely poor individuals than does the official measure—a 59 percent decrease in the rate, from 11 percent to 4 percent. In contrast, for incomes in the near poverty range—that is, between 100 and 185 percent of the poverty threshold—benefits are relatively few and taxes predominate. The net result is a substantially greater number among the near poor population. The alternative near poverty rate, 49 percent, is six percentage points higher than the corresponding official rate. When estimating poverty rates, including benefits and taxes generally diminishes somewhat the estimated number of poor individuals. For 1996, the alternative poverty rate was 19 percent, compared with the official rate of 23 percent. However, it is only in recent years that the two series of poverty rates have begun to significantly diverge. (See Figure 10.)

The Earned Income Tax Credit has become an increasingly effective tool against poverty. The divergence in recent years between official and alternative poverty rates coincides with the expansion of the EITC in 1993. The result of this expansion is easily seen in Figure 11, which graphs the alternative measure, both including and excluding the effects of the EITC.[3] In 1996, the YCPR [Ed.: Young Child Poverty Rate] using the alternative young child poverty measure would have been 23 percent higher in the absence of the EITC; in 1993 the increase would have been only 8 percent. NCCP's analysis shows that the EITC has especially benefited groups that have historically had higher poverty rates, such as single-parent families, blacks, and Hispanics. (From pages 8–9 of the NCCP report.)

Conclusion

In both these reports, the authors justifiably felt compelled to use alternate measures that substantially broadened the definition of countable resources. They recognized that major changes had occurred in those parts of the social safety net that were not officially counted as

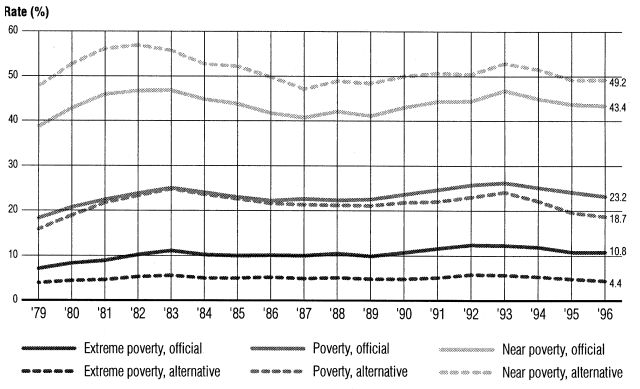

Figure 10. Extreme poverty, poverty, and near poverty rates for children under age six by official and alternative measures, 1979–1996.

Source: *Young Children in Poverty: A Statistical Update* (New York: NCCP, 1998), p. 9.

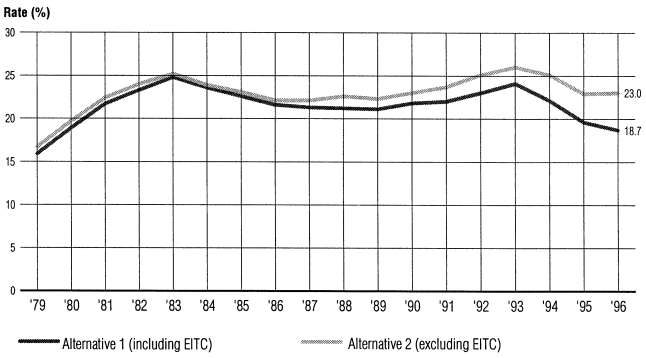

Figure 11. A comparison of poverty rates for children under age six using alternative measures of poverty with and without the EITC, 1979–1996.

Source: *Young Children in Poverty: A Statistical Update* (New York: NCCP, 1998), p. 9.

income for the purpose of determining who was poor—in-kind benefits and tax-based cash transfers. Excluding these resources tends to increase the poverty rate at any given period of time. Use of the official measure also obscures the effect of policy changes that tend to alter poverty rates over time. Finally, the authors of these reports realize that it makes little sense to omit what are clearly available resources. Delays in developing a reasonable consensus on a more appropriate measure of poverty will add some contentiousness to our efforts to understand and assess poverty during this critical period of change. ■

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[1]Some reformatting of the excerpts has been done for editorial purposes. No substantive changes have been made.

[2][Note in original report] This alternative measure does not include the costs associated with employment, such as child care, transportation, clothing, etc., which, unfortunately, are not available in the CPS. Taking these costs into account would serve to raise poverty estimates. This alternative measure also does not account for the significant regional variation in cost of living. The most complete measure of poverty that would address these issues was recommended by the Panel on Poverty and Family Assistance of the National Research Council in their volume, *Measuring Poverty: A New Approach*, (1995) edited by C. F. Citro and R. T. Michael, Washington, DC: National Academy Press.

[3][Note in original report] The Census Bureau imputes the EITC for all individuals in the CPS and assumes that all eligible persons actually obtain it. Thus, any CPS analysis using a measure that incorporates the EITC should be interpreted as addressing the potential, and not necessarily the actual impact of the EITC. In 1990, the estimated participation rate was 80 to 86 percent (Scholz, J. K. (1994). The Earned Income Tax Credit: Participation, compliance, and antipoverty effectiveness. *National Tax Journal*. 47(1), pp. 63–87). According to Scholz and the Center on Budget and Policy Priorities, the participation rate is likely to have increased since 1990 in response to public-awareness campaigns. Also, the amount of the credit has grown and eligibility for the EITC has been expanded. The Census Bureau attributes the EITC income it imputes to the previous year rather than the year in which an EITC recipient files taxes. (Only about 1 percent of those eligible for the EITC receive a portion of their EITC income through their employer in the same year it was earned.) In analyzing the CPS, one cannot properly apply EITC income to the year in which it was actually received because that would require two consecutive years of income information for the same individuals—information that is not available in the CPS.

Joint Center for Poverty Research
September Research Institute: Risk Sharing and Economic Vulnerability

The Joint Center for Poverty Research is issuing a call for papers for its Research Institute, "Risk Sharing and Economic Vulnerability," to be held September 17–18, 1998, in Chicago.

The twin goals of this research institute are to gain a better understanding of: (1) the risk-sharing roles played by markets, social safety nets, political institutions, informal arrangements, and family ties; and (2) the effects of risk-sharing arrangements on families and social organizations, human capital accumulation, productive efficiency, the distribution of income and wealth, and the incidence and intergenerational transmission of poverty.

Institute organizers are Steve Davis, an economist who teaches at the University of Chicago Graduate School of Business, and Susan Mayer, a sociologist who teaches at the Harris Graduate School of Public Policy Studies at the University of Chicago and serves as executive director of the Poverty Research Center. The Joint Center seeks to bring together a broad range of economists, sociologists, political scientists, and other interested poverty researchers.

Interested researchers should submit two copies of papers or detailed abstracts by Friday, May 15, 1998 to Amy Hagen, Program Assistant, Joint Center for Poverty Research, Harris Graduate School of Public Policy Studies, University of Chicago, 1155 E. 60th Street, Chicago, IL 60637. For further information, e-mail: a-hagen@uchicago.edu.

Measuring the cost of medical care

In countries where health care is a universal, publicly provided benefit, the measurement of poverty need not take health care into account. Even in the United States, with no universal health care system, it is sometimes too readily assumed that Medicare and Medicaid meet the needs of the elderly and the poor. In fact, coverage under both programs is patchy and incomplete. Part-time workers and those in minimum-wage jobs with no health insurance may well be a hospital stay away from poverty. And many more have inadequate insurance. One study estimates that "In the event of catastrophic illness, approximately 29 million Americans with private health insurance would face out-of-pocket expenses for medical care that would amount to 10 percent or more of their family income because they were underinsured."[1]

To ignore health care needs would be to ignore a central element in the measurement of poverty, one that is potentially related to destitution, morbidity, even early mortality. Yet no easy way of incorporating health care needs has come to hand. The National Academy of Sciences (NAS) panel studying poverty measurement commented:

> The issue of how best to treat medical care needs and resources in the poverty measure has bedeviled analysts since the mid-1970s, when rapid growth in the Medicare and Medicaid programs (and in private health insurance) led to a concern that the official measure was overstating the extent of poverty among beneficiaries because it did not value their medical insurance benefits. Yet after almost two decades of experimentation, there is still no agreement on the best approach to use.[2]

The panel noted three problems: 1. Most health care benefits, unlike food stamps, are not essentially interchangeable with money ("fungible"): insurance benefits or free care for expensive medical services do not make equivalent cash income available for other purposes. If we merely add the value of medical insurance benefits to income—whether the real value or imputed values for a particular group such as the elderly—the consequence is, perversely, to make the sick always look better off than the healthy, even though the sick cannot use their benefits to support consumption.

2. Health care needs vary greatly among families and, over time, within them, much more than the need for food or housing. In any particular year, a family classified as "generally healthy" may experience a serious illness or accident with devastating financial consequences. Conversely, a family that is classified as "generally unhealthy" may have a very good year, with few spells of illness. These common events, multiplied over the population, could seriously skew the count of who is poor in that year. To accurately reflect different health care circumstances, many different thresholds would be needed, complicating the poverty measure.

3. There has been little research on the subject of out-of-pocket medical costs, and much debate over the best way to estimate them. Even groups with generally adequate medical insurance, such as the elderly, may confront high drug costs or long-term care costs. The dollar amounts for premiums, deductibles, copayments, and payments for uncovered but often essential services such as eye care can be very high, and do not necessarily diminish in a managed-care environment. How best should we adjust poverty thresholds or family resource definitions to take these into account, if we wish to do so? In addition to the conceptual difficulties, there has been a dearth of data, only now being partially remedied.

The realization that poverty rates are extremely sensitive to the way in which medical benefits are calculated has raised the stakes in setting a value upon them. The Census Bureau experimented with several different ways to value Medicare and Medicaid benefits, eventually settling upon an estimate of "fungible value." This starts with the market value of the benefit, but counts only that portion which can be shown to free up resources that might have been spent on necessary medical care. When the "fungible value" of medical benefits is included in calculations, the poverty rate changes; for example, if the Census valuation of medical care is included in the poverty statistics for 1986, the poverty rate is reduced by 8 percent for the general population and by 20 percent for the elderly.[3]

The NAS study panel concluded that there was a fundamental problem in trying to combine nonmedical and medical needs and resources in a single measure of poverty status: the two components were essentially measuring different things. The nonmedical component retrospectively assesses each family's actual payments, during a particular year, for universal needs such as food and housing. The medical component, in contrast, measures a risk that may not actually materialize. Thus the panel recommended separating the measurement of economic poverty from the measurement of medical care needs and resources. Specifically, it proposed that medical insurance benefits not be added to income, that out-of-pocket medical expenses, including health insurance premiums, be subtracted from income, and that a separate index of medical risk be constructed.

The idea of a two-index poverty measure was not new.[4] The approach has the advantage that it provides a clean measure of nonmedical resources assessed against nonmedical needs. It then explicitly measures medical risk against the adequacy of insurance coverage and the abil-

ity to pay for medical services. But by no means does a two-index measure solve all problems. To determine a threshold of medical risk, for example, it is necessary to define a basic package of medical services. That, in itself, might not be too difficult. Good models exist—for instance, the benefit package identified in the Health Security Act (HSA) proposed by the Clinton Administration or the largest federal employee health benefits plan. But what procedures should be used to update that package? Improvements in medical technology radically change what constitutes "adequate medical care." Accepted standards for treatment of premature infants in the 1960s, for instance, would not be acceptable today. And the pace of medical innovation is increasing, while the cost continues to escalate. Updating the poverty thresholds for changes in price alone, the NAS panel believed, is even less appropriate to medical costs than it is to other goods. But how should "discretionary" medical expenditures or "experimental" procedures be distinguished from "necessary" expenditures and "standard" procedures? When state governments have attempted to "ration" medical care through the explicit ranking of medical procedures, they have evoked major ethical and political controversies. The current bitter debates over Medicare payments for home health care are only one example.[5]

Since 1995, analysts at the Census Bureau and elsewhere have expended considerable energy in efforts to explicate and resolve the difficulties in the NAS panel proposals. They have, perhaps, been more successful in explaining than in resolving them. This article briefly reviews three aspects: the estimation of out-of-pocket expenditures, advances in data collection, and the construction of a medical care risk index.

Estimating household spending on medical care

Determining the medical out-of-pocket expenditures to be deducted from family budgets is not a simple exercise.[6] Much of the information must be achieved indirectly, by imputation. Estimates of the distribution of poverty have proved very sensitive to the methods used to do so, as they have for medical benefits. The approach that relies upon measuring out-of-pocket costs is, moreover, a controversial one. An alternative approach to valuing medical needs and expenses, more consistent with the methods used for food, shelter, and clothing, is suggested on p. 29.

There are three primary elements in family medical costs: (1) the cost of private health insurance or the employee's share of health care insurance; (2) for the elderly and disabled, payments for Medicare Part B coverage; and (3) actual out-of-pocket payments for health services. The Health Care Financing Administration publishes annual aggregate data for these payments. In 1991, aggregate household medical spending for the entire population (including those in institutions) amounted to $207.2 billion: $52.2 billion in health insurance premiums paid by families, $10.7 billion in Medicare Part B payments, and $144.3 billion in actual out-of-pocket expenditures for health care services. Total out-of-pocket expenditures have declined relative to the other components; they represented 80 percent of household medical spending in 1965, but only 70 percent in 1995 (payments to private health insurance premiums and Medicare Part B each rose 5 percentage points).

It is difficult accurately to determine the total annual expenditure for those people not in institutions (excluding payments for nursing home care). David Betson reports estimates that range from $201.6 billion to $184.4 billion for 1991. The single most important factor in determining the relative share of out-of-pocket payments going to particular groups is, not surprisingly, age. The older one is, the more one spends and, over time, the share paid by the elderly appears to have increased. Better services, improved quality of life, extended life expectancy and greater expenditures on the very old have all played a role in this increase. The consensus is that about 27 percent of all household medical spending is now made by families headed by someone 65 years or older (in 1994, 12.5 percent of the population was over 65).

Using data from the two National Medical Care Expenditure (NMES) surveys (1977 and 1987), Betson examined the distribution of out-of-pocket payments and found that it is rather firmly linked to family characteristics. For example, being black, having low income, or having an uninsured family head younger than 65 all greatly increase the probability that a family will have no such payments. The distribution of out-of-pocket payments appears to have been relatively stable over the decade: payments did not rise significantly for low-income or black families. For the elderly, and for nonelderly families without public or private insurance, out-of-pocket expenditures did rise, and they constituted a larger proportion of income in 1987 than they did in 1977.

Data

The main sources of information on health care use, financing, and expenditures were, until recently, the two national probability surveys conducted by the Agency for Health Care Policy and Research (AHCPR). The National Medical Care Expenditure Survey (NMCES, also known as NMES-1) was conducted in 1977, the National Medical Expenditure Survey (NMES-2) in 1987. Surveys a decade apart cannot provide data current enough for estimating household medical expenses in the context of an annual poverty measure.

Beginning in 1996, the AHCPR and the National Center for Health Statistics implemented a greatly improved program of data collection, the Medical Expenditure Panel Survey (MEPS). MEPS is a national survey of health care use, expenditures, sources of payment, and insurance coverage for the U.S. civilian population that is not institutionalized. It also surveys nursing homes and their residents nationwide. It is designed to yield comprehensive annual data on the level and distribution of health care use and expenditures, monitor the dynamics of the health care delivery and insurance systems, and assess implications for health care policy.

MEPS comprises four component surveys: the Household Component, the Medical Provider Component, the Insurance Component, and the Nursing Home Component. Its main component collects medical expenditure data continuously at both the individual and household levels, through an overlapping panel design. The information collected includes demographic characteristics, health conditions, health status, use of medical care services, charges and payments, access to care, satisfaction with care, health insurance coverage, income, and employment.

In addition, the Survey of Income and Program Participation, which was recommended by the NAS panel as the primary basis for measuring poverty, has now added questions on the use of health care services to those on health insurance. Combined, these two surveys are a rich source of information for constructing a medical care risk index.

Will certain kinds of data be harder to come by, as health care moves from a fee-for-service to a managed-care environment, in which services are capitated? In the context of poverty, we are most concerned about out-of-pocket costs, and these, as it turns out, may well be easier to measure under managed care. In some plan designs, consumers actually know what they have paid, and can accurately answer survey questions. Under the fee-for-service system, consumers may not find out until months later what their financial obligations actually are.

Constructing a medical care risk index

A medical care risk index (MCRI) potentially solves several vexing conceptual problems in measuring medical care needs and resources.

1. It clearly distinguishes between two distinct accounting periods, the past and the future. For the past, actual out-of-pocket expenses can be calculated. For the future, the prospective accounting of insurance benefits over a longer term more readily allows us to measure the adequacy of insurance in case of need.

2. It results in greater equity in benefit measures, because it constructs indicators of the adequacy of insurance plan provisions and family assets for the healthy as well as the sick.

3. It allows us to estimate needs and resources for the entire family. Out-of-pocket costs for all family members can be deducted from family income. A family risk index could be reached by simply summing family members' expenses and benefits.

Creating a prospective index requires many assumptions and predictions about future medical events, insurance coverage, family composition, and financial resources. Patricia Doyle offers five criteria that should enter into the construction of such an index.[7]

1. It must reflect various kinds of risk. However good their current health, people unpredictably become ill or have accidents, so that the index should not be conditioned exclusively on current health status. The index should also reflect the true risk of incurring excessive out-of-pocket expenses, independently of the decision to purchase insurance. And unlike insurance companies, which sort people into homogeneous groups over which medical costs are averaged, it must recognize that people within these homogeneous groups do not actually have the same risk of incurring medical costs.

2. It must reflect resources and medical need. Does the family now have assets or insurance sufficient to meet its future net liabilities for necessary medical expenses? Analysts have found that their estimates in this area are very sensitive to the choice of a basic plan. For example, calculations using the HSA plan as the basis suggested that about 31 percent of people were underinsured. When the largest federal employee health benefits plan was used instead of the HSA plan, the underinsurance rate was cut in half.

Measuring financial security (assets). People may choose not to purchase health insurance if they are confident that their liquid assets or ability to access credit will cover any medical costs. Such people may not be underinsured, says Doyle, merely "unconventionally insured." The MCRI should take such assets into account: out-of-pocket costs projected to occur over some span of time can be compared to "countable net assets." But this is a term needing explicit definition. Should such assets, for example, include equity in a house?

Defining the adequacy of insurance. Measures of adequacy must include the provisions of any insurance plans held, potential access to free or subsidized care, and the ability to pay what is necessary to secure insurance benefits. One suggestion has been to compare the actuarial value of a family's health insurance to the actuarial value of a basic benefit plan such as the HSA plan. In this case, insurance plans with actuarial values at least as large as those of the basic plan would be considered "adequate." Yet the level of risk varies with income levels. Very low income working people may have a plan

Creating a medical care risk index: A proposal

This model for an MCRI was proposed by P. F. Short and S. Banthin, "New Estimates of the Underinsured Younger than 65 Years," *Journal of the American Medical Association* 274, no. 16 (1995):1302–6.

1. Each individual is classified into one of two risk groups (high/low), based on age, race/ethnicity, sex, income, perceived health status, disability days, and usual activity limitations.

2. Within each risk group an annual expenditure scenario is developed. It reflects the expenses of a person who experiences a catastrophic medical event, defined as an event in which the total medical costs fall above the 99th percentile of all costs, ranked from least to most.

3. The catastrophic expenditure scenario of each risk group is assigned to all members of that group.

4. Out-of-pocket expenses on direct medical care are computed for each person as a function of the attributes of the person's insurance plan, the assigned expenditure scenario, and net payments after reimbursement.

