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The Supplemental Poverty Measure: Its Core Concepts, Development, and Use

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Summary

The Supplemental Poverty Measure (SPM) is a measure of economic deprivation—having insufficient financial resources to achieve a specified standard of living. The SPM addresses some of the limitations of the official poverty measure, without supplanting it outright.

Both the SPM and the official measure determine the poverty status of people and families by comparing their financial resources against poverty *thresholds* that are valued in dollars. For both measures, poverty thresholds vary by family size and composition, and families whose resources are lower than the thresholds are considered to be poor.

The measures differ in their definitions of

- *need*, as it is used in the thresholds (the dollar amounts used to determine poverty status),
- *financial resources* that are considered relevant for comparing against the measure of need as specified in the thresholds, and
- *family*, for the purpose of assigning thresholds and counting resources.

Need

The official poverty thresholds measure needs derived from the cost of an austere food budget. The food budget was multiplied by three, based on the finding that food accounted for about one-third of total family expenditures in 1955. Since their original computation, these thresholds have been adjusted annually for price inflation. In contrast, the SPM's thresholds are based on consumer expenditures for food, clothing, shelter, and utilities, and it uses five years of data from the Consumer Expenditure Survey in calculating needs and thresholds. Developing the SPM thresholds starts with spending data for families with exactly two children. These data are refined by using approximately the 33rd percentile of families' expenditures on food, clothing, shelter, and utilities. Next, an extra 20% is figured into the thresholds for miscellaneous expenses such as cleaning supplies and personal care items. The thresholds then undergo further adjustment to reflect that

- housing costs differ between homeowners with mortgages, homeowners without mortgages, and renters;
- housing costs differ geographically; and
- costs differ by family size and composition.

Financial Resources

Financial resources to meet needs, whether in the SPM or the official measure, are based on the sum of income of all family members. While the official measure uses money income before taxes, the SPM makes additional adjustments and considers a wider range of resources. The SPM includes the value of certain in-kind benefits (such as food and housing subsidies), uses income after estimated federal and state taxes, and subtracts some expenses from income. These expenses include medical out-of-pocket costs, such as health insurance premiums, physician co-pays, and over-the-counter medications; child support paid outside of the household; and work expenses, such as child care and the cost of commuting, tools, uniforms, or licensing fees related to a person's employment. Work expenses, including child care, are capped at the amount of earnings from work of the lowest-earning family member. These expenses are subtracted from family income because they cannot be used to obtain the needs defined in the SPM thresholds. Unlike

the official poverty measure, the range of financial resources included in the SPM is defined to be consistent with the types of needs used to compute the SPM poverty thresholds.

Family

Like the official measure, the SPM family unit definition includes people related by birth, marriage, or adoption living in the same housing unit. However, the SPM additionally includes cohabiting couples and their children, and foster children below age 22.

How Does Poverty Look through the Lens of the SPM?

The demographic profile of the poverty population is different under the SPM than under the official measure. Children have a comparatively lower poverty rate (percentage in poverty) under the SPM, and the aged (65 and older) and working-age persons (18 to 64) have comparatively higher poverty rates. These differences can be explained by the SPM's resource definition. The SPM includes tax credits and in-kind benefits that help families with children (in effect, boosting the measure of family income). It subtracts medical out-of-pocket expenses, which disproportionately affects the aged (lowering their measure of income), and subtracts work-related expenses, which disproportionately affects the working-age population (lowering their measure of income).

Uses and Limits

The SPM can give policymakers the tools to understand how taxes and government programs, including the noncash programs, affect the poor. It also illustrates how medical expenses and work-related expenses such as child care can affect a family's economic well-being. However, the SPM poverty estimates are derived from household survey data, and hence are affected by issues such as underreporting of income from government benefit programs, limitations on how tax liabilities and tax benefits can be estimated based on survey data, and differences in how noncash benefits and lump-sum tax refunds are "valued" by program recipients versus how they are valued for the purposes of poverty measurement. Additionally, the SPM does not directly value health insurance provided publicly or privately. Further, poverty has historically been measured in the United States as an "absolute" measure, based on how many people fall below a set standard of living. Questions have been raised about whether the SPM continues to measure poverty in that way, or represents a "relative" measure of poverty, based on how the population ranks in terms of well-being relative to each other.