5. Persons are considered to be underinsured if they are covered by private insurance, but their out-of-pocket costs exceed 10 percent of family income.

This summary appears in P. Doyle, "Who's at Risk? Designing a Medical Care Risk Index," unpublished paper, U.S. Bureau of the Census, May 1, 1997. (Doyle proposes some modifications to the index as presented here.)

that appears actuarially adequate but not be able to afford the associated out-of-pocket costs.

3. It must be quantifiable. It is implicit in an MCRI that insurance policies held at a specific point in time will have some future value when compared to expected expenditures. The value of current insurance is the potential reduction in a family's liability for medical costs that is attributable to the insurance. If potential medical expenditures in a given accounting period are $10,000, but the family is obligated for only $2,000, then the prospective value of the insurance policy in that period is $8,000. In subsidized or unsubsidized plans, the actual value of benefits will rise and fall with the need for medical care and the length of the accounting period chosen for measuring benefits. For healthy people with unsubsidized insurance plans, benefits may actually prove to be less than payments.

4. It must have a well-defined accounting period. Payments for insurance can span a lifetime, yet use of most benefits might be confined to a few months. If value is measured only over a brief episode of illness and cost as the sum of all premium contributions to date, the two are not adequately balanced. Medical care liabilities and costs, values, and benefits should all be measured over the same period. The choice of an accounting period is theoretically an arbitrary decision. As a practical matter, however, one year is typically the accounting period over which poverty is defined and for which insurance contracts are effective.

5. The MCRI must be feasible to produce with existing data or through relatively modest extensions of current data collection.

The accompanying box (above) presents an existing and, Doyle believes, practical proposal for constructing such an index. ■

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[1]These figures apply to the nonelderly population with private insurance only. P. F. Short and S. Banthin, "New Estimates of the Underinsured Younger than 65 Years," *Journal of the American Medical Association* 274, no. 16 (1995):1302–6.

[2]C. F. Citro and R. T. Michael, eds., *Measuring Poverty: A New Approach* (Washington: National Academy Press, 1995), pp. 223–24.

[3]Citro and Michael, eds., *Measuring Poverty*, pp. 228–29.

[4]See, for example, the discussion by Marilyn Moon, "Incorporating Health Issues in Poverty Measurement," unpublished paper prepared for the Panel on Poverty Measurement and Family Assistance, Committee on National Statistics, Urban Institute, Washington, DC, 1993.

[5]See, for example, Robert Pear, "Home-Care Denial in Medicare Cases Is Ruled Improper," *New York Times*, February 15, 1998, p. 1.

[6]This discussion is based upon D. M. Betson, "In Search of an Elusive Truth: 'How Much Do Americans Spend on Their Health Care?'," unpublished paper, University of Notre Dame. Other papers that explore ways to estimate out-of-pocket costs include P. Doyle, "How Do We Deduct Something We Do Not Collect? The Case of Out-of-Pocket Medical Expenditures" (August 5, 1997), and P. Doyle and M. Johantgen, "The New Poverty Measure: Administrative Data as a Source of Medical Expenses," U.S. Census Bureau, Proceedings of the Annual Research Conference, Spring 1996.

[7]P. Doyle, "Who's at Risk? Designing a Medical Care Risk Index," unpublished paper, U.S. Bureau of the Census, May 1, 1997.

Incorporating health care needs into a measure of poverty: An exploratory proposal

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The NAS panel suggested that we include health care needs in the measure of poverty by subtracting out-of-pocket medical expenses, including health insurance premiums paid, from family resources. I find this approach unattractive. Out-of-pocket expenditures may be responding to factors other than health care needs and may not reflect effective utilization of health care. For example, persons with limited incomes and no or minimal health insurance may have very little access to medical care; hence their out-of-pocket expenditures are likely to lie below the level of effective care. Alternatively, persons with extensive coverage may use care beyond the point at which the marginal value is close to the true cost; examples include cosmetic surgery, multiple eyeglass purchases per year, and perhaps very new and expensive medical interventions.

Here I lay out an alternative approach. This discussion proceeds with the view that health care needs themselves, rather than merely the insurance coverage to meet those needs, should be included in the measure of poverty. One difference lies in the treatment of administrative costs. I believe this aspect is subject to debate. The suggested approach could be modified to include the administrative costs—overhead—of insurance coverage.

I begin by defining a bundle of health care service needs, HB. This bundle should be thought of as a minimum bundle. It consists of those services for which a well-informed person of moderate income would be willing to pay the full cost, in order to engage in the full range of daily activities permitted by the person's underlying health status.

This bundle may vary according to certain characteristics: health status, age, whether or not the individual lives alone. I propose, for the moment, that we envisage four categories of health care bundles: those for children, for prime-age adults, for the elderly, and for persons in poor health, suffering chronic illness, or physically or mentally disabled. We can denote such a bundle, in general terms, as $HB_{i,}$ where i may represent bundle 1, 2 , 3, or 4.

Many people have health insurance that permits them to buy medical care at a reduced cost or, in some cases, at no direct cost. If I designate α to represent the share of the bundle of health care services paid by health insurance, then $(1-\alpha)$ represents the remaining share of the bundle of services which must be paid by individuals, and $(1-\alpha)HB_i$ represents the cost to individuals (or their families) of the basic bundle. This is the amount that should be deducted from family income in order to calculate the resources available to meet nonmedical needs.

I identify income as consisting of earnings, unearned income, the earned income tax credit and food stamps, minus child care costs, taxes, and the costs of getting to work. It is then possible to determine whether a single person is in poverty by calculating whether that person's income, net of his or her share of the cost of the basic health care bundle, $(1-\alpha)HB_i$, is less than the poverty threshold for an individual. Similarly, for a family or household the calculation would be the sum of the health bundle needs of everyone in the unit.[1]

Still unanswered is the question of how to calculate the health care bundle (HB_i) and the individual's share of health care costs $(1-\alpha)$. There are several options for calculating HB_i , and, depending on the choice that is made, $(1-\alpha)$. These options are:

1. The average capitation rate charged by HMOs for a minimum package, adjusted for the administrative costs of the insurance. This information could be gathered nationwide and differentiated by region. Required out-of-pocket expenditures toward the services covered by the package would have to be added.

2. The amount the federal government contributes to the minimum plan for federal workers and their families, plus the amount workers and their families contribute toward the plan, including copays and premium contributions. Again, administrative costs should be subtracted and regional differences could be incorporated.

3. The amount of care consumed by persons whose family income lies between half the national median and the median, and who also have insurance coverage. These patterns of utilization would then have to be converted to a numerical value. Such conversions might make use of region-specific costs of medical care and could be based upon the Medical Expenditure Panel Survey, MEPS (or,

for earlier years, the National Medical Expenditure Survey, NMES).

For persons with chronic health conditions or disabilities, we could adjust any of these values by the ratio of Medicaid expenditures for the disabled to Medicaid expenditures for all others in the same age group.[2]

Once we have agreed how to measure the health care bundle, HB, we would look at the coverage it offers to determine an individual's or family's share of the costs, (1-α). For any of the approaches above, we would calculate that share using the same data. For example, for approach 3 we would measure the share of costs for those who have private coverage and whose incomes are between half the median and the median. We would use this proportion in calculating the share of costs for all who have private coverage in each of the four categories: children, prime-age adults, the elderly, and those with significant health problems. Then, for those with Medicaid coverage, the individual or family share is likely to be zero; in the case of no insurance, it will equal one, and in most cases of some insurance, including Medicare, it will be a positive value that depends on the copayment schedule and on the depth and breadth of coverage. MEPS and, for earlier years, NMES can be used to get estimates of the family share.

For greater accuracy, we might wish to explore the feasibility of differentiating a few types of private insurance coverage: HMO versus fee for service, and, for the elderly, whether or not they have Medigap insurance. These are refinements that could be subsequently explored.

Over time, the health care bundles (HB) would be updated as the composition of the basic bundle changed. How this is to be done will depend on the basic package adopted, the way it is measured, and a decision on whether particular cost-increasing improvements in technology should be included in HB. ■

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[1]The proposal can be expressed, using an economist's conventional notation, as follows: Let the poverty threshold = N, and Y = income. Then, a person or a family is living in poverty if, for an individual:

$N \leq Y - (1-\alpha)HB_i$ and, for a family:

$$N \leq Y - \sum_{I=1}^{f} (1-\alpha) HB_i$$

where I = 1,..f indicates the need to sum over the health bundle needs of everyone in the unit.

[2]Since these expenditures may vary significantly according to the nature of the disability, it may be desirable to create multiple categories of the disabled, calculating specific ratios for each of them.

Estimating the value and the cost of housing

Whether owned or rented, housing accounts for a large chunk of the expenses of low-income families.[1] Yet ownership of a house may also increase family resources, and estimating the value that it adds is no simple matter.

Some 39 percent of low-income consumer units owned their own homes, according to the 1994–95 Consumer Expenditure Survey (CEX).[2] Among households headed by someone 65 or older, the figure was 61 percent. Moreover, about 64 percent of low-income home owners do not have a mortgage. Thus 28.4 percent of low-income consumer units live in a home that is paid for. There is clearly an argument to be made that the measurement of poverty should take into account the ownership of a home and any implicit income that could be used to increase economic well-being.

Rental subsidies are not a trivial issue either: both the Current Population Survey (CPS) and the Survey of Income and Program Participation (SIPP) show that over 20 percent of poor people receive some kind of subsidy, although the surveys disagree on the amounts (see this *Focus,* p. 18, Table 1).

There are three sets of issues regarding housing: (1) how the value of owner-occupied or of subsidized housing is (or should be) treated in determining resources; (2) how the cost or value of owned housing is (or could be) factored into the poverty thresholds; and (3) how to take account of the regional differences in the cost of living, in which housing is a large, but not the only, component. This article addresses the first two issues. Separately, the question of regional differences is briefly examined (see p. 36).

The value of housing in defining resources

The National Academy of Sciences (NAS) panel reviewing the official poverty measure included the value of public or subsidized housing in its resource estimates, but did not calculate the value of home ownership in its experimental measure of poverty because of the many practical difficulties in doing so.

Placing a value on home ownership may , however, have a significant effect upon the number of people who might be considered poor. For example, one researcher, using a measure like that of the NAS panel and excluding home ownership, has calculated that the poverty rate for children in 1992 would rise moderately, from 21.9 percent to 25.8 percent, but the poverty rate for the elderly would rise markedly, from the official rate of 12.9 percent to 22.2 percent.[3] Because many elderly people own their own homes outright, placing a value on home ownership might well bring the poverty rate of the elderly back down. The panel urged that high priority be given to the issue in future research. On the whole, this has not yet been done, in part because of the complexities the panel noted.

How much, for example, do you add to resources to account for the fact that families who own a house outright or have low mortgage costs have more income available to meet their needs than do renters or owners with high mortgage costs? And how do you value public or subsidized housing—how much do you add to a family's resources for the value of the government subsidy? This is a calculation analogous to valuing other near-cash benefits such as food stamps, but rather more difficult. Housing costs nationwide vary far more than food costs, for example.

The value of home ownership

Families that own their own homes may, depending on their circumstances, have considerably lower actual housing expenses than the amount assumed in poverty-level budgets. Home owners have available to them both a roof over their heads and the cash that would otherwise go to rent or mortgage payments.

A 1995 article by David Betson explored ways of valuing home ownership. There is, first, "imputed rent"—a technique that the NAS panel thought might be the way to deal with home ownership. To arrive at a comparable estimate of total consumption by renters and home owners, economists employ a concept of "net imputed rent"—the amount of money for which the household could rent its home, minus the home owner's expenditure on mortgage (principal and interest), property taxes, and maintenance. If the difference between the two is negative (and for young home owners with large mortgages, it may well be), then zero is added to the home owner's consumption.

There are problems here. Can householders be expected realistically to estimate what they might receive in rent for their houses? What about maintenance costs? Many people, especially among the elderly, live in houses that are old and in frequent need of maintenance, but the work is not necessarily being done. And what about those householders, again especially the elderly, who are living in houses that are larger than their current needs? It seems inappropriate to count the full value of the net imputed rent among their resources, since in the short run they cannot use the excess of the imputed rent over the cash value of their current housing to pay for other needs. Should the amount of imputed rent, then, be adjusted (capped) by some proportion of the household's needs that is generally agreed to be reasonable for shelter? To

realize any imputed rental value, the household may be able to rent out part of the home, but might have to move. For some, especially the elderly, the costs of moving, both material and psychological, can be very high. So should some hypothetical moving costs be deducted in estimating the imputed rent? There are data problems also with calculating imputed rent. This method requires information about mortgages and property taxes (both collected by the SIPP but not by the CPS) and maintenance costs (not collected by either survey).[4]

Table 1 illustrates the difficulties by looking at four hypothetical households. For the elderly household with no mortgage, the net return from renting the house would be $3,530, a substantial amount to add to family resources. For the older family with a mortgage, the imputed rental value is positive but quite small; moving would be problematic. For the young household with a mortgage, the expense of keeping the house exceeds the potential rent by $595; the family could not rent elsewhere with their current resources, so moving is not really an option. But do these constraints on the elderly and young households with mortgages mean that the net imputed rent of both should be set to zero in estimating their resources? Doing so might well result in too many elderly households being categorized as poor. Betson expressed his discomfort with the use of net imputed rental value:

> Should home ownership provide sufficient cause for special consideration in poverty measurement? While traditional economic reasoning has led others to conclude that it should enter directly via the addition of the net imputed rental value of the home, I am not convinced. . . . What I find convincing is the observation that if home owners do not have a mortgage or have a small mortgage, then they will have a greater ability to finance their needs compared to an identical householder who rents.

Table 1
Average Shelter Expenditures for Four Hypothetical Home-Owning Households, 1988–89

Shelter Expenses	With Mortgage	Without Mortgage
Householder aged 34–44 years, annual income $10,000–15,000		
Est. rental value of home	$5,400	$5,400
Mortgage (P&I)	-4,868	0
Property taxes	-437	-437
Maintenance	-690	-690
Net imputed rental value of home	-595	4,273
Householder aged over 65 years, annual income $5,000–10,000		
Est. rental value of home	$4,680	$4,680
Mortgage (P&I)	-2,700	0
Property taxes	-490	-490
Maintenance	-660	-660
Net imputed rental value of home	830	3,530

Source: D. M. Betson, "Effect of Home Ownership on Poverty Measurement," unpublished paper, Notre Dame, November, 1995, Table 1.

Note: Spending on "shelter" includes, as here, mortgage payments, property taxes, and maintenance costs for owned dwellings and rent paid for dwellings not owned by the household but excludes utilities, housekeeping supplies, and household furnishings.

An approach that takes into account mortgage payments requires us to measure the amount paid. The difficulty—a minor one—is that doing so means adding a question in the March CPS survey.

Estimating housing subsidies

In the years since the NAS panel's report appeared, Census Bureau researchers have explored different methods of estimating the value of housing subsidies as part of ongoing research on poverty measurement, using data from the CPS and the SIPP. They estimated housing subsidies for 1991 (with the SIPP) and for 1993 and 1995 (with the CPS), using several different valuation methods.[5]

Their methods included the use of an approach developed by the Department of Housing and Urban Development (HUD) for programs such as Section 8 housing subsidies: fair market rents (FMRs). HUD sets FMRs at the 45th percentile of the rent distribution of two-bedroom apartments in a given area. Since the relevant geographic identifiers are available in the SIPP, the researchers matched the HUD FMRs to the 1991 SIPP file. They estimated subsidy amounts by subtracting 30 percent of family income from FMRs.[6]

The researchers also used variants of the method used by the Census Bureau since 1979. This method, still in use, estimates average monthly costs for unsubsidized renters in two-bedroom apartments in each of four main regions, using data from the 1985 American Housing Survey (AHS) updated by the Consumer Price Index (CPI), and taking into account such indicators of housing adequacy as bathrooms, kitchen appliances, problems (holes, rats), and satisfaction with community services. Renters are asked during the interview about actual rent paid. Average subsidy amounts for two-bedroom apartments in each of the four main regions are therefore calculated as the difference between the average market values estimated from the AHS and the average rent paid. Subsidy amounts are then assigned to subsidized renters and adjusted based on the number of bedrooms and on income.

Researchers created another model (the "updated method" in Table 2) based on newer data from the 1993 AHS. It includes a larger set of characteristics of the housing unit, utility costs, length of residence, family income, and also a large set of geographic indicators. These indicators attempt to define housing markets in a more precise way than the region indicators used in the current method.

Table 2
Effect of Housing Subsidies on Estimated Poverty Rates for All and for Selected Groups, 1991, 1993, 1995 (in percentages)

	For Total Population			Children			Elderly			Married Couple			Female Householder		
	SIPP	CPS		SIPP	CPS		SIPP	CPS		SIPP	CPS		SIPP	CPS	
Method	1991	1993	1995	1991	1993	1995	1991	1993	1995	1991	1993	1995	1991	1993	1995
Base rate[a]	12.1	15.1	13.8	19.6	22.7	20.8	9.0	12.2	10.5	6.3	8.0	6.8	35.5	38.7	36.5
Current Census method[b]	11.5	14.7	13.3	19.2	22.4	20.4	7.1	10.7	9.4	6.2	7.9	6.7	34.1	37.5	35.2
Updated method 1	11.3	14.6	13.2	18.9	22.2	20.1	7.0	10.8	9.4	6.2	7.9	6.7	33.2	37.2	34.5
Updated method 2	11.3	14.6	13.2	18.8	22.2	20.1	7.1	10.8	9.5	6.2	7.9	6.7	33.0	37.1	34.6
Fair Market Rent	11.2	14.3	13.0	18.6	21.7	19.6	6.9	10.3	9.2	6.2	7.9	6.6	32.2	35.6	33.5

Source: M. Naifeh and T. J. Eller, "Valuing Housing Subsidies in a New Measure of Poverty Using the Current Population Survey," October 1997 (esp. Tables 6, 7); M. Shea, N. Naifeh, and K. Short, "Valuing Housing Subsidies in a Measure of Poverty in the Survey of Income and Program Participation," August 1997 (esp. Tables 3–5). Both are unpublished papers, U.S. Census Bureau, and are posted on the Census Bureau web site <http://www.census.gov>.

[a]Under official definition of poverty, using SIPP and CPS as indicated.

[b]Using data from 1985 American Housing Survey, updated using CPI.

For 1993 the average monthly subsidies estimated using CPS data ranged from $160 (using the current method) to $181 and $186 (using two variants of the updated method), to $247 (using FMRs). Using 1991 SIPP data, mean amounts were $71.50 based on the current method, $114 and $111 based on two variants of the updated method, and $133 based on FMRs. Average CPS subsidy amounts are higher than SIPP subsidy amounts since the former are based on the household whereas the latter are based on the individual. But the relative differences across methods are the same for the SIPP and the CPS, even though there are important differences between the surveys.[7]

Subsidies estimated by the new model were generally consonant with, and slightly below, HUD's total expenditures on housing subsidies, increasing confidence in the reliability of the model. But researchers believe that the SIPP needs further investigation as a data source, particularly because the current surveys have problems with changes in geographic indicators—variables of particular importance in estimating interarea differences in housing subsidies.

The effects of housing subsidies on poverty

Adding housing subsidies to family resources will, obviously, reduce the official poverty rate. The question is, by how much, and how dependent are the results on the methods and data used? Table 2 shows the effects of different methods on base poverty rates for three selected years. Adding housing subsidies to income in general had an uneven effect on reducing the poverty rates of various demographic groups and in different regions, regardless of which dataset was used.[8] Estimates using variants of the new model fall between those estimated from the Census Bureau's current method and those from FMRs.

The cost of housing in defining the poverty thresholds

How should the housing component of family expenditures be calculated in deriving the poverty threshold for the reference family?

In the NAS panel's report, housing costs (not including utilities) were defined as the out-of-pocket expenditures of the reference household.[9] However, the panel recommended that other ways of defining home owners' shelter costs be examined. In a 1997 paper, BLS researchers produced and compared thresholds based on three different approaches: (1) out-of-pocket shelter costs following the panel's approach; (2) replacing home owners' out-of-pocket expenditures with the "rental equivalence value" reported by interviewed household units; and (3) replacing the mortgage interest and taxes paid by home owners with an estimated imputed rental value based on an hedonic regression but keeping the same expenditures for insurance, maintenance, and repairs.[10] The hedonic regression equation was based on selected housing and location characteristics available in CEX data.

Median shelter expenditures for a reference household consisting of two adults with two children were produced, using each of the three approaches. These expen-

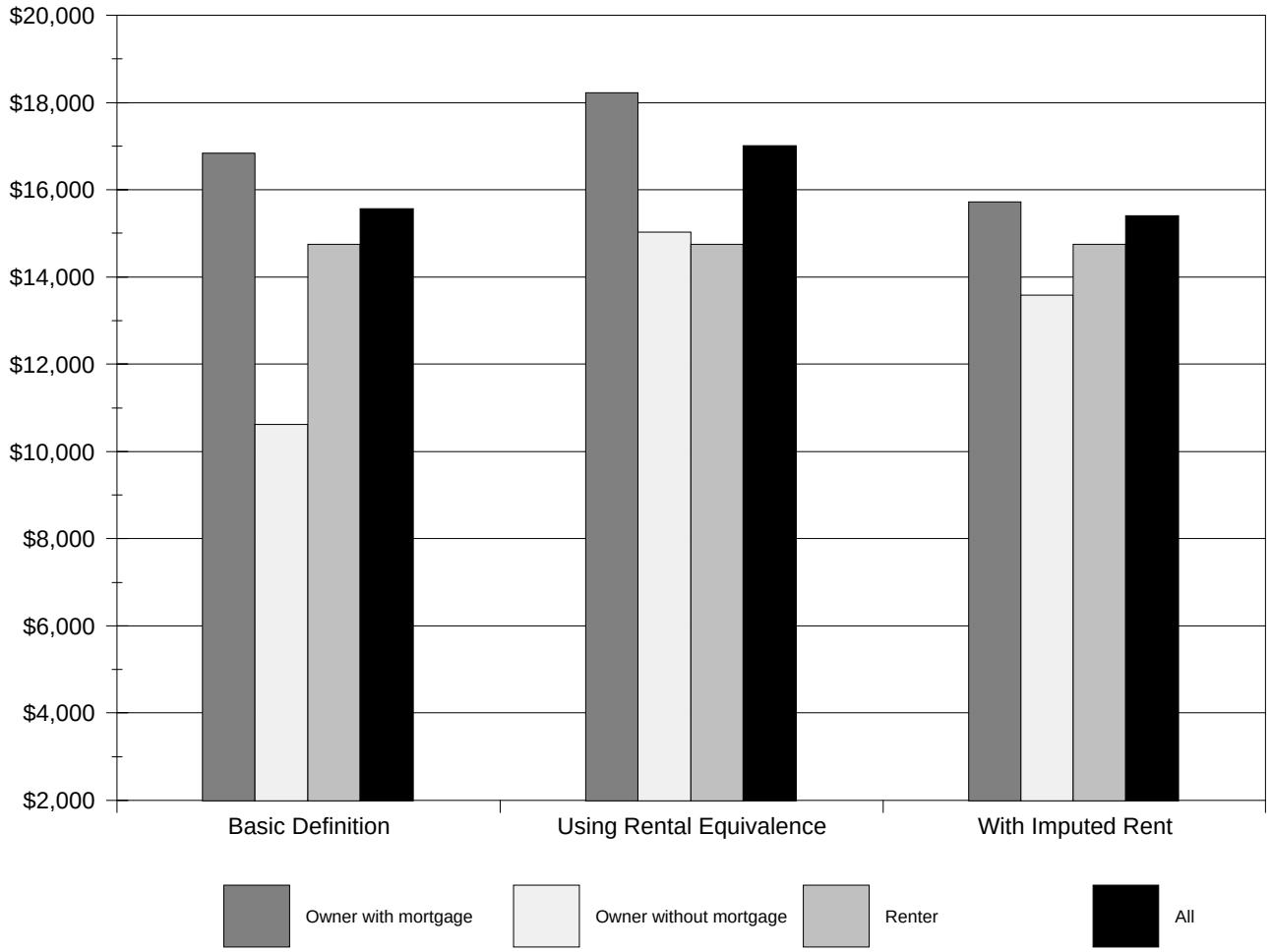

Figure 1. Poverty thresholds for renters and homeowners, using alternative measures of shelter, 1995. Basic definition = out-of-pocket shelter costs from the Consumer Expenditure Survey (CEX), including property taxes, mortgage interest, maintenance, and tenant and homeowner insurance. Rental equivalence reported in the CEX. Imputed rent = hedonic model of imputed rents that includes housing characteristics and quality, geographic area, and some owner costs.

Source: D. Johnson, S. Shipp, and T. I. Garner, "Developing Poverty Thresholds Using Expenditure Data," *Proceedings of the Government and Social Statistics Section, American Statistical Association* (Alexandria, VA: ASA, 1997), pp. 28–37.

ditures were added to the median expenditures for food, clothing, and utilities to create poverty thresholds for 1995 (see Figure 1). Briefly, the researchers found:

1. The basic definition of housing costs (out-of-pocket costs) resulted in much lower thresholds for owners without mortgages than for those with mortgages and for renters.

2. Using rental equivalence values raised the thresholds for owners without mortgages, compared to the thresholds for renters alone. However, when rental equivalences were used for all owners (those with and those without mortgages), substantially higher thresholds for the reference household resulted.

3. Use of the basic definition produced very similar thresholds to those in which expenditures were calculated with imputed rent, when all owners and renters were considered as one group. Thus the BLS researchers concluded that, at least using data for 1995, out-of-pocket expenditures would result in thresholds quite similar to those based on imputed rental values for the flow of services for home owners.

The different approaches could, however, result in differences concerning who is poor. For example, assigning an imputed rental value to home owners may understate the needs of home owners with mortgages and overstate the needs of home owners without mortgages—and thus, potentially, overstate poverty among the elderly. Thus, in concluding this part of their work, the BLS researchers asked whether the poverty threshold should allow for ownership or just for a flow of services for comparable housing. Work on this issue continues.[11] ■

[1]The NAS panel estimated that about 44 percent of the basic expenditure bundle of food, clothing, and shelter went to shelter. See C. F. Citro and R. T. Michael, eds., *Measuring Poverty: A New Approach*

(Washington, DC: National Academy Press, 1995), p. 197. David Betson notes distinctions commonly made by researchers at the BLS between the concepts "shelter" and "housing": "Spending on shelter includes mortgage payments, property taxes, and maintenance costs for owned dwellings and rent paid for dwellings not owned by the unit. Housing expenditures is a broader concept which includes shelter expenditures as well as utilities, housekeeping supplies, and household furnishings. The NAS Panel used the term 'shelter' to include what the BLS deemed as 'shelter' spending and payments for utilities." D. M. Betson, "Effect of Home Ownership on Poverty Measurement," unpublished paper, Notre Dame, November, 1995

[2]"Low-income" groups: with annual income less than $5,000 or between $5,000 and $9,999 total before-tax annual income. Figures based on 1994–95 CEX data for complete income reporters.

A second major source of housing data is the AHS. The AHS surveys apartments, single-family homes, mobile homes, and vacant housing units. AHS collects data on household characteristics, income, housing and neighborhood quality, housing costs, equipment and fuels, size of housing unit, and recent movers. National data are collected every other year, and data for each of 47 selected metropolitan areas about every four years. The survey is conducted by the U.S. Census Bureau for HUD and data are posted on the U.S. Census Bureau web site, <http://www.census.gov/>. See also Citro and Michael, eds., *Measuring Poverty*, p. 245.

[3]Betson, "Effect of Home Ownership," esp. Table 4. See also Citro and Michael, eds., *Measuring Poverty*, pp. 244–46.

[4]Much of this information is, however, collected by the Consumer Expenditure Survey (CEX).

[5]The methods used and tables of results appear in M. Naifeh and T. J. Eller, "Valuing Housing Subsidies in a New Measure of Poverty Using the Current Population Survey," October 1997 (esp. Tables 6, 7); M. Shea, N. Naifeh, and K. Short, "Valuing Housing Subsidies in a Measure of Poverty in the Survey of Income and Program Participation," August 1997 (esp. Tables 3–5). Both are unpublished papers by Census Bureau researchers and are posted on the Census Bureau web site (see note 2).

[6]HUD estimates FMRs annually for 341 U.S. metropolitan areas and over 2,400 counties that are outside metropolitan areas. FMRs are defined as gross rent (including utilities) at the 45th percentile of the rent distribution of "standard quality" rental housing units. HUD also decided that Section 8 renters ought to pay 30 percent of their income toward a rental amount that cannot exceed the FMR for that area. Base-year data are drawn from the 1985 AHS, which provides estimates for 44 large metropolitan areas that include about half of the nation's rental housing stock, the decennial census, and local telephone surveys. These estimates are updated by the local-area CPI, where it is available, or by estimates of price changes from the HUD telephone surveys. See also Citro and Michael, eds., *Measuring Poverty*, p. 114.

[7]There are also differences between the data collected by the two surveys. The SIPP counts less than a full year's receipt of housing subsidies, but the CPS does not. The SIPP also reports that more persons received subsidies than the CPS.

[8]This was also true for regions, which are not shown in Table 2. For instance, using the fair market rents and CPS data for 1995, the overall poverty rate dropped from 12.5 to 10.8 percent in the Northeast; in the Midwest, it dropped from 11.0 to 10.6 percent. See Naifeh and Eller, "Valuing Housing Subsidies," Table 7b.

[9]For renters, these costs included rent paid, rent as pay, tenant's insurance expenditures, and expenditures for maintenance and repairs. For home owners, they were defined as mortgage interest, taxes, insurance, maintenance, and repairs.

[10]D. Johnson, S. Shipp, and T. I. Garner, "Developing Poverty Thresholds Using Expenditure Data," *Proceedings of the Government and Social Statistics Section, American Statistical Association* (Alexandria, VA: ASA, 1997), pp. 28–37. See also the article by Short and colleagues in this *Focus*, "Putting the Experimental Poverty Measure into Practice." Rental equivalence values are collected in the CEX data by asking the following question of home owners: "If someone were to rent your home today, how much do you think it would rent for monthly, unfurnished and without utilities?"

[11]This work will be reported in "Experimental Measures of Poverty from the Current Population Survey, 1991–1997," U.S. Census Bureau P60 report, forthcoming 1998.

Geographic differences in the cost of living

Ideally, poverty thresholds would be adjusted for regional differences in the costs of all of the goods that form part of the basic bundle of family expenditures—food, clothing and shelter—in the alternative poverty measure suggested by the National Academy of Sciences (NAS) panel that studied the measurement of poverty. But official data are still not available for items in the basic bundle, other than for shelter.[1]

Geographic differences in the cost of housing are known to be substantial and have drawn much analytic attention. The chief methodological challenge, the NAS panel noted, has been to devise methods that estimate differences in prices per se and that do not also reflect differences in the characteristics or quality of the housing being priced.[2] The panel discussed two main methods of calculating differences in housing costs across geographic areas: (1) HUD Fair Market Rents (FMRs) and (2) hedonic regression methods that attempt to isolate the contribution of individual characteristics of the housing unit to its price in order to capture the effects of geographic location alone, without confusion with other qualities.[3]

1. The FMR methodology for calculating is straightforward and nationally applicable (see this *Focus*, p. 32), and the census supplies adequate sample sizes and national consistency of data, even if only for every tenth year. One problem noted by the NAS panel is that FMRs do not fully adjust for interarea differences in the quality of housing. Because only recent movers are surveyed, rents are based on only one-third of the housing stock; further, in some areas they are adjusted upward because of legislative mandates.

2. Hedonic regression pricing models attempt to relate observed market prices of housing in particular areas to the prices of the individual characteristics of the housing: age and physical condition, number of rooms, and the presence of central air conditioning, for example. They also include neighborhood characteristics, mostly sociodemographic. Critics point out that the choice of characteristics to include in such models is arbitrary, and the rankings of metropolitan areas often depend upon which city is used as the index city. Bureau of Labor Statistics (BLS) researchers have constructed a model that, they believe, goes some way toward answering these criticisms.[4]

The NAS panel demonstrated that not only do different methods yield different results, but, even more disconcerting, researchers have estimated different index values for the same area even when using similar methods and data. Nevertheless, all these indexes do make it clear that the cost of housing differs substantially from region to region and that differences within regions are highly correlated with population—larger cities or metropolitan areas are more expensive than smaller areas. None of this is exactly news to renters, homeowners, or large organizations. The federal government and many corporations routinely adjust salaries and provide cost-of-living allowances for employees in high-cost areas.[5]

In order to develop poverty thresholds in which interarea differences were adequately quantified, the panel created its own index of housing costs. Using 1990 census data and HUD FMR procedures, it first calculated an index for each of the 341 metropolitan areas and for nonmetropolitan areas within each state and tested different aggregations to see which worked best.[6] The panel's ultimate recommendation was to use indexes for six different population size categories (five for metropolitan areas and one "nonmetropolitan" area) within the nine census regions. These index values would be applied to the 44 percent of the poverty threshold that was estimated to represent shelter costs.

The panel considered its proposed index only "a modest step in the right direction." The method did allow for adjustments for differences in housing costs in metropolitan areas of different sizes, but its estimates of housing cost variations within large areas did not really take into account more local differences—for example, between central cities and suburbs, or between Alaska and Hawaii and the rest of the Pacific region. The panel also thought that its index was only a crude measure of the differences in housing price that did not also reflect differences in housing quality. In the ten years between decennial censuses, furthermore, particular areas might move from housing boom to housing bust, or vice versa. The panel called for research on ways to update estimates of housing cost variations on a more frequent basis. ■

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[1]However, experimental interarea price indexes for the items in the basic bundle are available from the BLS, though not for all geographic areas. Research on this topic continues. See, e.g., M. Kokoski, P. Cardiff, and B. Moulton, "Interarea Price Indexes for Consumer Goods and Services: An Hedonic Approach Using CPI Data," Working Paper 256, Bureau of Labor Statistics, July 1994. See also this *Focus*, p. 10, n. 11, and C. F. Citro and R. T. Michael, eds., *Measuring Poverty: A New Approach* (Washington, DC: National Academy Press, 1995), pp. 187–88.

[2]Citro and Michael, eds., *Measuring Poverty*, pp. 188–201. This brief description of methods is based upon the panel's analysis.

[3]The panel also reviewed methods used by the BLS in generating their Family Budgets, now quite out of date (last published in 1981).

[4]Kokoski, Cardiff, and Moulton, "Interarea Price Indexes."

[5]The hardships brought by military postings to expensive areas were recognized by 1996 and 1997 Department of Defense appropriations of approximately $17 million for cost-of-living allowances to service personnel who were posted to areas in the continental United States where payments for goods and services exceeded the national average by 9 percent. *Defense Issues* 11, no. 24.

[6]The decennial census provides national data; the CPS is only available for selected metropolitan areas. Citro and Michael, eds., *Measuring Poverty*, pp. 196–97.

What is it to be poor? Definitions of economic poverty

"Annual income twenty pounds, annual expenditure nineteen nineteen six, result happiness. Annual income twenty pounds, annual expenditure twenty pounds ought and six, result misery."

Mr. Micawber, in *David Copperfield*

For Mr. Micawber, poverty is a simple cash equation. But researchers who see poverty in economic terms—defining the poor, for example, as those who lack the resources for basic subsistence—have, in general, a far more complex view of resources. They include money, certainly, and the material assets money can buy, but also physical and human capital and time. There is, moreover, a strong contingent which believes that the argument from "subsistence" does not address some central qualities of being poor.[1] These researchers have sought to define poverty more in terms of "outcomes," as expressed in poor living conditions, ways of life, customs, and attitudes. In the end, a definition may be chosen less on its absolute merits than on the pragmatic ground that appropriate data exist, on the political ground that the measure meets widely acceptable social values, or even on historical grounds.

In discussing the definitions of economic poverty, a useful starting point is a survey of poverty definitions by Dutch economist Aldi Hagenaars and her colleague Klaas de Vos. They saw these definitions as fitting into three broad categories:

1. Poverty is having less than an objectively defined, absolute minimum.

2. Poverty is having less than others in society.

3. Poverty is feeling you do not have enough to get along.[2]

All three categories have some relationship with income, which clearly plays a role in determining whether a household is poor. They do not, however, necessarily start by assuming a specific poverty line that is defined by income. Instead, they define poverty by some other proxy of well-being, such as what people have, or what they think they need. The first two categories define poverty as an objective situation, whereas the third category defines it subjectively.

Within each of these three groupings, Hagenaars and de Vos distinguished several variant definitions. In the first category, perhaps the best-known example is the official U.S. poverty line, which defines the absolute minimum in terms of a basic food budget, multiplied by three to take care of other essential items such as housing and clothing.

Definitions in the second category may be framed in terms of income or of commodities. Households are poor when they lack certain commodities that are common in their society. In modern industrialized societies, these go beyond shelter and food, and might include durable goods such as a car, a color television, a refrigerator, a washing machine.

The third category includes income-based, consumption-based, and expenditure-based definitions. For income, the question is classically framed as the so-called "minimum-income question." It usually takes a form rather like the following: "What do you think would be just sufficient income to allow your household to make ends meet?" For consumption, the question is phrased as follows: "How much do you think you would have to spend in order to provide the basic necessities for your family?"

Hagenaars and de Vos were able effectively to demonstrate, first, that the choice of definition can make a quite significant difference in the number classified as poor. From their three categories, they defined a set of eight different indicators and applied them to the same dataset (a 1983 survey of over 12,000 households in The Netherlands). Despite the relative homogeneity of Dutch society compared, say, with the United States, the range of results they came up with was astonishingly wide. Depending on the definition used, poverty rates for the group as a whole ranged between 33.5 and 5.7 percent. Using a "durable-goods" definition (category 1, above), poverty among single, working people rose to an improbable 42.4 percent (the rate for the same group was 7.5 percent according to a "basic needs," U.S.-style definition). This difference reveals one major weakness of durable-goods definitions. Singles are often young people who have not yet settled down and cannot be expected to own an array of durables. Many may still be studying. By all the other definitions, they are much better off, for example, than single-parent families, who are systematically worse off than other groups by most criteria.

Hagenaars and de Vos considered that definitions based on consumption were, in general, inadequate, because they were not able to distinguish whether the observed consumption behavior was grounded in poverty or in health, personal tastes, or age. The recommendations of the National Academy of Sciences (NAS) study panel on the measurement of poverty do, however, incorporate consumption measures for a limited bundle of goods and services into their threshold calculations (see p. 2). The NAS panel also reviewed subjective measures of poverty, but concluded that methodological problems, such

as sensitivity of the results to the wording of questions and the large variation in responses, made the approach unsuitable for determining the official measure.[3]

Among all definitions, Hagenaars and de Vos believed, the "basic needs" definition and the subjective "just sufficient" definition were best able to identify social subgroups at high risk of poverty.[4] Even comparing only these two definitions, they found quite different results: defined by "basic needs," 19.4 percent of single elderly people were poor, but defined by "just sufficient" income, 36.1 percent were poor.