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Introduction

As its name might suggest, the Supplemental Poverty Measure (SPM) was developed to supplement, but not replace, the official poverty measure by addressing some of its methodological limitations. The official measure provides a consistent historical view of poverty in the United States, but the SPM may be better suited to helping congressional policymakers and other experts understand how taxes and government programs affect the poor. Also, it may better illustrate how medical expenses and work-related expenses such as child care can affect a family's economic well-being.

This report describes the SPM, how it was developed, how it differs from the official poverty measure, and the insights it can offer. This report will not discuss potential consequences of changes to anti-poverty programs, nor will it provide an analysis of poverty trends.[1]

The Official Measure of Poverty

The official measure of poverty was developed in the 1960s by Mollie Orshansky, an analyst at the Social Security Administration. It was based on food costs in that decade as well as the share of a family's total budget that was devoted to food according to family budgets in the mid-1950s. The food cost it used was the U.S. Department of Agriculture's (USDA's) Economy Food Plan. A 1955 survey of family consumption determined that about one-third of a family's spending was on food. Thus, the poverty thresholds were developed as three times the cost of the Economy Food Plan, with some adjustments for two-person families and single individuals to account for their higher fixed costs. In the current official measure of poverty, the thresholds developed in the 1960s have been adjusted only for price inflation, as measured by the Consumer Price Index for All Urban Consumers (CPI-U).[2]

Under the official poverty measure, an individual is counted as poor if his or her family's pre-tax money income falls below the poverty threshold. Pre-tax money income excludes the value of government noncash benefits provided either privately or publicly, such as health insurance, Supplemental Nutrition Assistance Program (SNAP) benefits, or housing assistance. It also does not consider taxes paid to federal, state, or local governments, or tax benefits (such as the Earned Income Tax Credit, EITC) that might be received by families. The official poverty measure is computed for the non-institutionalized population.

What is the SPM?

The SPM was designed to address limitations of the official poverty measure.[3] Like the official poverty measure, it is a measure of economic deprivation. It defines poverty status for families

[1] For a historical perspective on poverty, an overview of poverty by demographic group, and summary explanations of the official measure and the SPM, see CRS Report R44991, *Poverty in the United States in 2016: In Brief*, by (name r edacted) For a more thorough introduction to the methods of poverty measurement, see CRS Report R44780, *An Introduction to Poverty Measurement*, by (name redacted).

[2] The official poverty measure, as well as its method of inflation adjustment, was established by the Office of Management and Budget (OMB) in Statistical Policy Directive 14, originally issued in 1969 (as the Bureau of the Budget's Circular A-46) and reissued in 1978. The Census Bureau follows this directive when publishing official poverty statistics.

[3] The purpose of the SPM was discussed in 2010 by an Interagency Technical Working Group (ITWG), organized by the Office of Management and Budget (OMB). A link to documentation of the ITWG's observations regarding the SPM is available on the Census Bureau's website at https://www.census.gov/topics/income-poverty/supplemental-(continued...)

and individuals by comparing *resources* against a measure of *need*.[4] Measures of need are used to establish poverty thresholds that are valued in dollars.

The SPM poverty thresholds measure a standard of living based on expenditures for food, clothing, shelter, and utilities (FCSU), and "a little more" for other expenses. The resources measured against those thresholds represent disposable income (after taxes and certain other expenses), including the value of noncash benefits, that are available to families to meet those needs.

The SPM is considered a research measure, because it is designed to be updated as techniques to quantify poverty and data sources improve over time, and because it was not intended to replace either official poverty statistics or eligibility criteria for anti-poverty assistance programs.

Broadly Comparing the Official Poverty Measure to the SPM

Both the SPM and the official measure determine the poverty status of people and families by comparing their financial resources against poverty thresholds. For both measures, poverty thresholds vary by family size and composition, and families whose resources are lower than the thresholds are considered to be poor. The differences between the SPM and the official measure reflect changes in household composition in the more than 50 years since the official measure was developed. The differences also partly spring from attempts to more accurately assess the needs and resources of families. Some of the innovations surrounding the calculation of needs and resources embodied in the SPM are based on data that were not yet available when the official measure was developed.