Given these variances, it is perhaps hardly surprising that most *official* definitions of poverty have been framed in terms of income. But the use of income has a fundamental and often noted drawback: material deprivation and poverty are expressed not so much by a family's income as by its inability to acquire the goods and the services that family members need. Moreover, income inequality and material deprivation appear to be only weakly related. Susan Mayer and Christopher Jencks point out that "economic inequality has many dimensions, of which income is only one. Legislators have always known this, and have developed a wide range of policies that seek to reduce material inequality among people whose incomes are very unequal. Scholars and policy analysts who want to assess trends in economic inequality need to become at least as eclectic as the legislators whose behavior they seek to influence."[5] Thus analysts have, over and again, returned to the possibilities inherent in categories 2 and 3, above, seeking ways to contain and adjust for the ambiguity and subjectivity that undermine such approaches.[6]

At the end of the 1990s, it seems possible that these efforts may lead to a better understanding of economic poverty and to better tools for its measurement. In the articles that follow, Peter Saunders, director of the Social Policy Research Centre at the University of New South Wales, Australia, describes efforts to derive more reliable subjective measures and to create better budget standards to benchmark deprivation in Australia, and Thesia Garner and colleagues from the U.S. Bureau of Labor Statistics and the Census Bureau report on a current study aimed at improving methods for the subjective assessment of economic well-being. ■

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[1]Many now would call into question the once common assumption that "the poor are just like everybody else, except that they have less money." See, e.g., S. E. Mayer, *What Money Can't Buy: Family Income and Children's Life Chances* (Cambridge: Harvard University Press, 1997), p. 3

[2]A. Hagenaars and K. de Vos, "The Definition and Measurement of Poverty," *Journal of Human Resources* 23, no. 2 (Spring 1988): 211–21. See also *Focus* 17, no. 2 (Fall/Winter 1995): 28–30, reporting on the Aldi Hagenaars Memorial Conference, held August 28–29, 1994, in Leiden, The Netherlands.

[3]C. F. Citro and R. T. Michael, eds., *Measuring Poverty: A New Approach* (Washington, DC: National Academy of Sciences, 1995), p. 50.

[4]The authors also included the official (Dutch) poverty definition among their "best" definitions (see their Table 2, p. 219).

[5]S. E. Mayer and C. Jencks, "Recent Trends in Economic Inequality in the United States: Income versus Expenditures versus Material Well-Being," in *Poverty and Prosperity in the USA in the Late Twentieth Century*, ed. D. B. Papadimitriou and E. N. Wolff (Macmillan Press, 1993), p. 181.

[6]In the early 1980s, for example, Eugene Smolensky, Sheldon Danziger, and Jacques van der Gaag, all then working at the University of Wisconsin–Madison and affiliated with IRP, were actively investigating consumption-based and subjective measures of poverty; see, for example, S. Danziger, J. van der Gaag, M. K. Taussig, and E. Smolensky, "The Direct Measurement of Welfare Levels: How Much Does It Take to Make Ends Meet?" *Review of Economics and Statistics* 66 (1984): 500–505, and D. Colasanto, A. Kapteyn, and J. van der Gaag, "Two Subjective Definitions of Poverty: Results from the Wisconsin Basic Needs Study," *Journal of Human Resources* 19 (1984): 127–37.

Toward a better poverty measure

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In the United States, criticism of the official poverty measure has focused upon its inadequacies and on what measure might replace it. Critics have not, in general, been at odds over the usefulness of such measurement. In Australia, the comparable (though semiofficial) poverty measure, known as the Henderson poverty line, has become a subject of greater public controversy.[1] Although the debate over the Henderson line has too often dissipated its energies in squabbles over statistical minutiae, it has nonetheless raised fundamental issues concerning the meaning of poverty and what should be done about it. In this article I discuss research that explores alternatives to the current Australian measure of poverty, seeking both a viable subjective approach and more adequate objective measures of deprivation.

A definition of poverty that I find a useful starting point for considering alternative measures is that offered by English researchers Joanna Mack and Stewart Lansley, who describe poverty as *an enforced lack of socially perceived necessities*.[2] This is admirably brief, and it embodies two ideas that I believe to be central to any realistic definition of poverty: that poverty involves involuntary restrictions on choice, and that it is socially specific, grounded in a particular society or culture. The second point has a corollary: a measure of poverty is not only socially determined, but must also meet with community agreement if it is to have social legitimacy. Translating these criteria into a practical measure of poverty has proven to be no easy task.

Subjective approaches to a poverty measure

Subjective assessment holds out the promise of articulating what poverty means to those most directly affected by it. It thus potentially meets the two criteria above. And it also accords well with the often expressed desire for a measure that "removes the concept of poverty from an arbitrary exercise of judgement by 'experts,' politicians, and governments . . . and opens it up to a more democratic representation of interests."[3]

The subjective approach to poverty is sometimes referred to as the "consensual approach," but that is misleading. When broad sections of the community are asked what they understand poverty to mean there is no consensus in the replies, no matter how precisely the questions are worded. For instance, the Social Policy Research Centre (SPRC) asked a sample of Australians the "minimum-income question" (MIQ)—what was the minimum income they needed to make ends meet? Even after we took into account differences in actual incomes and family circumstances among the participants, we were never able to explain more than 30 percent of the variation in the answers. A poverty line thus derived will surely be too sensitive to its particular methodology to be useful for policy purposes.

We achieved only slightly more promising results when we used a more homogeneous (but less socially representative) sample. We asked the MIQ of clients of the federal Department of Social Security (DSS)—389 young unemployed people and approximately 1,000 participants in a longitudinal study of the partners of unemployed men.[4] Preliminary results indicate that the mean family income considered "enough to make ends meet" was around Australian (A) $400 a week, or an annual income of US$15,600, as of June 1997.[5] But answers ranged between A$200 and A$500 per week, showing that perceptions of a "minimum" income vary rather a lot, even among those whose actual incomes and standards of living are broadly similar.

We asked the participants in the DSS survey other questions designed to elicit what poverty means for those who are actually experiencing it. Most of our respondents (almost 70 percent) explained it in one of two ways: as "not having enough to buy basics like food or clothing," and as "having to struggle to survive each and every day." Less than 2 percent opted for a relative definition—that poverty meant "having a lot less than everyone else." These answers suggest a surprisingly modest set of aspirations. DSS clients want enough to get by, and don't expect much more. But their income estimates in response to the MIQ are not altogether consistent with this view: most DSS clients say that they need more money (often a good deal more) in order to make ends meet.

For all their ambiguities and inconsistencies, these answers suggest that this kind of research may well be helpful in trying to identify poverty and in formulating policy. But its usefulness will clearly be greater if answers to subjective questions can be linked to objective indicators of deprivation. Below, I examine three different approaches, in light of my two criteria: that poverty is a situation in which choice is severely restricted, and that the judgments required to operationalize the concept of poverty must draw upon community understanding of what poverty means.

The Australian social welfare system

In Australia, unlike most other industrialized countries, social welfare benefits are not based on contributions made to the system. Instead, benefits are funded from general revenue and entitlement is related to a person's current situation (for example, unemployed, elderly, sick) as well as to income and assets (other than housing). A variety of allowances are available to qualifying individuals and families, including age pension, family payments (adjusted for number of children), guardian allowance (for single parents), newstart allowance (for the unemployed), disability support, and rent assistance. Many pensioners also receive concessions on their pharmaceutical costs and pay subsidized rents in public housing to state governments. Health care is publicly and universally provided; there are copayments and private and public supplementary insurance programs that expand the choice of services and physicians. Updated details of various Australian pensions and allowances are available on the World Wide Web from the Brotherhood of St. Laurence at <http://home.vicnet.au/~bstl/pov981.htm> or from the federal Department of Social Security at <http://www.dss.gov.au>.

The Henderson poverty line was formulated 25 years ago for the Commonwealth Commission of Inquiry into Poverty (its *First Main Report: Poverty in Australia*, in 1975, was authored by Ronald Henderson). It is updated quarterly to reflect the amount of money needed by families of various sizes to cover basic living expenses, including housing. For a couple with two children and the household head working, this level was A$450 a week as of June 1997 (A$405 if the head was not in the workforce). This equates to an annual income of US$17,524 (1997 exchange rates). For 1997, the U.S. poverty guideline for a family of four was $16,050.

Objective measures of deprivation

Income and expenditure measures

The disadvantages of income and expenditure measures of poverty have been widely canvassed. The income measure of poverty only indirectly captures the material deprivation and social isolation that are at the heart of poverty for those who experience it. Amartya K. Sen comments: "The extent of real inequality of opportunities that people face cannot readily be deduced from the magnitude of inequality of *incomes*, since what we can or cannot do, can or cannot achieve, do not depend just on our incomes but also on the variety of physical and social characteristics that affect our lives and make us what we are."[6]

In an Australian context, any analysis of trends in living standards will be extremely misleading if it does not take into account the policy-induced switch from money to what is called "social wage income"—the value to families of government cash and noncash benefits in the areas of social security, education, health, and housing. This has meant that improved living standards have been accompanied by reduced choice over how income is spent and a more tenuous understanding of what an increase in income itself may signify.

An alternative to income-based measurement which continues to receive attention is an expenditure-based measure. Peter Travers and Sue Richardson describe its advantages thus: "Expenditure generates the flow of services from which material well-being is derived . . . . Generally income is valued not for its own sake but for the ability it provides to buy goods and services. It is thus more satisfactory to measure directly the level of goods and services bought."[7] But there are a number of limitations to using expenditure to gauge the standard of living. What actually matters is the level of *consumption* rather than of expenditure per se. Where a low level of expenditure represents the choice of consumers, we cannot draw inferences for their level of living. This is particularly important in the context of poverty, which is characterized by constraint, not by preference. Wealthy misers may spend little, but this does not make them poor.

It may be useful to consider income and expenditure not as substitute measures of well-being, but as complementary. Using expenditure to supplement rather than replace income allows some account to be taken of the role of choice in distorting poverty measures derived from either alone. This is especially so if our interest lies in the living standards of particular groups in the population, for whom estimates of poverty have proved to be particularly sensitive to whether income or expenditure is used. For example, expenditure poverty among single people below pension age (in Australia, age 65 for men and 61 for women) is less than income poverty.

The constrained-income approach

If people are constrained by lack of resources from meeting all of their basic needs, they can legitimately be defined as poor. In constructing a measure of poverty, it is useful to think of a hierarchy of needs, beginning with food, clothing, shelter, and health, and extending upward from there. Hunger and homelessness demonstrate that some cannot adequately meet even the most basic needs.

Once basic needs are met, other coping strategies come into play. Those who cannot afford new clothes buy second-hand clothing or make do. Furniture or household appliances that wear out or break down are not replaced or repaired. Insurance policies are allowed to lapse, and large utility and other bills are a constant source of anxi-

ety. Some people resort to any means (including crime) to increase their income.

These patterns suggest that one possible way of measuring deprivation is to identify what we can call a "constrained expenditure level," at which all income is spent in meeting basic needs, and none of it is devoted to purchasing or maintaining durable items, nor to expenditure on luxury items. Such an inability to engage in any discretionary expenditure links this method to the idea that poverty is an involuntary constraint on choice.

This method utilizes data on the absence of *expenditures* on durable goods and luxury items as a way of identifying inadequate income, as opposed to using information on the lack of *ownership* of certain durable items to indicate deprivation. It thus allows us to take account of the medium- and longer-term perspectives within which people make purchases of durable items.

We have estimated three different formulations of this method. The first includes expenditures on all of the principal household durables, vehicles, and the main electrical and recreational durable items. The second also includes a range of expenditures on clothing, insurance, repairs, and vehicle accessories. The third adds expenditures on such items as gardening equipment, vacations, private school fees, gifts, and charitable donations. These expenditure constraints are in fact very stringent. According to the third formulation, the household's income is such that nothing whatever is spent on the major household durables, nor on such items as tablecloths, cutlery, light bulbs, household repairs, clothes (except jeans, underwear, and children's clothing), nor even a pack of playing cards. No holidays of more than four days are taken, and almost no expenditures on insurance and repairs are incurred.

We tested these formulations with data from the Australian Household Expenditure Survey for 1988–89. As explanatory independent variables, we used total household commodity and service expenditures and the demographic, geographic, and economic characteristics of each household. We then compared our constrained expenditure estimates for different groups in the population with the semiofficial (Henderson) poverty line estimates for 1988.[8] In general, the constrained expenditure values for single people and couples, with or without children, are higher than the poverty line, although as family size increases, the difference narrows and finally disappears. For sole parents and the elderly, the constrained incomes are lower than the poverty line, although again the difference narrows with increasing family size. This partly reflects the fact that sole parents and the aged spend much less on durables and luxuries than other Australians, the former in response to what they may see as a temporary period of low income, the latter because of their stage in the life cycle.

The budget standards approach

The SPRC is currently engaged in a project to create more reliable expenditure measures by deriving budget standards that focus on the flow of expenditure over a period of time rather than on ownership of durable goods at a point in time. The research has been funded by DSS as part of its comprehensive study of adequacy. The research will develop a low-cost budget that may eventually form the basis of a revised poverty standard. The value of such research, I believe, is that it can bring together the variety of normative judgments about living standards that already exist in the community. Combined with behavioral data that reflect prevailing community values and practices, these normative judgments are analyzed within a systematic framework that translates needs into budgets, budgets into costs, and costs into expenditures and hence incomes.

This statement raises more questions than it answers, of course. First are the difficulties of obtaining the data. The task of deriving budget standards has been described, perhaps too generously, as "nothing less than a ghastly chore."[9] Establishing what kinds of budgetary information are available and how, when, and whether it can be obtained has proved to be expensive and very time-consuming.

The data problems pale into insignificance when compared to some of the conceptual issues. Judgments made by a wide range of experts working in many different fields—nutritionists, housing experts, health care specialists, financial counselors—are nonetheless still normative. The National Academy of Sciences panel that studied the U.S. poverty measure expressed concern that such expert judgments can be misleading, because they convey an unwarranted impression of objectivity.[10]

On what basis are normative judgments to be made, when none are available? How can one avoid making arbitrary decisions that are difficult to defend and may have far-reaching consequences, not immediately apparent? We have tried to address this issue by establishing guidelines such as the "75 percent rule." This specifies that if 75 percent of the population own a particular good or use a particular service, then that good or service is regarded as a "socially defined and endorsed necessity" and is included in the low-cost budget. But should this rule be applied to the population as a whole or separately to different subgroups? Probably more than 75 percent of young Australian families, for instance, now own a computer, but fewer than 75 percent of all households own one. Should the rule be adjusted in such cases? If so, what new rule should be used to determine exceptions to the old rule? For each problem for which a sensible solution can be found, another equally difficult one emerges.

Yet determining standards of adequacy requires that some judgments be made. The issue, then, is how this can

be done convincingly, and in a way that combines simplicity and transparency. Budget standards score rather low on simplicity, but they do offer a framework that, although complex, is transparent and flexible. In particular, they can be tested against actual behavior and modified in the light of comment and feedback from consumers. Thus they potentially combine technical expertise with community endorsement. We are attempting to achieve this aim by using focus groups to provide feedback on our preliminary budgets and to explore how relevant these standards are to groups with specific needs—the disabled, noncustodial parents, or rural residents, for example.

Budget standards alone will not resolve all of the issues surrounding the measure of poverty and the determination of adequacy. But they play a significant role in developing a framework for benchmarking adequacy and in informing the ongoing debate over income poverty. ■

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[1]This article summarizes P. Saunders, "Poverty, Choice, and Legitimacy," Discussion Paper 76, Social Policy Research Center, Sydney, March 1997. See the box, p. 40, for a brief characterization of the Australian social welfare system and the Henderson poverty line.

[2]J. Mack and S. Lansley, *Poor Britain* (London: G. Allen & Unwin, 1985), p. 39.

[3]Mack and Lansley, *Poor Britain,* p. 47, cited in R. Walker, "Consensual Approaches to the Definition of Poverty: Towards an Alternative Methodology," *Journal of Social Policy* 17:221. [Ed. note: See also the next article, p. 43, for the comments of the 1980 expert committee of the U.S. Bureau of Labor Statistics.]

[4]The study is investigating responses to recent changes in social welfare programs. Among the young unemployed, whether living at home or not, income estimates produced in response to the MIQ exceeded respondents' actual incomes, generally by between 30 and 80 percent. Many respondents had difficulty in answering the question, and about 10 percent chose not to.

[5]For 1997, the U.S. poverty guideline was $7,890 for a single individual. The NAS panel compared poverty thresholds for *two-adult, two-parent families* set by various methods. These included two subjective thresholds, one of $17,700 for 1989 (Gallup Poll) and another of $17,200 for 1993 (General Social Survey). See C. F. Citro and R. T. Michael, eds., *Measuring Poverty* (Washington, DC: National Academy of Sciences, 1995), p. 47.

[6]A. K. Sen, *Inequality Reexamined* (Oxford: Oxford University Press, 1992), p. 28.

[7]P. Travers and S. Richardson, *Living Decently: Material Well-Being in Australia* (Melbourne: Oxford University Press, 1993), p. 24.

[8]The detailed item lists are presented in the Appendix and results for our regressions in Tables 4 and 5 of the full article.

[9]J. Bradshaw, "Rediscovering Budget Standards," in *The European Face of Social Security,* ed. J. Berghman and B. Cantillon (Avebury: Aldershot, 1993), p. 72.

[10]Citro and Michael, eds., *Measuring Poverty,* pp. 32–34.

An Invitation to Minority Scholars in Poverty Research

The Institute for Research on Poverty offers the opportunity for minority scholars in the social sciences to visit IRP, interact with its faculty in residence, and become acquainted with the staff and resources of the Institute. The invitation extends (but is not restricted) to those who are in the beginning years of their academic careers. The intent of the program, which is supported by the University of Wisconsin-Madison, is to enhance the skills and research interests of minority scholars and to broaden the corps of poverty researchers.

Mark D. Turner, a Research Associate at The Urban Institute, visited IRP as a minority scholar in March 1998 (see Visitors, p. 56).

Visits of up to two weeks duration by two scholars can be supported during the academic year 1998–99. The scholars will be invited to give a seminar, to work on their own projects, and to confer with an IRP adviser, who will arrange for interchange with other IRP affiliates.

Applications will be reviewed, and the visitors selected, by the IRP Executive Committee. Interested scholars should send a letter describing their poverty research interests and experience, the proposed date(s) for a visit, a current curriculum vitae, and two samples of written material, to Betty Evanson, Institute for Research on Poverty, 1180 Observatory Drive, Madison WI 53706; fax: 608-265-3119; e-mail evanson@ssc.wisc.edu.

Subjective assessments of economic well-being: Cognitive research at the U.S. Bureau of Labor Statistics

Most American adults are confronted daily with the delicate task of balancing their income and expenses, and it seems reasonable to expect them to have a rather well-developed budgetary sense. There has been consistent interest in using such perceptions to create measures of economic well-being. In 1980, for instance, an expert committee advising the Bureau of Labor Statistics (BLS) noted that "there is a general consensus about how much it takes for an ordinary family to 'get along'—perhaps not an exact figure, but rather a range or 'band' of total expenditure levels." The committee recommended that the BLS "evaluate and perfect" a survey methodology that would move away from the notion that experts should define what people need to get along and would instead seek stable, reproducible estimates of what ordinary people experience with their family budgets.[1]

Subjective questions such as "How much income does it take for you and your family to make ends meet?" and "How would you evaluate your income, say, on a scale from very good to very bad?" have been part of a number of government and academic surveys. For example, versions of the "minimum-income question" (e.g., question 1, below) have been asked in government surveys in Canada and the United States, among other countries. Data from such questions have been used to produce equivalence scales and subjective poverty thresholds and as a benchmark for assessing more objective measures of well-being.[2] But their reliability and validity have rarely been examined.[3]

For some years now, the U.S. government has included subjective assessments of health status and health-related work limitations in federally sponsored surveys. It has not so readily endorsed subjective measures of economic well-being. The government's first foray into the subjective assessment of income came when two subjective questions (questions 1 and 4 from the list below) were included in the 1979 Research Panel of the Income and Survey Development Program of the Census Bureau. In 1982, on the recommendation of the 1980 expert committee, the minimum-income question was asked in the Consumer Expenditure Interview Survey. Before approving further data collection, however, the Office of Management and Budget (OMB) recommended that laboratory testing be conducted to improve our understanding of what people were actually thinking when they attempted to answer such questions.

In 1995, in response to OMB's recommendation, BLS began an exploration of subjective assessments of economic well-being. As part of an agreement with OMB to examine these measures, the Census Bureau was allowed to ask subjective assessment questions in a topical module of the Survey of Income and Program Participation (SIPP).[4] Data were collected in 1995–96. The focus of this summary is the BLS work.

The BLS cognitive study

The BLS cognitive study focused on the following: how people interpret such terms as "minimum income," "necessary expenses," and "making ends meet," how accurately they describe their economic situation, and how

This summary of BLS research is based upon the following papers:

T. I. Garner, L. Stinson, and S. Shipp, "Affordability, Income Adequacy, and Subjective Self-Assessments of Economic Well-Being: Preliminary Findings," paper presented at the Association for Consumer Research annual conference, October 1996 (revised November 1996).

T. I. Garner, L. Stinson, and S. Shipp, "Measuring Subjective Economic Well-Being: Economic Foundations and Cognitive Methods," paper presented at the American Association for Public Opinion Research, May 1997.

L. Stinson, *The Subjective Assessment of Income and Expenses: Cognitive Test Results*, Final Report, Bureau of Labor Statistics, Washington, DC, January 1997.

L. Stinson, "Using the 'Delighted/Terrible' Scale to Measure Feelings about Income," paper presented at the American Association for Public Opinion Research, May 1997.

D. M. Steiger, T. Manieri, and L. Stinson, "Subjective Assessments of Economic Well-Being: Understanding the Minimum Income Question," paper presented at the American Association for Public Opinion Research, May 1997.

Thesia I. Garner is a research economist in the Division of Price and Index Number Research and Linda Stinson is a research psychologist in the Office of Survey Methods Research at the Bureau of Labor Statistics, U.S. Department of Labor. Stephanie Shipp was the Branch Chief of Information and Analysis in the Division of Consumer Expenditure Surveys at the Bureau when this study was conducted. Shipp is currently Assistant Division Chief for Labor Force and Transfer Program Characteristics, Housing and Household Economics Division, U.S. Bureau of the Census. D. M. Steiger and T. Manieri were with the University of Michigan Survey Research Center at the time of this study. The views expressed in this article are those of the authors and do not represent the position of the Bureau of Labor Statistics.

difficult they find the process of answering the questions. Garner and her colleagues anticipate that results from these cognitive tests can someday be integrated with the field data collected by the SIPP to assist in understanding such questions.[5] They hope that the study will give analysts better insight concerning how to combine subjective assessments and objective measures of economic well-being, broaden their array of economic statistical measures, test theories of consumption over the life cycle, produce sufficiency thresholds (what does it take to get along?), and design and implement better maintenance and transfer programs for the neediest in society.

The BLS study was designed to lay the groundwork for reliability and validity testing. These are related to "nonsampling error." Nonsampling error is a serious problem in any attempt to measure subjective phenomena. The respondent's mood or experiences—or the weather—may change. The context of the interview itself, the order of the questions, and the personality of the interviewer may affect the way a respondent answers. Given such circumstances, it may be difficult, if not impossible, to determine whether different subjective assessments represent real differences or real changes, or are merely momentary blips—nonsampling error. If subjective questions are to produce reliable and useful answers, they must be framed in clear, precise, and unambiguous language and must contain response categories that are not arbitrary and concepts that are clearly defined.

Through one-on-one individual interviews and focus groups at five sites across the nation, BLS researchers and a contractor (the University of Michigan Survey Research Center) conducted exploratory laboratory work to understand how respondents understood the following four self-assessment questions and how study participants tried to create their answers:

1. *The Minimum-Income Question (MIQ)*: "Living where you do now and meeting the expenses you consider necessary, what would be the smallest income (before any deductions) you and your family would need to make ends meet?"

2. *The Minimum-Spend Question (MSQ)*: "In your opinion, how much would you have to spend each month in order to provide the basic necessities for your family?"

3. *The Income Evaluation Question (IEQ)*: "Which after-tax monthly income would you, in your circumstances, consider to be very bad? bad? insufficient? good? very good?"

4. *The Delighted/Terrible Question (D/T)*: "Which of the following categories best describes how you feel about your family income (or your own income, if you are not living with relatives)? Do you feel delighted, pleased, mostly satisfied, mixed, mostly dissatisfied, unhappy, or terrible?"

These are not new questions; all have been used in previous research. What *is* new is their systematic exploration by a federal government agency.

Because attitudes about income and expenditures are expected to be related to income and family structure, the BLS exploratory work included different household types: (1) single adults with no child under 18 years of age, (2) adults (either single or sharing expenses with another adult) with children under 18 living with them, and (3) adults sharing expenses, but without any children under 18 in the house. Using income data from the Current Population Survey, researchers established three income categories—low, medium, and high—in each test site and drew respondents from all categories. One-on-one interviews and focus groups were conducted at five sites: Baltimore, Detroit, Los Angeles, Miami, and Keyser, West Virginia. Results from all of these areas are currently available in a report prepared by Linda Stinson.[6]

In general, results from the BLS study can be grouped into three main categories: ambiguity in the language, complexity in the questions, and "new" language.

Ambiguity in the language

Both the MIQ and the MSQ appear to be plagued by similar problems. At the heart of the MIQ is the thorny problem of deciding what expenses are needed to "make ends meet." Some respondents interpreted the question as asking for the bare minimum on which to survive, "with no gravy"; to "make ends meet" was to be "hanging on by the skin of your teeth." Others interpreted "making ends meet" as maintaining their current lifestyle, including some gravy: "I just calculated what I would need not to have to worry about expenses at all."

Determining which expenses were "necessary" was one of the more difficult judgments for respondents. They generally agreed that this term meant items required for existence—"without them you can't live"—but differed on what to include on the list in addition to the two basics, food and shelter. When pressed to come up with "absolutely necessary" items from the list, some focus group participants shortened the list substantially, at times by one-half to one-third (typically, people would "do without" entertainment, clothing, and tuition). But others indicated that they would probably make adjustments by changing the quantity or quality of items or buying used items, rather than omitting a category altogether.[7]

The MIQ and the MSQ turned out to be full of ambiguities for respondents. "Needs" may be those items strictly necessary for survival, but for many people "expenses" include various other items that can be seen as improving the quality of life. "Living where you do now" is inter-

preted variously to mean life circumstance or stage, place in life, house, neighborhood, or city of residence. "You" again proves itself to be one of the great ambiguities in English. For some it refers to the individual, for others to the family or housemates.

In evaluating their incomes (questions 3 and 4), people were asked for judgments along two dimensions: "good/bad" and "sufficient/insufficient." For some, these two scales ask very different questions: "good/bad" is seen as a judgment about the quality of life, and "sufficient/insufficient" as a judgment about what is absolutely necessary for survival. A "very bad" income might yet be "sufficient for survival."

Question 4 (the "delighted/terrible" question) has been one of the more popular approaches to collecting subjective quality-of-life data.[8] Its seven-category scale was intended to allow for more precise discrimination of feelings than previous methods of measuring affective evaluations. Perhaps the most notable aspect of the responses in the interviews and focus groups was the rarity with which respondents endorsed either extreme. They seemed very hesitant to consider "delighted" or "terrible" as appropriate terms to apply to income, reserving such terms for responses to events that are unexpected or unplanned, and using them to describe highly emotional and possibly transient reactions to overwhelming events—winning the lottery or a family disaster.

Respondents also found some of the intervening categories vague or redundant, although they were in general comfortable in applying them to income. However, they tended to see "sufficient/ insufficient" and "good/bad" as two different ways of envisioning income. "Sufficient" was more factual—either you have the money or you don't. "Good" evokes other aspects, such as emotional security and self-esteem. And within the good/bad range, respondents may have heard very different questions: "What is a *very good* amount for basic survival?" or "What is a *very good* amount for living life as you are right now?"

Complexity of the questions

The researchers concluded that the MIQ and the MSQ in particular are not easy questions. In order to answer them, respondents had first to make a series of judgments:

1. Do you want my current level of expenditures or the minimum level I need for survival?

2. What are my current expenditures?

3. What is survival-level living and what would I need for that?

4. How much income would I need to cover the expenditures?

In many cases respondents' lists, on further probing by investigators, proved to be incomplete, though focus groups in general came up with larger lists. Original dollar estimates were often much too low, and some participants had real trouble figuring out what would be sufficient for survival, especially if they had never experienced hardship. Some proved totally unable to generate dollar amounts, and others did so only in very gross terms, often in increments of $1,000.

The process of determining expenses is not always dependent upon the income level or family structure of the respondent, but may hinge upon knowledge of the family's finances. If the respondent happened to be the designated bill payer in a household, lists of expenses and dollar estimates were likely to be different from those of family members who did not pay the bills. In one family, for instance, the bill payer's estimate of monthly expenses was twice that of the spouse who did not pay the bills.

"New" language

Without prompting, respondents repeatedly referred to stress, anxiety, and worry when talking about "bad" or "insufficient" income. Referring to "good" income, they spoke of "freedom," "security," "being more relaxed." This may well be a fruitful avenue for future subjective assessment questions—along the lines of "How much more money would you need each month to be free from worry about your bills?"

Conclusions

In general, the BLS research team found that the questions that have been tried in the past are flawed and need revisions if they are to come anywhere near meeting minimal survey standards for avoiding serious measurement error. For instance:

1. In general, it was difficult for some respondents to itemize all their expenses, especially on the spur of the moment. Providing cues and lists and involving other household members should improve consistency. Moreover, obtaining an accurate estimate may depend upon identifying the appropriate household member.

2. Respondents found it difficult to compute income "before deductions." They knew their take-home or after-deduction pay.

3. Respondents were asked to perform several tasks: (a) define terms, (b) apply these definitions to their own lives, and (c) generate monthly estimates. The heart of the subjective assessment seems to lie in (b); if (a) were provided, and respondents were supplied with consistent definitions, all would, in effect, be performing the same task.

4. Respondents tended to like the more emotional language, but did not provide consistent answers and had real difficulties in the middle ranges of the "very good/very bad" and "delighted/terrible" scales. Clearly, "sufficient/insufficient" and "good/bad" scales should be separated in the questions. And nothing would be lost from the subjective aspect of the questions if it were made clear what exactly was meant by good/bad—good for what? bad in what way?

As other researchers have found, people in lower-income groups often estimate their expenditures in excess of their income.[9] Garner, Stinson, and Shipp expressed their hope that the subjective measures examined may provide a fruitful path for exploring the relationship between expenditures and income, help us to identify which commodities people consider necessary, and perhaps produce subjective poverty or sufficiency thresholds.[10] These issues have not, however, been pursued in this research.

The cognitive study reported here provides greater information than previously available about the subjective questions that are now in use, both their obvious and more hidden aspects. Through this research, the BLS team was able to glimpse the strategies people use to answer the questions. They discovered that people have definite emotional reactions to their financial situations and are willing and able to discuss their fears and concerns. The consistencies found in the focus groups suggest that the team was measuring something very real when people were asked to examine their financial situation and report their reactions to it. But as yet unanswered are two central questions: Which subjective assessments would be most useful to economists—that is, what do economists really want to learn when they ask about "making ends meet"—and how can we best obtain such information? ■

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[1]The committee was chaired by Harold Watts, first director of IRP and now at Columbia University. See H. W. Watts, "Special Panel Suggests Changes in BLS Family Budget Program," *Monthly Labor Review*, December 1980, pp. 3–10.

[2]For example, equivalence scales derived from subjective measures can provide information that helps determine the extent to which more objective measures are in tune with public perceptions. The National Academy of Sciences panel studying the poverty measure considered the term "subjective thresholds" to be "unfortunate, given that all types of thresholds involve subjective elements." C. F. Citro and R. T. Michael, eds., *Measuring Poverty: A New Approach* (Washington, DC: National Academy Press, 1995), p. 134n.

[3]Citro and Michael, eds., *Measuring Poverty*, p. 142, give examples of subjective thresholds. The various uses of such thresholds are discussed at length in Garner, Stinson, and Shipp, "Affordability, Income Adequacy, and Subjective Self-Assessments of Economic Well-Being," and "Measuring Subjective Economic Well-Being: Economic Foundations and Cognitive Methods."

[4]The questions were included in a topical module of wave 9 of the 1993 panel of the SIPP. Thesia Garner of the BLS and Kathleen Short of the Census Bureau are currently analyzing these data as related to the production of subjective sufficiency or poverty thresholds. The SIPP topical module data will be available to the public in late autumn, 1998.

[5]Garner, Stinson, and Shipp, "Affordability, Income Adequacy, and Subjective Self-Assessments of Economic Well-Being."

[6]Stinson, *The Subjective Assessment of Income and Expenses: Cognitive Test Results*.

[7]A composite list of "necessary monthly expenses" included rent, food, clothing, health insurance, transportation, utilities, household sundries, credit card payments, and four items on which there was no consensus: school expenses, garbage, grooming expenses, and pets.

[8]The D/T question was developed and tested at the University of Michigan during the 1970s by Frank Andrews and Stephen Withey.

[9]See, for example, K. J. Edin, "The Myths of Dependence and Self-Sufficiency: Women, Welfare, and Low-Wage Work," *Focus* 17, no. 2 (Fall/Winter 1995): 2.

[10]Garner, Stinson, and Shipp, "Affordability, Income Adequacy, and Subjective Self-Assessments of Economic Well-Being" and "Measuring Subjective Economic Well-Being."

Setting American standards of poverty: A look back

Gordon M. Fisher

Gordon M. Fisher is a program analyst in the Office of the Assistant Secretary for Planning and Evaluation in the Department of Health and Human Services.[1]

Historical discussions of poverty measurement in the United States commonly begin with Mollie Orshansky of the Social Security Administration (SSA) and the poverty thresholds she developed in the early 1960s. This is not surprising, because her poverty lines were adopted as quasi-official by the Office of Economic Opportunity in 1965 and subsequently became the official federal poverty measure in 1969. But efforts to measure poverty began long before the 1960s. There is a rich intellectual and political tradition that has sought ways to quantify economic destitution, whether it be called poverty, or minimum subsistence, or low income.[2]

The last third of the nineteenth century was a period of major turbulence and change in the United States. A society of small towns and farms was being replaced by an urbanizing society as millions of Americans flocked from rural areas to large, overcrowded cities whose public and private facilities were unable to keep pace with the influx of new residents. Millions of immigrants streamed into the country, especially into the large cities of the Northeast and Midwest. Family-owned businesses were replaced by large corporations running railroads and factories. Three serious multiyear depressions threw thousands of workers out of their jobs. Widespread strikes and worker riots were countered by violent repression by employers and governments.

In this period of turmoil, some people hoped that social statistics, the accumulation of data on social problems, would lead to solutions for problems arising from labor unrest, economic insecurity, and urban slums. State and federal bureaus of labor statistics were established and engaged in studies. Social workers undertook studies of social and economic problems in the communities and urban neighborhoods in which they toiled. These studies, starting about 1870 and including quantitative assessments of income and expenditure patterns, became more sophisticated and frequent by the end of the century. For example, in 1871, the first known Americans to link the word "poverty" with a dollar income figure—the reformist initial leadership of the Massachusetts Bureau of Statistics of Labor—associated a $2 daily wage (equivalent to $526 a year after allowing for unemployment during the year) with "poverty or want," but did not indicate how they arrived at this figure. In 1891 J. R. Sovereign, the Iowa Commissioner of Labor Statistics, presented a 33-item standard budget (an item-by-item "market basket") for a five-person family showing the "necessary living expenses of laboring men with families" with an annual cost of $549.84.[3]

During the nineteenth century, the word "poverty" had commonly been used to designate what was more precisely known as pauperism—the state of being "dependent" on relief or private charity. About 1900, some social workers and others started using "poverty" with a new meaning—insufficient income, regardless of the source of that income or the reasons for the insufficiency. The idea of a poverty line could only make sense in the context of this new concept of poverty. In fact, much of the work on poverty lines and standard budgets during the first two decades of the twentieth century was done by social workers—a professional group containing significant numbers of activist social reformers during this period.

As the concept of poverty as insufficiency of income began to take hold, the opening years of the twentieth century were marked by a number of informal estimates of the cost of an acceptable minimum standard of living. These estimates varied, but a number were in the neighborhood of $600 per year for a five-person family.[4]

From Hunter to Orshansky

In 1904, Robert Hunter, a settlement house worker, published *Poverty*, in which he defined poverty using the new concept of income insufficiency, described what was known about poverty in the United States, and proposed legislative remedies for it. He conservatively set poverty for the average family of five persons at $460 per year in the industrial North, and $300 in the more agrarian South.[5]

> Unlike some other calculations, those relating to poverty have no intrinsic value of their own. They exist only in order to help us make them disappear from the scene. . . . With imagination, faith and hope, we might succeed in wiping out the scourge of poverty even if we don't agree on how to measure it.
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> Mollie Orshansky, "Demography and Ecology of Poverty," *Proceedings of a Conference on Research on Poverty* (Washington, DC: Bureau of Social Science Research, 1968), p. 28.

During this period, U.S. studies of poverty or minimum living standards were largely conducted by social workers and private charities, though there were some efforts by state government agencies, as the work by Commissioner Sovereign in Iowa shows. A federal government agency made an isolated foray into the discussion in 1912, when the U.S. Bureau of Labor published a study of the budgets of cotton-mill workers. Part of a much larger federal investigation, the study was prompted by persistent pressure from settlement house social workers concerned about women's working conditions and child labor. The budget study grew out of the question whether families in cotton-mill towns depended on the earnings of their young children to achieve an income that a family could live on.

Social concerns continued to motivate attention to income and expenditure patterns throughout the progressive era and World War I. Advocates of the disadvantaged were trying to develop figures that approximated a rough social consensus about the level of a socially acceptable minimum standard of living at a specific point in time. A number of them did this by developing standard budgets. A handful developed standards by examining and making judgments about the living standards and consumption patterns of relatively small groups of individual families. One analysis presented a "definite line of adequate subsistence" based on recent studies of infant mortality by the U.S. Children's Bureau.[6]

The Depression

After the prosperity of the 1920s, the social and economic trauma of the Great Depression again turned public and political attention to poverty. In 1934, the Brookings Institution published *America's Capacity to Consume*, a study to "determine whether the existing distribution of income in the United States among various groups in society tends to impede the efficient functioning of the economic system," with low incomes among the masses leading to low consumption, low capacity utilization, and slow economic growth. This study set the "subsistence and poverty" line at $1,500 for families and $750 for unattached individuals.[7]

At the start of his second term as president in 1937, Franklin Roosevelt spoke of "millions of families trying to live on incomes so meager that the pall of family disaster hangs over them day by day . . . I see one-third of a nation ill-housed, ill-clad, ill-nourished."[8] The lowest third of the nation turned out to comprise all families and unrelated individuals with annual income below $780, a figure that was sometimes used as an approximate measure of poverty for this period—or at least remembered as having been such a measure.[9]

In a 1938 book on American labor problems that included a section on standards of economic well-being, Carroll Daugherty, an economics professor, presented dollar figures (based on family budget studies over the previous two decades) for a "poverty plane" for five years. Daugherty's figures may well be the first with separate figures for years with different price levels. For a four-person family, his "poverty plane" incomes were: 1910, $490; 1918, $800; 1929, $860; 1932, $690; 1935, $730. (These represent figures for a base year of 1929 adjusted to other years for price changes only.) Despite Daugherty's presentation of a constant-dollar poverty line over a 25-year period, he commented in the same section that standard budgets "must also be changed occasionally, whenever there are significant shifts in the nature of the items concerned or whenever people's objectives and standards change. . . . The budget of 1950 will undoubtedly make the present one look as antiquated as the hobble skirt."[10] He discussed "relative standards of economic well-being," but did not propose any sort of relative poverty line.