The measures differ in their definitions of the following:

- *Need*, as it is used in the thresholds (the dollar amounts used to determine poverty status). Unlike the official measure, the SPM's measure of need is geographically adjusted based on housing costs by metropolitan area or by state for nonmetropolitan areas. Furthermore, three sets of SPM thresholds are computed by the housing status of a family—as homeowners with a mortgage, homeowners without a mortgage, or renters—to reflect differences in housing costs. Thus, while the official poverty measure uses 48 poverty thresholds to represent families' needs, the SPM uses thousands.
- *Financial resources* that are considered relevant for comparing against the measure of need as specified in the thresholds. Financial resources to meet needs, whether in the SPM or the official measure, are based on the sum of income of all family members. While the official measure uses money income before taxes, the SPM makes additional adjustments and considers a wider range of resources.
- *Family*, for the purpose of assigning thresholds and counting resources. The SPM uses an updated approach to more explicitly take account of how household members share resources based on their relationships, which the Census Bureau's definition of "family" (used in the official measure) does not capture completely.

(...continued)

poverty-measure/guidance/methodology.html.

[4] For a more thorough introduction to the methods of poverty measurement, see CRS Report R44780, *An Introduction to Poverty Measurement*, by (name redacted).

One of the most important differences between the two measures, however, is that the SPM is intended to be revised periodically, using improved data sources and measurement techniques as they become available, while the official poverty measure is intended to remain consistent over time. A summary of the differences is provided in **Table 1**.

Table 1. Differences between the Official and Supplemental Poverty Measures

	Official Poverty Measure	Supplemental Poverty Measure
Resource units ("families")	People related by birth, marriage, or adoption (official Census Bureau definition of "family"). People age 15 and older not related to anyone else in the household are considered as their own economic units.	People related by birth, marriage, adoption, plus unrelated and foster children, and cohabiting partners and their children or other relatives (if any) are considered as "SPM resource units" (sharing resources and expenses together).
Needs (thresholds)	• Vary according to family size and ages of family members. • Dollar amounts based on the cost of a food plan for families in economic stress in the early 1960s, multiplied by three (with adjustments for two-person families and individuals). • Updated for inflation using the Consumer Price Index. • No geographic cost adjustments.	• Vary according to the size and composition of the resource unit (see above). • Dollar amounts based on consumer expenditure data for food, clothing, shelter, utilities, with adjustments by homeownership and mortgage or rental status. • Based on most recent five years of consumer expenditure data (not fixed at one point and trended forward). • Housing costs geographically adjusted for metropolitan and nonmetropolitan areas.
Resources	Money income *before* taxes (includes 18 private and government sources of income, including Social Security, cash assistance, and other sources of cash income).	Money income (both private and government sources) *after* taxes... • **minus:** work expenses, child care expenses, child support paid, out-of-pocket medical expenses, • **plus:** tax credits (such as the Child Tax Credit and the Earned Income Tax Credit) and the value of in-kind benefits (such as food and housing subsidies).

Source: Congressional Research Service summary of methodological discussion in Liana Fox, *The Supplemental Poverty Measure: 2016,* U.S. Census Bureau, September 2016, http://www.census.gov/content/dam/Census/library/publications/2016/demo/p60-261.pdf.

The Supplemental Poverty Measure: Research to Address Limitations of the Official Poverty Measure

The SPM was developed after decades of research focused on overcoming the limitations of the official poverty measure. These limitations are not easy to surmount, as evidenced by dozens of alternative poverty measures developed over the years by the Census Bureau and by academia, and the working papers and reports written about those measures.[5]

Criticisms of the Official Poverty Measure

Over time, the official poverty measure has faced criticism, including the following:

- The official poverty thresholds are not adjusted to reflect geographic variations in costs.
- Owing to the limitations of the source data available at the time the official measure was developed, it is based on money income before taxes; however, most individuals pay for their basic necessities using after-tax income. This represents a disconnection between the way needs were specified in the thresholds (which represent a level of need) and the definition of resources available for meeting those needs.
- The official measure captures the effects of some but not all government programs intended to provide relief for the poor because the income used in the official measure is money income before taxes.
  - The programs that are captured are those that provide money income benefits before taxes: Social Security, Supplemental Security Income (SSI), Temporary Assistance for Needy Families (TANF), and any state or local relief programs based on money income.
  - The programs that are not captured are the EITC and the Child Tax Credit, which, despite their large effects for low-income workers with children,[6] are not considered because they are tax credits and only reflected in after-tax income; and a host of noncash benefits such as the Supplemental Nutrition Assistance Program (SNAP), the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), housing subsidies, and subsidized medical care. Many of these programs did not exist when the official measure was developed in the 1960s.
- The official measure captures neither the needs incurred nor the resources brought in by household members who are not related by birth, marriage, or adoption. These include unmarried partners and their children (if any are present) and foster children not legally adopted.