The postwar period

After about 1946, poverty lines in the United States were not usually derived from standard budgets, as they generally had been earlier. Instead, analysts generally set a dollar figure (or figures) with greater or lesser amounts of supporting details and rationales. For most of this time, neither poverty nor poverty lines constituted a single field of discourse. Persons trying to develop or revise poverty lines included congressional subcommittee staff, union officials, Councils of Economic Advisers,

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A significant proportion of those who over these years made important contributions to poverty line and budget studies were women—including women economists and statisticians working for the federal government. In 1965 Eugene Smolensky, then at the University of Chicago and later director of IRP, pointed out "of course this field [counting the poor] belongs to these ladies of the Federal Government. . . . What these ladies do, obviously, is eminently sensible: they draw a poverty line; they try to establish some kind of minimum income on the basis of some kind of definition of need." Among those Smolensky named were employees in the SSA's Office of Research and Statistics, where the poverty thresholds had just been developed, in the Bureau of Labor Statistics, and in the Bureau of Human Nutrition and Home Economics that had developed the USDA food plans. They included Mollie Orshansky, Helen Lamale, Faith Clark, Faith Williams, Lenore Epstein, Margaret Stecker, Eleanor Snyder, and Dorothy Brady, "who taught me everything I know in this area."

Proceedings of the 23rd Interstate Conference on Labor Statistics, June 15–18, 1965, U.S. Dept. of Labor, Bureau of Labor Statistics, p. 35.

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lobbyists, academics, federal civil servants, and social commentators.

Among the more significant events of these years was the appointment, in 1949, of a subcommittee to study low-income families by the chairman of the Congressional Joint Committee on the Economic Report (subsequently renamed the Joint Economic Committee). The new Subcommittee on Low-Income Families (SLIF) chose cash-income levels for the purpose of identifying a target population for intensive study, not as a definition of poverty. The thresholds selected were $2,000 for nonfarm families (about $2,520 in 1962 dollars), and $1,000 for farm families and for all unrelated individuals—figures attacked by some as inadequate. (For example, Walter Reuther, president of the Congress of Industrial Organizations, suggested a figure of $3,000 for families.) But in the relatively sparse poverty literature of the 1949–58 period, the SLIF's $2,000 figure was widely used.

In 1959, Robert Lampman, an economics professor at the University of Wisconsin, prepared a paper on the low-income population in connection with a Congressional Joint Economic Committee study of employment, growth, and price levels. He presented a low-income line that was essentially a revision of the 1949 SLIF threshold. He applied this figure to four-person families, and used a Bureau of Labor Statistics equivalence scale to develop figures for other family sizes. He updated these figures to 1957 and, later, to 1963 using the Consumer Price Index.

	1947	1957	1963
3-person family	$1,674	$2,106	$2,296
4-person family	2,000	2,516	2,742[11]

In 1960, Mollie Orshansky, a social science analyst at the SSA, in two publications that are almost unknown, developed her first measures of income inadequacy. She applied multipliers derived from the 1955 Household Food Consumption Survey to the cost of the U.S. Department of Agriculture's low-cost food plan (at that time the cheapest of the USDA's three food plans) to develop two rough measures of income inadequacy for an elderly couple. Her measures were included in unattributed material supplied at an April 1960 congressional hearing and were utterly ignored. The complete contrast between the fate of these 1960 measures and her subsequent work illustrates her comment, in 1988, that "Apparently the right timing is as important as the right idea."[12]

Timing, indeed, was a central issue. In 1958, John Kenneth Galbraith had published *The Affluent Society*, in which he spoke of American poverty as "an afterthought" and "a special case," although he noted that "poverty does survive."[13] But the persistence of poverty in the most affluent nation on earth had begun to move into greater public view, and attention accelerated when the Kennedy administration came into office in 1961. In 1962 two influential books marked the change in public and political attitudes—Michael Harrington's *The Other America* and Gabriel Kolko's *Wealth and Power in America*.[14]

When the Johnson administration announced its War on Poverty in January 1964, it became essential, for both administrative and political reasons, to have some kind of measure of who was poor. How, otherwise, could eligibility for the new programs be determined and advances against poverty be measured? The 1964 Report of the President's Council of Economic Advisers (CEA), which contained a chapter on poverty in America (primarily authored by Robert Lampman), set a poverty line of $3,000 for families of all sizes (for a single individual, the line was $1,500). This was a consensus choice, based on such factors as the minimum wage level, the income levels at which families began to pay federal income taxes, and public assistance payment levels.[15]

Mollie Orshansky—unaware that a War on Poverty was about to be declared—was then working on a measure to assess the relative risks of low economic status among different demographic groups of families with children. She was basing her work on two of the USDA's four family "food plans," the economy plan and the somewhat less stringent low-cost food plan.[16] Concerned because the CEA report did not adjust its poverty line for family size and, as a consequence, would understate the number of children in poverty relative to the aged, Orshansky undertook to extend her two sets of poverty thresholds to the entire population. In January 1965 she published her research, just as the Office of Economic Opportunity (OEO) was being established.[17] OEO adopted the lower of Orshansky's two sets of poverty thresholds (the set based on the economy food plan) as a working definition of poverty in May 1965.[18]

Orshansky did not develop the poverty thresholds as a standard budget because, except for food, no definitive and accepted standards of minimum need for major consumption items then existed (nor do they today).[19] She knew from the USDA's 1955 Household Food Consumption Survey that families of three or more persons spent about one-third of their after-tax money income on food in 1955. Accordingly, she calculated poverty thresholds for families of three or more persons by taking the costs of the economy food plan for families of those sizes and multiplying those costs by a factor of three—the "multiplier." In effect, she took a hypothetical average family spending one-third of its income on food, and assumed that it had to cut back sharply on its expenditures and that expenditures for food and nonfood would be cut back at the same rate. When the food expenditures of the hypothetical family reached the cost of the economy food plan, she assumed that the amount the family would then be spending on nonfood items would also be minimal but adequate. (She followed somewhat different procedures to derive poverty thresholds for one- and two-person

units.) Poverty thresholds for farm families were set, as of May 1965, at 70 percent of corresponding thresholds for nonfarm families.

These poverty thresholds were presented as a measure of income *inadequacy*. Orshansky noted "if it is not possible to state unequivocally 'how much is enough,' it should be possible to assert with confidence how much, on an average, is too little." She said, accurately enough, that the thresholds were a "relatively absolute" measure of poverty, inasmuch as they were developed from calculations that made use of the consumption patterns of the U.S. population at a particular point in time. They were not a purely relative measure, such as the 50-percent-of-median-income definition proposed by Peter Townsend in Great Britain in 1962 and Victor Fuchs in the United States in 1965. Nor were they considered to be purely absolute. Ida Merriam, then Assistant Commissioner in the SSA's Office of Research and Statistics, wrote in 1967 that "It is easy to observe that poverty in the U.S. today cannot meaningfully be defined in the same way as in the U.S. of 1900. . . . [O]bviously today's [poverty] measure, even if corrected year by year for changes in the price level . . . should not be acceptable twenty, ten, or perhaps even five years hence."[20]

What happened over the next several years may help to explain why, thirty years later, the Orshansky measure is still in its essentials the official U.S. poverty measure.

The politics of the poverty count, 1967–69

Quite soon after the thresholds were adopted, SSA analysts had begun to worry about how to adjust the thresholds to reflect the historical fact that poverty/subsistence levels have tended to rise in real terms as the real incomes of the general population have risen.[21] By late 1967, a second worry had been added. Prices as measured by the Consumer Price Index (CPI) had been rising more rapidly than the food prices (the per capita cost of the economy food plan) that were then being used to adjust the poverty thresholds for inflation. As measured against the CPI, the thresholds were actually decreasing in real terms. At an April 1968 meeting of representatives from federal agencies with an interest in poverty, SSA analysts thus proposed to take a very modest step toward raising the poverty thresholds for the generally higher level of living by using a revised economy food plan reflecting 1965 rather than 1955 food consumption data.[22] The net effect would have been to raise the thresholds based upon the economy food plan by 8 percent in real terms.

When SSA began to prepare poverty population figures for 1966 and 1967 on the basis of the revised poverty thresholds, however, several agencies, notably OEO and the CEA, objected. In July 1968, the Bureau of the Budget directed the Census Bureau to make no change in the criteria for computing the poverty thresholds for 1967. It also appointed a task force to "re-evaluate the poverty thresholds for future use."

The SSA proposal ran into difficulties because it confronted federal agencies with two serious policy problems. OEO was using the poverty index to determine eligibility in a number of its programs, and the change might have seriously affected budgets and regulations. This was, however, a much lower concern (since these programs were not entitlements) than the fact that higher thresholds would have resulted in a higher count of the poor. Having proclaimed a war on poverty in 1964, the Johnson Administration was, in 1968, able to report that the poverty population had dropped by 5.6 million persons in three years. Contemporary records make clear that it was simply politically unacceptable in such a context to report a 2.8 million "increase" in the poverty population—and that would happen if the poverty line were raised in real terms.

The overruling of SSA's decision to revise the poverty thresholds raised the question of who should be responsible for the thresholds. In the outcome, the Census Bureau was given responsibility for publishing poverty statistics, but no federal agency was given primary responsibility for maintaining the definition of poverty and doing research related to it.

Thus the poverty measure was both decoupled from changes in the general standard of well-being and made an "agency orphan." As the comment by Ida Merriam makes clear, "freezing" the measure was not the intent of its proponents, nor had it been previous practice in setting budget standards. For example, the $3,000 line proposed by the CEA was 19 percent higher, in real terms, than the low-income line of $2,000 that had been used in 1949 by the congressional Subcommittee on Low-Income Families mentioned earlier.[23] What had changed, by 1969, were the political constraints under which these decisions were made.

In early 1969, the task force reviewing the poverty measure decided to make two changes in the measure: (1) to base the annual adjustment of the poverty thresholds upon the annual change in the CPI, not the per capita cost of the economy food plan and (2) to set farm poverty thresholds at 85 rather than 70 percent of corresponding nonfarm thresholds. In August 1969 the Bureau of the Budget directed all federal agencies to use the revised-definition statistics and thresholds, as issued annually by the Census Bureau, for statistical purposes.

Thereafter, the poverty measure remained unchanged for over a decade. Various committees and subcommittees were appointed, made suggestions, and disbanded. In 1973, three interagency subcommittees were formed to conduct a thorough review of federal income and poverty statistics. No changes were made in the poverty defini-

tion as a result of their deliberations and recommendations.[24]

The 1981 revision

The detailed poverty thresholds for families distinguished between families headed by men and families headed by women, and the thresholds for male-headed families were higher than those for female-headed families of the same size and composition. These distinctions had never been carried through into the poverty guidelines used in setting program eligibility.[25] Nevertheless, in 1979, the Justice Department Task Force on Sex Discrimination found that "the use of separate male and female thresholds may have a significant impact on program evaluation uses." An interagency committee conducted a review of the poverty measure. Minor changes in the measure, somewhat delayed though not altered by the change in presidential administrations in 1981, were made in December 1981. The distinction between thresholds for male- and female-headed families was eliminated, the two sets of thresholds being merged by averaging into a single set. At the same time, the farm/nonfarm distinction was abolished: farm family thresholds went to 100 percent of nonfarm thresholds.

Throughout the 1980s, there was no official review of the poverty thresholds. Nor were there any changes made in the official definition of poverty, despite extensive public debates about the way poverty was being measured—particularly over whether to count noncash benefits as income, without making corresponding changes in the thresholds. As more nonentitlement programs and a few entitlement programs (food stamps, the school lunch program, and relatively small portions of the Medicaid program) began to use the poverty guidelines for eligibility, objections to raising the poverty line were less on the grounds of a higher poverty count and more on the grounds of (perceived) effects on program caseloads.

In 1990 the Bush administration reviewed the poverty measure, among many others, as part of an initiative to improve the quality of federal economic statistics. But no changes in the official poverty measure have been made during the 1990s. In 1992, however, Congress requested that the Committee on National Statistics of the National Academy of Sciences (NAS) conduct an examination of the statistical issues involved in measuring and understanding poverty. The panel that the NAS convened is, of course, the one whose recommendations are now at the center of discussion about measuring poverty. ■

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[1]The views expressed in this article are those of the author, and do not represent the position of the Department of Health and Human Services.

[2]This article is based upon two lengthy historical discussions of poverty lines by Gordon M. Fisher, "From Hunter to Orshansky: An Overview of (Unofficial) Poverty Lines in the United States from 1904 to 1965" (1993, revised 1997), and "The Development of the Orshansky Poverty Thresholds and Their Subsequent History as the Official U.S. Poverty Measure" (1992, revised 1997), both unpublished papers, Department of Health and Human Services, Washington, DC.

[3]This would be roughly $1,900 in 1963 dollars—about 52 percent of Orshansky's 1963 average nonfarm poverty threshold of $3,685 for a family of five.

[4]For the pre–World War I period as a whole, poverty lines and minimum subsistence budgets were, in constant dollars, generally between 43 and 54 percent of Mollie Orshansky's poverty threshold for 1963. The estimate of $600 per year would be equal to roughly $2,000 in 1963 dollars.

[5]A modern edition of Hunter's book is *Poverty: Social Conscience in the Progressive Era*, ed. P. d'A. Jones (New York: Harper and Row, 1965). The $460 figure would equal roughly $1,600 in 1963 dollars, about 43 percent of Orshansky's 1963 five-person threshold.

[6]W. Jett Lauck and E. Sydenstricker, *Conditions of Labor in American Industries: A Summarization of the Results of Recent Investigations* (New York: Funk & Wagnalls, 1917), p. 371. Some standard budgets were developed to represent levels of living higher than poverty or minimum subsistence.

[7]M. Leven, H. G. Moulton, and C. Warburton, *America's Capacity to Consume*, Publication no. 56, Institute of Economics of the Brookings Institution, Washington, DC, 1934), p. 1. The authors' family subsistence/poverty line of $1,500 would be equal to about $2,680 in 1963 dollars, 86 percent of the Orshansky threshold of $3,128 for a family of four.

[8]F. D. Roosevelt, Second Inaugural Address, January 20, 1937. Roosevelt's address also offered a criterion of equitable economic growth: "The test of our progress is not whether we add more to the abundance of those who have much, it is whether we provide enough for those who have too little."

[9]The $780 figure was derived from an extensive national survey, the Study of Consumer Purchases, conducted in 1936. It combined data for families and single unrelated individuals in one chart. See National Resources Committee, *Consumer Incomes in the United States: Their Distribution in 1935–36* (Washington, DC: U.S. Government Printing Office, 1938). This amount would be about $1,740 in 1963 dollars. In the late 1930s, two other subsistence/low-income lines were developed in studies by federal agencies, but none was adopted as an official measure of poverty.

[10]C. R. Daugherty, *Labor Problems in American Industry*, 4th ed. (Boston: Houghton Mifflin, 1938), pp. 137 (quotation) and 139 (figures). Daugherty's figure of $860 for a family of four in 1929 would be equal to about $1,540 in 1963 dollars, 49 percent of the Orshansky threshold of $3,128.

[11]R. J. Lampman, "The Low Income Population and Economic Growth," in U.S. Congress, Joint Economic Committee, *Study Papers Nos. 12 and 13: The Low Income Population and Economic Growth. . .* (Washington, DC: U.S. Government Printing Office, 1959), pp. 1–36. When expressed in 1963 dollars, Lampman's low-income line for a family of four ($2,742) was about 88 percent of Orshansky's 1963 average nonfarm poverty threshold of $3,128.

[12]M. Orshansky, "Commentary: The Poverty Measure," *Social Security Bulletin* 51, no. 10 (October 1988): 22.

[13]J. K. Galbraith, *The Affluent Society* (Boston: Houghton Mifflin, 1958), p. 323.

[14]On the origins of the War on Poverty, see, for example, L. Friedman, "The Social and Political Context of the War on Poverty: An Overview," in *A Decade of Federal Antipoverty Programs: Achievements, Failures, and Lessons*, ed. R. H. Haveman (New York: Academic Press, 1979), pp. 21–54, and H. J. Aaron, *Politics and the Professors:*

The Great Society in Perspective (Washington, DC: Brookings Institution, 1978), ch. 2.

[15]The $3,000 figure was consistent with a rough consensus among experts about the level that represented "poverty" at this time. Of 11 poverty lines (besides the CEA and Orshansky poverty lines) applied to families of four between 1959 and 1964, 7 were between $3,000 and $3,500 (in current dollars).

[16]The USDA first introduced its four diets or food plans at various levels in 1933, characterizing the lowest of the food plans (the quasi-predecessor of the economy food plan that was used to develop the current poverty thresholds) as providing approximately the minimum requirements of the body for various nutrients, but allowing "little margin for safety. It represents good food selection when a fully adequate diet is beyond reach." H. K. Stiebeling and M. M. Ward, *Diets at Four Levels of Nutritive Content and Cost*, U.S. Department of Agriculture Circular no. 296, Washington, DC, Nov. 1933, p. 4.

[17]M. Orshansky, "Counting the Poor: Another Look at the Poverty Profile," *Social Security Bulletin* 28, no. 1 (January 1965): 3–29.

[18]A brief characterization of the official (Orshansky) poverty line appears in this *Focus*, p. 3.

[19]The USDA had developed the 1962 revisions of the food plans using data from the 1955 Household Food Consumption Survey. It described the economy food plan as a plan "designed for temporary or emergency use when funds are low." It has been estimated that families spending for food at the dollar level of the economy plan had about 1 chance in 2 of getting a fair or better diet, but only about 1 chance in 10 of getting a good diet. See B. Peterkin and F. Clark, "Money Value and Adequacy of Diets Compared with the USDA Food Plans," *Family Economics Review* (September 1969): 6–8.

[20]Orshansky, "Counting the Poor," p. 3; I. C. Merriam, "The Meaning of Poverty-Effectiveness," unpublished paper, January 4, 1967, p. 2.

[21]This is a phenomenon sometimes known in the United States as the "income elasticity" of the poverty line. For instance, one study has shown that over the years from 1905 to 1960, Oscar Ornati's group of "minimum subsistence" standard budgets rose 0.75 percent in real terms for each 1 percent increase in the real disposable income per capita of the U.S. population. See Gordon M. Fisher, "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," unpublished paper, 1995.

[22]The idea of using a higher multiplier derived from 1965 data was also discussed at the meeting, but this idea was not part of the formal SSA proposal for revising the thresholds.

[23]The relativity of poverty standards had been recognized by economists as far back as Adam Smith: "By necessaries I understand, 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." Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, 1789 ed. (New York: Modern Library, 1937), p. 821.

[24]Subcommittee suggestions for improving income reporting led ultimately to the Survey of Income and Program Participation.

[25]The distinctions between the thresholds and the guidelines are explained on p. 6.

Better tools for poverty measurement: A look ahead

Each year, billions of government dollars are divided among states, counties, and other local jurisdictions on the basis of economic profiles from the latest decennial census. In fiscal year 1994, for instance, more than $30 billion in federal funds were allocated to states or local jurisdictions using the official poverty measure along with income and poverty data from the 1990 census. But economic conditions can change rapidly, and some census data are obsolete before they are even published. Data from the 1990 census, for example, reflect a period before the recession that began in 1990. From other data, such as the March Current Population Survey (CPS), we know that median household income declined by 7 percent between 1989 and 1993 and that the number of people with incomes below the official poverty line increased by 25 percent. Moreover, these changes were not uniformly distributed. From 1989 to 1993, the number of poor people increased by 52 percent in Florida and 44 percent in California, but by only 4 percent in Texas and 7 percent in Illinois. From 1993 to 1995, the situation changed again: median income increased by 3 percent and the total number of poor decreased by 5 percent.

Clearly, more current estimates of income and poverty would improve the administration of public programs and more effectively target federal and state funds to local jurisdictions in greatest need. This article briefly summarizes two initiatives of the Census Bureau that are intended to provide those data: a model-based program, the Small Area Income and Poverty Estimates Program, and a survey program, the American Community Survey (ACS). The plan is to combine estimates from the two sources to obtain more accurate, regularly updated state and local poverty rates.

The Small Area Income and Poverty Estimates Program

Between 1971 and 1987, the Census Bureau produced biennial estimates of per capita income for local governments; such estimates were a major component in the allocation of funds under the General Revenue Sharing program. The estimates were discontinued when the program expired. But strong interest in such updated information continued, and in 1993 a consortium of five federal agencies agreed to provide funding for a Small Area Income and Poverty Estimates Program.[1]

Considerable impetus was given to this project by the passage, in September 1994, of PL 103-182, the Improving America's Schools Act. Title I of this law specified that federal funds should be distributed to school districts largely on the basis of the number of children aged 5 to 17 who were from families below the poverty level according to "the most recent satisfactory data" available from the Department of Commerce, beginning in 1997, unless those data proved to be inappropriate or unreliable.[2]

In January 1998, the Bureau issued its latest set of estimates for 1993, the most recent year for which federal income tax statistics were available when the project began. Estimates for 1995 should also be available in 1998. These estimates include (1) all people in poverty, (2) related children aged 5–17 in poverty,[3] (3) people under age 18 in poverty, (4) median household income, and (5) children under 5 years old in poverty.

These estimates are based upon the only method that is currently practicable, statistical modeling.[4] Census analysts developed regression models that relate income, the number of poor people, or poverty rates to data derived from administrative and other sources. The dependent variables are income and poverty estimates derived from the March CPS, which provides the nation's official estimates of income and poverty. The independent variables include direct estimates of income and poverty from the 1980 and 1990 decennial censuses. The state and county models use selected variables based on administrative data, including data summarized from federal individual income tax returns, numbers of Food Stamp program participants, and Bureau of Economic Analysis personal income estimates. Demographic estimates of the 1994 population of states and counties are another important source for the models. These are further adjusted to provide crude estimates of denominators for state and county poverty rates.

The multiple regression models thus created predict income and poverty for 1993. For each of the five key income and poverty statistics the Bureau constructed an estimation model at the state level and, for four of them, an estimation model at the county level. (The county estimates of a particular statistic are produced by combining estimates from the two models.) At the state level, the Bureau models poverty rates; at the county level, it models numbers of poor people in various age groups.[5] Results of the estimation models are posted on the Census Bureau's web site (see box below).

How do the model-based estimates compare with census estimates? As a rough test of their estimation methods, Census Bureau analysts made model-based estimates for

This brief summary of the characteristics of the Small Area Income and Poverty Estimates Program and the American Community Survey draws heavily upon the extensive information that appears on the U.S. Census Bureau's World Wide Web site, at <http://www.census.gov/hhes/www/saipe.html> and <http://www.census.gov/CMS/www/>.

states and counties in 1989 to compare with 1990 census data. They did not expect the models to provide precisely the same estimates as the census, because the census estimate of total poverty differs from the official estimates that are derived from the March CPS data used to calibrate the models. Nonetheless, analysts found the two sets of estimates to be "reassuringly close." County model-based estimates of the total number of poor people were, on average, 4.4 percent lower than census estimates; for the number of related children aged 5 to 17 in poverty they were 4.4 percent higher.

The model-based procedures provide the best estimates of income and poverty for states and counties for 1993, reflecting the large increase in poverty and decline in the median household income that occurred from 1989 to 1993. Estimates derived from the census long forms that were sent to approximately 16 percent of U.S. households as part of the 1990 census will be more statistically precise than the model-based estimates, but they are less current; they describe the world as it existed in 1989.

The American Community Survey

The ACS is intended to provide annual estimates of housing, social, and economic characteristics for all states, and for cities, counties, metropolitan areas, and population groups of 65,000 persons or more. For smaller areas, two- to five-year samples will be used to generate the estimates. For example, for rural areas and city neighborhoods or population groups of fewer than 15,000 people, it will take five years for the survey to accumulate a sample approximately 90 percent as large as the census long-form sample. These five-year averages, updated each year, will be produced down to the level of census tracts, which have an average population of 4,000, and block groups.

The survey is conducted by mail, backed up by computer-assisted telephone interviewing and personal interviewing for subsamples of those who do not respond to the mail survey. It will be administered continuously: each month, surveys will be mailed to a systematic sample of all U.S. households (the Census Bureau intends that the survey will not be sent to the same address more than once in any five-year period).

The survey is still in the demonstration phase; the Census Bureau's current plans envisage full implementation in 2003. At that time, the survey will be administered in every county in the United States, with an annual sample of three million housing units. The Bureau also proposes that by the time of the 2010 census, the survey will replace its traditional means of gathering such detailed social and economic information, the census long form.[6]

The goal of the Census Bureau is to provide survey data to users within six months after the end of a calendar year. For larger governmental units, these will be the direct annual estimates; for smaller units or population groups, estimates will be based on refreshed multiyear accumulations of data.

The Census Bureau sees numerous advantages to the survey. Regarded from the perspective of policy makers, analysts, and government agencies, it will be able to identify rapid changes in an area's population and give an up-to-date statistical picture yearly, not just once every ten years. The changes in the social safety net that have taken place over the last two years, at both federal and state government levels, have raised the premium on accurate and timely information. States and counties with large new responsibilities for social welfare policies and programs will have better data for tracking the well-being of particular groups such as children and the elderly and for monitoring the effects of programs. The survey can, furthermore, screen for households with particular characteristics—elderly Hispanics, for instance, or the disabled. Thus the survey potentially provides a robust sampling frame for other household surveys of economic or social well-being, without the prohibitively expensive screening interviews that are now required.

Unanswered questions

Problems that any household survey encounters are the response rate that it achieves and whether certain groups are underrepresented. Neither the Small Area Income and Poverty Program nor the ACS is exempt from these questions.

Response rates. Commentators have noted that the "widespread and intense publicity and sense of legitimacy" associated with the decennial census evokes better public response than other household surveys. Even so, the mail-in response rate to the long form in the 1990 census was only 65 percent, about 10 percent lower than in 1980. Two National Academy of Sciences panels that reviewed the Bureau's early plans for continuous sampling expressed the concern that the ACS might not achieve a response as high as that of the census.[7] In the demonstrations, however, ACS mail response rates were higher than expected. As with the census, return of the ACS survey form is mandatory, and research conducted since the 1990 census has improved mailing techniques and clarified the instructions.

Mail response rates and difficulties in completing follow-up interviews have been cited as reasons for the lower quality of sociodemographic data on hard-to-enumerate populations—minorities, poor people, and mobile and transient individuals—in the 1990 census.[8] Because the administration of a continuous sampling program requires a well-trained, permanent staff, the Bureau believes—and demonstrations suggest—that the ACS is likely to produce better information than that which

emerges from the compressed and hectic schedule of the census long-form interviews.

Coverage and quality of data. The Small Area Income and Poverty Program uses the CPS to calibrate its estimates; errors in the CPS will therefore pass through to those estimates. The Bureau is still conducting research to determine whether the ACS will, as it anticipates, achieve more accurate within-household coverage than the March CPS and the Survey of Income and Program Participation (SIPP). After correction for nonresponse, the CPS and the SIPP cover only 80 to 85 percent of black men compared with unadjusted census-based population estimates.[9] Even though adjustments for this shortfall are made during the CPS and SIPP weighting, these weighting adjustments do not correct for differences between the characteristics of the black men who are missed by the survey and those included in the survey.

In addition to these general problems of all household surveys, there is one that relates specifically to the ACS. For very small areas, the ACS data will consist of five-year averages. How interpretable will these data be? For instance, rural counties in many states have very small permanent populations and quite large seasonal populations, predominantly of the well-to-do. It is not yet clear how these circumstances might affect the data, but examples of such counties are to be included in future tests.

The Census Bureau's plans for the Small Area Income and Poverty Estimates Program and for the ACS are linked together as part of the Bureau's continuous measurement program. When ACS data are available, their use in the small-area models is expected to improve the reliability and geographic detail of the estimates. The NAS Panel on Estimates of Poverty for Small Geographic Areas took brief note of the potential role of the ACS data, commenting that: "The American Community Survey, when it is fully operational, will be an important component of any approach to providing updated estimates of poor school-age children for small areas. . . . However, given that each year of the CPS and the 2000 census will also provide evidence on poverty, it will be important to find ways to use all these sources together, for multiple time periods (for the CPS and the ACS) to produce the best small-area estimates."[10] It is proposed to test the accuracy of each method by how well it predicts the state poverty rate obtained by the 2000 census. The relative accuracy of the predicted poverty rate compared to the census will determine the weights (importance) of each procedure in the combined estimate. ■

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[1]The agencies were the Food and Nutrition Service (Dept. of Agriculture), National Center for Education Statistics (Dept. of Education), Head Start Program (Dept. of Health and Human Services), Office of Policy Development and Research (Dept. of Housing and Urban Development), and the Employment and Training Administration (Dept. of Labor). The Statistics and Income Division of the Internal Revenue Service also participated; their data were essential for several anticipated estimation methodologies.

[2]The law also directed the National Academy of Sciences to establish a panel to review the suitability of Census Bureau estimates. The first report of the Panel on Estimates of Poverty for Small Geographic Areas strongly endorsed the model-based approach but urged further testing before any decision was made to base Title I allocations solely on those estimates. See M. L. Cohen, G. Kalton, and K. K. West, eds., *Small-Area Estimates of Children in Poverty: Interim Report I—Evaluation of 1993 County Estimates for Title I Allocations* (Washington, DC: National Academy Press, 1997). A second report, C. F. Citro, M. L. Cohen, and G. Kalton, *Small-Area Estimates of School-Age Children in Poverty: Interim Report 2—Evaluation of Revised 1993 County Estimates for Title I Allocations* (Washington, DC: National Academy Press, 1998) was published March 31, 1998.

[3]"Related children" refers to children aged 5–17 related to the householder by blood or adoption, but not marriage.

[4]When 2000 census data and ACS data become available for all counties and school districts, model-based estimates will no longer be the "only practicable method."

[5]Estimates for children under 5 years old are provided at the state level only. Creation of postcensal estimates for states and counties was divided into separate, though related, modeling efforts in part because of the nature of the available data. The sample sizes for some states are large enough to permit the derivation of direct state estimates for some of the key statistics, but they are not sufficient for all statistics in some states or any statistics in most states. Direct, usable estimates from the CPS are possible for only a handful of counties, and only slightly more than one-third of all counties contain any March CPS sample households.

[6]Developmental work on total costs and savings associated with the survey, though not complete, suggests that, when fully implemented, the savings in the 2010 census will offset a large portion—perhaps all—of the total cost of the ACS between 2003 and 2012.

[7]The report of the NAS Panel on Census Requirements in the Year 2000 and beyond is B. Edmonston and C. Schulze, eds., *Modernizing the U.S. Census* (Washington, DC: National Academy Press, 1995) (see esp. pp. 124–36). The panel's concerns focused on issues of cost and completeness of within-household coverage. The final report of the Panel to Evaluate Alternative Census Methods, *Counting People in the Information Age* (Washington, DC: National Academy Press, 1994), also considered the continuous measurement issue (see esp. pp. 180–96). The successor to that panel, the Panel to Evaluate Alternative Census Methodologies, has produced two interim reports (1996 and 1997), mostly dealing with sampling procedures.

On the nonresponse issue, see *Counting People in the Information Age*, pp. 189–90; *Modernizing the U.S. Census*, p. 132 (quotation). On the drop in census response rates, see *Decennial Census: Preparations for Dress Rehearsal Leave Many Unanswered Questions*, GAO/GGD-98-74, March 6, 1998, p. 7.

[8]In 1990, data were gathered either by imputation or indirectly, from someone outside the household, on 14.4 percent of black non-Hispanic households and 10.2 percent of Hispanic households that were mailed the long form (response rates were much better for the short form). *Counting People in the Information Age*, p. 192.

Unlike the census, the CPS collects none of its data by mail. There is at this point no agreement on whether mail returns are superior to interviews conducted by permanent, trained interviewers such as are used in the ACS and the CPS. Census follow-up interviews are conducted by temporary enumerators. (Charles H. Alexander, Jr., U.S. Census Bureau, personal communication.)

[9]*Modernizing the U.S. Census*, p. 132.

[10]Citro, Cohen, and Kalton, eds., *Small-Area Estimates 2*, pp. 85–86.

Visitors to IRP in the 1997–1998 academic year

Hilke Kayser is an Assistant Professor of Economics at Hamilton College, Clinton, NY. She is spending the entire 1997–98 academic year as a visitor at IRP. Her current research project compares the distributional impacts of the income tax systems in Germany and the United States, using data from the German Socio-Economic Panel and the Michigan Panel Study of Income Dynamics.

Tim Maloney is a Senior Lecturer in Economics at the University of Auckland, New Zealand. He spent the Fall 1997 semester as a visitor at IRP. Dr. Maloney's primary area of teaching and research is labor economics, and while at Wisconsin he taught a course in industrial relations and labor problems. His article, "Welfare Reform and Labor Supply Behavior: The New Zealand Example," appears in this *Focus*, pp.57–60. He also worked on other publications, including a monograph on the effects of the 1991 industrial relations reform in New Zealand on unionization, wages, employment, and productivity. This work, *The New Zealand Labour Market: Five Years After the Employment Contracts Act*, will be published by the Institute for Policy Studies, Victoria University, Wellington, New Zealand, in 1998. He also began work on a large-scale project for the New Zealand Treasury Department on the determinants of cognitive achievement and educational attainment.

Judy Temple is an Associate Professor of Economics at Northern Illinois University and currently a National Academy of Education Spencer Postdoctoral Fellow. She is spending the entire 1997–98 academic year as a visitor at IRP, with funding from the U.S. Department of Education, National Institute for the Education of At-Risk Children and from a Spencer Foundation fellowship. Professor Temple's primary interests are in public sector economics, especially in policy evaluation and state and local expenditure and tax policies. The main project that she is pursuing while at IRP involves estimating the longer-term effects of an educational intervention for children who come from low-income families, the Chicago Child-Parent Centers. These centers, started in 1965, provide Head Start-type services to poor children and their families in high-poverty neighborhoods in Chicago. They include compensatory education that continues beyond preschool into the primary grades. (For discussions of this program, see *Focus* 19, no. 1 [Summer-Fall 1997]: 18–21, 39–40.)

Mark D. Turner is a Research Associate in the Income and Benefits Policy Center at the Urban Institute. He spent a week at IRP in March 1998 as the Institute's first visiting minority scholar (see p. 42 for a description of this program). Dr. Turner received the Ph.D. degree in Economics from the University of Maryland at College Park in 1996. His research focuses on issues of child support, youth employment, and the minimum wage. Most recently, Dr. Turner examined fathers' ability and willingness to pay child support and analyzed systemic barriers in child support policy. He is also supervising a survey of unwed mothers in the Washington and Baltimore areas and will be examining the factors influencing paternal acknowledgment nationally. While at IRP, Dr. Turner gave a seminar on "Nonresident Fathers and Child Support Modifications."

IRP Summer Research Workshop

June 15–18, 1998

Designed to build a community of research interest around topics concerning the low-income population, this annual invitational workshop gathers about 50 junior and senior researchers for formal and informal discussions over the course of the week. The workshop focuses on the application of methods on the frontier of empirical analysis.

AGENDA

Monday, June 15, and Tuesday, June 16: **Mobility, Poverty, and Neighborhood Effects**
Tuesday, June 16: Immigrants • EITC and Labor Supply •
Roundtable: "Welfare Reform in the States: A Ground-Level View"
Wednesday, June 17: Welfare, Workfare, and the Labor Market • Education
4:00-5:30 ***First Annual Robert Lampman Memorial Lecture***
The Lampman Lecture is open to the public; see this *Focus*, p. 60.
Thursday, June 18 (a.m.): Child Care

Welfare reform and labor supply behavior: the New Zealand example

Tim Maloney

Tim Maloney is Senior Lecturer in the Department of Economics at the University of Auckland, New Zealand. He was a visitor at IRP for the fall of 1997.

The argument for restructuring social welfare programs has often turned on the issue of work incentives. But there are no easy empirical answers for those who seek to determine whether, and to what extent, particular programs influence the duration of unemployment, discourage labor force participation, or reduce hours of work. Most countries have a myriad of social welfare programs with rather complicated and interrelated structures. Even a single welfare program may create budget constraints with different effective wage rates and benefit discontinuities that confound labor supply choices and frustrate the analyst attempting to understand them.

Furthermore, serious measurement problems confront analysts of labor supply behavior. The opportunity to perform controlled experiments with random assignment of individuals to groups receiving different benefit packages and structures is rare.[1] Researchers who try to use aggregate data to measure the effects of welfare reforms may encounter problems caused by small sample sizes, the difficulty of boiling complex reforms down to a few simple measures, and uncertainty about whether their measures are capturing the effects of macroeconomic conditions rather than specific reforms. There are uncertainties also in analyzing cross-sectional data, in which variations in benefits are related to particular factors such as age, sex, marital status, region of residence, or numbers of children. If benefit levels are set on the basis of a demographic group's past labor market performance, the results of analysis may reflect the original policy-making process rather than any behavioral response by benefit recipients.

Succeeding New Zealand governments have over the last 15 years drastically restructured the country's economic and social policies. These changes present an unusual opportunity to examine labor market responses to welfare reforms in a modern industrialized nation—unusual because the difficulties described above are largely absent. The nature of the social welfare system in New Zealand makes it relatively easy to identify the key components of the welfare programs that would affect labor supply behavior. For example, unemployment and retirement benefits do not depend on past earnings, as they do in the United States. Many changes targeted specific demographic groups, and it is possible to measure their effects as they were phased in for such groups. Moreover, benefit reductions were not uniform across demographic groups nor programs, nor did they take place at the same time. These variations in the magnitude, timing, and objectives of the benefit changes provide analysts, in effect, with something close to a natural experiment.

Economic and social welfare policies in New Zealand

Before 1984, New Zealand was characterized by pervasive government regulation and ownership in the economy at large: commodity exports and imports, currency holdings, exchange rates, banking, transport, and utilities were tightly regulated or publicly owned. The labor market was regulated and highly centralized: arbitration and union membership were both compulsory, and wage rates were determined by a national Arbitration Court. Social legislation from the 1890s on reflected a widespread expectation that the state could provide cradle-to-grave protection against economic uncertainty. In 1972, the government-appointed Royal Commission on Social Security spoke for a welfare state directed to ensuring that "everyone is able to enjoy a standard of living much like that of the rest of the community and thus is able to feel a sense of participation and belonging to the community."[2] In the 12 years following this ambitious declaration, government social welfare expenditure rose from 5.9 percent of GDP in 1971–72 to 11.6 percent in 1983–84.

In 1984, a decade of persistent inflation, poor economic performance, and rising public debt invoked a foreign exchange and constitutional crisis. In its wake, New Zealand embarked on a radical and far-reaching program of economic reforms that included financial market and trade deregulation and privatization of public sector industries. These policies were not merely pragmatic responses to difficult circumstances, but also reflected profound changes in economic thinking among policy makers. Since that year, economic reform has continued, although its pace has often been irregular and its incidence unevenly distributed. New Zealand governments were much slower to address social welfare policies than economic policies, and social welfare expenditures continued to rise, reaching 14 percent of GDP by 1990–91.

The main programs are listed in Table 1. The Domestic Purposes Benefit provided income support to single-parent families and to women aged 50 and over living alone.

Table 1
Expenditure on Social Welfare Programs in New Zealand, as a Percentage of Gross Domestic Product (GDP)

Program	1990–91	1995–96
Unemployment Benefit	2.2	1.5
Domestic Purposes Benefit	1.9	1.7
Superannuation	0.8	0.6
All Other	0.15	0.13
Total	13.5	10.8

Source: New Zealand Department of Social Welfare.

Note: Fiscal years run from July 1 to June 30. The total amount for 1990–91, in billions of current New Zealand dollars, was $9.660, and in 1995–96, it was $9.118. (In January 1996 N.Z.$1 = U.S.$0.65.)

The basic benefit guaranteed to a family was determined by the number of children in the family. Once earned income exceeded a predetermined threshold, benefits were cut back at rates that rose from 30 to 70 percent. An increase in real expenditures on the Domestic Purposes Benefit between 1990–91 and 1995–96 can be explained by a steady increase in the proportion of single-parent households over this period.

The Superannuation program provided benefits to all people "above retirement age." Benefit amounts were dependent upon marital status, but were traditionally set at around two-thirds the level of average earnings. In 1977, the age of eligibility for the basic retirement benefits, funded out of general revenues, was lowered from 65 to 60.

By default, nearly everyone else over the age of 16 was potentially eligible for income support through the Unemployment Benefit program. Basic benefits varied by age, marital status, and number and ages of children. There was no time limit on the receipt of unemployment benefits, and persons working part time were not categorically ineligible for these benefits. However, the benefit reduction rates of 30 and 70 percent applied to the Domestic Purposes Benefit also applied to the Unemployment Benefit. For families with children, Family Support and Family Benefit programs supplemented these basic benefits.[3]

Welfare policy changes and labor supply consequences

The recession following the global equity market shock of October 1987 had serious repercussions in New Zealand also. In 1990, a new, conservative National Government took office. Faced with a sharply deteriorating fiscal position, rising unemployment and debt levels, and the likelihood that Standard & Poor's was about to downgrade the country's debt rating, the government quickly cut public expenditures and deregulated the labor market, replacing centralized bargaining structures with decentralized enterprise bargaining and moving labor market institutions closer to the U.S. model. In this round of policy changes, major revisions in social welfare policies also took place. Both the economic and social policy changes were widely opposed. Nevertheless, strong real GDP and employment growth began shortly thereafter, and the last five years have seen generally improving economic circumstances.

In April 1991, nominal social welfare benefits were reduced, on average, by approximately 10 percent (derived from Table 2). The cuts were not uniform across demographic groups nor programs. In practice, they were the same, on average, for men and women (9.5 percent), and deeper for youth aged 16–24 (11.6 percent) than prime-age adults (10.6 percent) and older adults aged 55–64 (7.1 percent). Significant user charges were introduced for health and other services, with the exclusion of low-income earners.

Structural changes were introduced at the same time. The minimum age of eligibility for both Unemployment and Domestic Purposes benefits was raised from 16 to 18. The waiting period for the Unemployment Benefit was increased from 6 to 26 weeks for individuals who left work voluntarily or were dismissed for misconduct. In April 1992, the age of eligibility for Superannuation was raised from 60 to 61, and since that time it has increased by three months of age for every six months of time. The scheduled increases will end when the age of eligibility reaches 65, in 2001. Thus effective benefits for those aged 60–64 fell after April 1992, as the age of eligibility for Superannuation was steadily raised.

The five years from 1990–91 to 1995–96 saw a decline of 5.6 percent in total spending on social welfare (Table 1). One of the motives for these reforms was the belief, as in the United States, that reducing benefits and tightening eligibility criteria would cause people to work more.[4] Evidence on this point in the United States has been inconclusive, and the extent of the labor supply response remains unclear. The New Zealand data provide us with an unusual opportunity to estimate how much employment behavior changes when incentives change.

What, in essence, were the financial consequences for recipients of the policy changes just described? Figure 1 shows the change in benefit replacement rates—that is, the proportion of full-time earnings that could be "replaced" by the benefits for which for the average individual would be entitled if there were no other source of income between 1987 and 1995. The reforms announced in December 1990 took full effect by about June 1991, causing an immediate drop in the replacement rate from over 56.5 percent to under 53 percent. Thereafter, replacement rates remained relatively constant.

Because my ultimate objective was to determine whether these benefit changes affected labor supply, Figure 1 also

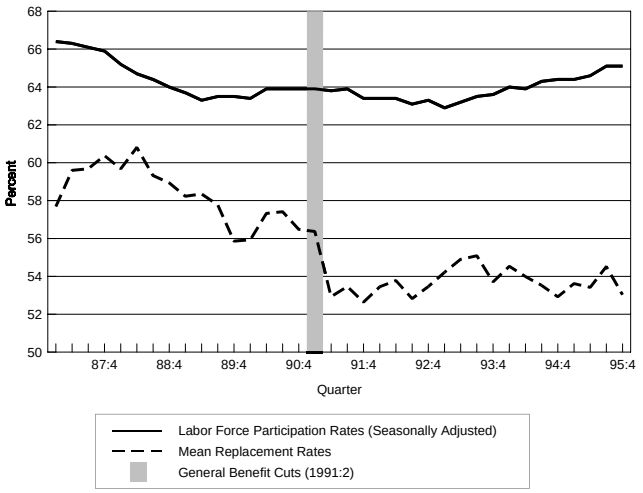

Figure 1. Aggregate labor market trends, 1987–1995.

Note: The aggregate, seasonally adjusted labor force participation rate is taken from Statistics New Zealand for all individuals 16 years old and over. The mean replacement rates are based on the author's calculations using HLFS and HES data for those aged between 16 and 64.

plots the aggregate, seasonally adjusted labor force participation rate. Between early 1987 and the time of the general benefit cuts, participation declined steadily, and continued to decline until the end of 1992, when it stood at 63 percent. By December 1995, it had rebounded to 65.1 percent. But these descriptive statistics do not allow us to claim a simple cause-and-effect relationship between welfare reforms and labor supply. During this same period, for example, New Zealand underwent a deep recession, followed by a vigorous recovery. Moreover, gross wages fell and effective income tax rates rose, so that the potential benefits associated with full-time work diminished. So, although real benefit cuts amounted to 9.5 percent, on average, between 1990 and 1995, benefit replacement rates over the same period declined by only 5.5 percent.

To isolate the effects of specific benefit changes for particular groups and to control for external factors such as those just noted, it is necessary to use regression analysis.[5] For these analyses I used data from the Household Labor Force Survey (HLFS), a random sample of New Zealand households drawn each quarter from the population and retained in the database for eight consecutive quarters. Data are available for samples of 16,000 to 32,000 households over the years 1985–95. I supplemented these data with the Household Economic Survey, which provides information on family income that is lacking in the HLFS.[6] Because labor force participation alone may not adequately capture changes in labor supply, I also examined the effects of the benefit changes on hours of labor supplied per week.

The results of these calculations appear in Table 2, which shows quite significant, though somewhat mixed, effects from the changes in benefit policy, especially for those aged 60–64 and for youth. Eligibility changes for those aged 60–64 were expected to increase labor supply, but the increase actually observed is quite large. By 2001, when the full impact of the increase in the age of eligibility for Superannuation takes force, labor force participation among those aged 60–64 is likely to have increased by around 30 percentage points.

The effects for young people seemed at first counter-intuitive—labor force participation actually decreased for those aged 16–18—but became positive when I broadened the definition of "economic activity" for youth to include participation in *either* the labor force or in schooling. Raising the age of eligibility for basic benefits from 16 to 18 increased educational participation significantly, offsetting reductions in labor force participation. This is perhaps because reductions in future welfare benefits increase optimal schooling levels and the returns to schooling.

It surely comes as no surprise that those of working age will respond to benefit reductions by increasing their labor supply. What is significant here is the size of the response. Overall, the benefit reforms implemented in New Zealand since 1990 are estimated to have increased aggregate labor force participation by more than 3 percentage points.[7]

One cannot draw lessons for U.S. welfare policy from the circumstances of the New Zealand labor market. Yet the New Zealand experience suggests the need for policy makers to bear in mind that different groups in the popu-

Table 2
Estimated Effect of Benefit Reforms on Labor Supply, 1990–1995

	Estimated Effect		
Program change	Change in Labor Force Participation (%)	Avg. Change in Hours Worked/Wk	Change in Participation in Labor Force and Education (%)
Maximum benefits decline by 9.5%	2.74	1.22	4.34
Partial benefits for those in full-time work decline by 1.0%	-0.33	-0.12	-0.38
Age of eligibility for UB and DPB rises from 16 to 18	-0.25	-0.16	0.21
Age of eligibility for Superannuation rises from 60 to 62.75	0.99	0.39	1.01
Net effect	3.15	1.33	5.18

Robert J. Lampman Memorial Lecture, 1998

Welfare Reform, Welfare Recipients, and the Labor Market

How Did We Get from the Negative Income Tax to the Personal Responsibility and Work Opportunity Reconciliation Act?

The first Lampman Memorial Lecture will be given by Sheldon Danziger, Henry J. Meyer Collegiate Professor of Social Work and Public Policy, University of Michigan, Ann Arbor. Professor Danziger is director of the Research and Training Program on Poverty, the Underclass, and Public Policy at the university. The Lecture will take place on Wednesday, June 17, 4–5:30 p.m. in Room 2080, Grainger Hall, 975 University Ave., Madison, WI.

Professor Danziger's current research projects include a longitudinal study of welfare reform and barriers to employment, and trends in poverty and inequality. Professor Danziger was director of the Institute for Research on Poverty from 1983 to 1988. He has been associated with IRP since 1974, when he joined the staff as a Research Economist. From 1976 to 1988 he was a faculty member of the Department of Social Work at the University of Wisconsin–Madison.

Among his most recent books are *America Unequal* (with Peter Gottschalk), published in 1995 by Harvard University Press, and three edited volumes, *Uneven Tides: Rising Inequality in America* (with Peter Gottschalk; Russell Sage Foundation, 1993); *Confronting Poverty: Prescriptions for Change* (with Gary Sandefur and Daniel Weinberg; Harvard University Press, 1994); and *Child Poverty and Deprivation in the Industrialized Countries, 1945–1995* (with Giovanni Andrea Cornia; Clarendon Press, 1997).

Robert J. Lampman Memorial Lectures

To honor Robert Lampman, founding director and guiding spirit of the Institute for Research on Poverty until his death in 1997, a fund has been established to support an annual lecture by a distinguished scholar on the topics to which Lampman devoted his intellectual career: poverty and the distribution of income and wealth. This memorial has been established by the Lampman family, with the help of the University of Wisconsin Foundation. The lecture series is organized by the Institute for Research on Poverty, in cooperation with the university's Department of Economics. The series offers a special opportunity to maintain and nurture interest in poverty research among the academic community and members of the public. The Institute extends its deep appreciation to the Lampman family and other donors for making this opportunity possible.

Further contributions to the fund are welcome, to ensure continuation of the lectures in future years. Donations may be made to the Robert J. Lampman Memorial Fund, University of Wisconsin Foundation, 1848 University Avenue, P.O. Box 8860, Madison, WI 53708-8860.

Welfare reform and labor supply behavior, continued

lation may respond very differently to similar incentives and offers some clues to the nature and size of the response that we may expect from welfare policy changes. ■

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[1]Well-known examples in the United States are the New Jersey and Seattle/Denver Income Maintenance Experiments.

[2]This section draws heavily upon L. Evans, A. Grimes, B. Wilkinson, and others, "Economic Reform in New Zealand, 1984–95: The Pursuit of Efficiency," *Journal of Economic Literature* 34 (1996): 1856–1902.

[3]Housing and accommodation supplements, which replaced public housing, are not considered in this discussion because I have no way of comparing the value of the in-kind housing benefit provided before the policy changed with the value of the cash supplements now in force.

[4]The government's primary concern in making these changes was not a general labor shortage, given that the unemployment rate was around 10 percent. Until just a few years ago, New Zealand was experiencing a net outmigration of the population, mostly to Australia, but also to the United Kingdom, North America, and other places. Those leaving tended to have slightly higher qualifications and to be younger, evoking fears of a "brain drain."

[5]Methods and calculations used are fully described in T. Maloney, "The Impact of Recent Welfare Reforms on Labor Supply Behavior in New Zealand," IRP Discussion Paper 1149-97, University of Wisconsin–Madison, 1997. See also T. Maloney, *Benefit Reform and Labour Market Behaviour in New Zealand* (Wellington, NZ: Institute of Policy Studies, 1997).

[6]Factors which were included in the equations because of their posited effects upon labor supply were age, gender, educational attainment, status as a Maori or Pacific Islander, marital status, and number of children. Maoris and Pacific Islanders are less likely to be working. Marital status and the number and ages of children have substantially different effects upon the labor force participation of men and women. Those outside the prime working age of 20–54 were also less likely to be in the labor force.

[7]In the long run, it remains unclear whether these positive labor supply effects might be reduced, if the reforms indirectly lower the returns from employment.

The IRP Evaluation of the Wisconsin Works Child Support Waiver Demonstration

Wisconsin Works (W-2), the state's welfare reform program that began in September 1997, contains more generous child support provisions than those in the AFDC program. Under AFDC, families received the first $50 per month paid on their behalf; the remainder went to public agencies as partial reimbursement for their welfare expenditures. Under W-2, families will generally retain all of the child support paid on their behalf.

Wisconsin's experiment with "passing through" all child support to resident-parent families is unique among the states. Given new flexibility by federal welfare reform legislation, most states have decided to retain all child support paid to families receiving assistance; others plan to maintain the $50 pass-through. The Wisconsin experience offers an opportunity to evaluate the potential advantages and disadvantages of this new approach to child support, and to increase our knowledge concerning the way the child support system is working for low-income families.

The child support component of W-2 is operating as a waiver demonstration program, which began in October 1997. In granting the waiver, the federal government required a random-assignment evaluation of the program.[1] In response to a Request for Proposals issued by the state, the Institute for Research on Poverty submitted an evaluation proposal, which subsequently received the contract award. A four-year evaluation is planned, using a control group of 4,000 who will receive either 41 percent of the amount paid or $50, whichever is greater, and a treatment group of 4,000 (plus all others participating in W-2) who will receive the full amount of child support.

The IRP plan includes three types of evaluation: an implementation/process study, an impact analysis, and a nonexperimental study (the last must still receive federal approval).

Implementation and process study

As required by the waiver, the evaluation will contain an implementation analysis of the program during its first six months and a process analysis that describes implementation and operation of the program over the full four years of its existence. Data from several sources will be used:

administrative data on client placement and progression, staff resources, expenditures;
policy documents, including administrative rules, contracts, and policy directives;
formal surveys of program staff and administrators and of program participants; and
field research, entailing observation of programs in operation and discussions with program officials.

The project will explore agency actions: for example, how and when program information is given to the counties and how the computer system that calculates benefits is structured and operating. It will look at agency-client interactions: how the pass-through is explained to clients, what custodial and noncustodial parents are told about the duration of the benefit structure in which they are participating, control group attitudes and local staff responses. And it will examine the effects of the policy on the enforcement activities of the child support system: for example, does the full pass-through influence staff efforts to establish paternity or revise support orders?

Experimental evaluation: The impact study

The impact analyses are sorted into eight different domains, each with its own theory, rationale, and procedures. The domains are:

1. *Effect on child support collections*: amount of support paid by nonresident parents, compliance with obligations, amount of support actually received.

2. *Effect on orders and paternity establishment*: paternity establishment, order establishment, order amount, change in order amount.

3. *Effect on W-2 and related program costs*: time spent in each tier of W-2, likelihood of moving up or down the tier ladder, total W-2 benefits paid, likelihood of participation in other public assistance programs, level of food stamp and child care benefits.

4. *Effect on self-sufficiency of the resident parent*: employment rate, level of earnings, total income, income relative to needs, assets of resident-parent families.

5. *Effect on the earnings of the nonresident parent*: earnings, wage rate, hours worked, income, employment history, W-2 participation of nonresident parents.

6. *Effect on formal versus informal payments*: type (cash, in kind) and amount of information payments, relation to formal payments.

7. *Effect on the nonresident parent's involvement with the child*: time spent with children, participation in child care and in decisions about children's medical care and education, time spent directly in helping children with medical and education needs.

8. *Effect on child well-being*: health, education, parenting behavior and practices.

Data for the impact evaluation will be taken from linked state administrative-record databases and from a survey of resident and nonresident parents, who will be interviewed twice, once in 1999 and once in 2000. The interviews will cover knowledge of W-2, details on child support payments, involvement of the nonresident parent with the child, informal cash and in-kind payments, living arrangements, parental conflict and child-parent conflict, employment history, other program participation, and health insurance status. These survey data will provide measures of independent and dependent variables not available in the administrative records, permitting a check on the extent to which participants in experimental and control groups are aware of the requirements and procedures of the group, and providing some capability for an independent assessment of the completeness of the administrative records.

Nonexperimental evaluation

The nonexperimental effort has several components. First, administrative data on child support payments and order compliance will be compared under three policy regimes: before 1984 (when all child support collected on behalf of welfare recipients was retained by the state), 1984–97 (when $50 a month was passed through), and after 1997 (when all support was passed through). The second component will compare effects of the $50 pass-through with the full pass-through, using child support parent surveys conducted by IRP in 1987, 1989, and 1996–97 for AFDC and the survey described above for the W-2 regime. The IRP surveys include information on informal or in-kind payments, nonresident parents' contact with their children, parental conflict, and child well-being. The third component will draw upon national survey data to compare Wisconsin under the full pass-through with other states that did not alter their pass-through policy.

The fourth component involves ethnographic research, in collaboration with the Manpower Demonstration Research Corporation. Intensive interviews with fathers in Milwaukee will explore fathers' knowledge of the pass-through policy and its influence on their payments, their employment patterns, and their involvement with the children.

Finally, the nonexperimental evaluation will involve collaborative work with the Urban Institute's New Survey of American Families (NSAF), a comprehensive national study designed to document the well-being of families at two points in time: before the reforms that introduced Temporary Assistance for Needy Families (1997) and after (1999). Containing detailed questions on child support orders and payments and on paternity establishment, the NSAF oversampled families in Wisconsin when it became clear that the state would be a leader in welfare reform. Three types of comparisons will be possible: child support in Wisconsin before and after the pass-through change; child support in Wisconsin after the change versus child support in other states; and differences in payments before and after the reform in Wisconsin, compared to differences in other states before and after they change their pass-through policy. ■

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[1]Within each group, half are to be those receiving assistance when W-2 began and half are to be those who subsequently joined the program.

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