[5] Working papers related to the SPM are available on the Census Bureau's website at https://www.census.gov/topics/income-poverty/supplemental-poverty-measure/library/working-papers.html. Reports on the SPM and on previous experimental poverty measures are available at https://www.census.gov/topics/income-poverty/supplemental-poverty-measure/library/publications.html. Reports examining alternative income definitions (including noncash benefits and taking account of taxes) used in earlier poverty measurement research are available by year on the Census Bureau's income publications page at https://www.census.gov/topics/income-poverty/income/library/publications/cps.html.

[6] See, for instance, CRS Report R43805, *The Earned Income Tax Credit (EITC): An Overview*, by (name redacted) and (name redacted) .

- While the official measure is adjusted for overall inflation, it does not consider the extent to which the prices of basic necessities have shifted in relation to all goods and services. Therefore, it can be argued that the inflation adjustment used in the official measure does not accurately reflect the purchasing power needed, in a practical sense, to remain at the poverty line compared to previous decades.

Motivation for a New Poverty Measure

While there has been broad agreement among poverty scholars that these issues are drawbacks to the official poverty measure, overcoming them has proven to be difficult. Scholars in the federal government, universities, and private research institutions have spent decades developing approaches to address these shortcomings and evaluating the effectiveness of those approaches.[7]

For example, adjusting the poverty thresholds by geographic variations in costs is difficult, because price levels within a state can vary greatly among its different metropolitan areas, as well as between metropolitan and nonmetropolitan areas. Numerous approaches were developed over the years to adjust thresholds geographically, and because of a lack of comprehensive small-area geographic detail on prices, earlier approaches were more limited in their ability to accurately reflect cost variations within states.[8] Research inquiries into the other issues listed above—

[7] Three such examples, in different decades, illustrate the participation from academic researchers and federal agencies in the research discussion:

In 1976, the Department of Health, Education, and Welfare issued a multi-volume report entitled *The Measure of Poverty: A Report to Congress as Mandated by the Education Amendments of 1974* in order to comply with Section 823 of P.L. 93-380. Authors of the volumes of this report included analysts from the University of Michigan, private research institutions (Mathematica, Urban Systems Research and Engineering, Inc.), and federal agencies (Bureau of Labor Statistics; Census Bureau; Department of Agriculture; Department of Health, Education, and Welfare; Department of the Treasury; Social Security Administration). The report is reproduced on the Census Bureau website at https://www.census.gov/library/publications/1976/demo/measure-of-poverty.html.

In 1985, a conference was held to discuss methods of computing the value of noncash benefits. See *Conference on the Measurement of Noncash Benefits*, December 12-14, 1985, Fort Magruder Inn and Conference Center, Williamsburg VA, proceedings and related technical papers available at https://www.census.gov/library/working-papers/1985/demo/measurement-conf.html. Participants included "115 persons, including 23 from the Census Bureau.... 40 persons from universities and nonprofit research organizations, 16 persons from interest groups and other private sector organizations, and 36 persons from other government agencies and Congressional Committees." See conference proceedings, Preface, p. III.

The third example is the National Academy of Sciences Panel on Poverty and Family Assistance: Concepts, Information Needs, and Measurement Methods, which met from 1992 to 1995 and published its report, *Measuring Poverty: A New Approach*, in 1995. The panel is discussed in more detail later in this report.

[8] The first Census Bureau report to adjust poverty thresholds geographically was Kathleen Short, Thesia Garner, David Johnson, and Patricia Doyle, *Experimental Poverty Measures: 1990 to 1997*, U.S. Census Bureau, *Current Population Reports*, P60-205, 1999. The report used a methodology recommended by a panel from the National Academy of Sciences, incorporating indices that varied by nine census regions and by population size category within regions. Subsequent reports (e.g., Short, *Experimental Poverty Measures: 1999*; U.S. Census Bureau, *Current Population Reports*, P60-216, 2001) used indices based on Fair Market Rent data from the Department of Housing and Urban Development—usually two indices by state: one for all metropolitan areas within the state, the other for all nonmetropolitan areas within the state (if any existed). While arguably both approaches were at least a conceptual improvement over no geographic adjustment at all, they did not capture the full range of geographic cost variation. A discussion of cost variations within a single state and more recent approaches to adjusting poverty thresholds is available in Trudi Renwick, "Geographic Adjustments of Supplemental Poverty Measure Thresholds: Using the American Community Survey Five-Year Data on Housing Costs," SEHSD Working Paper 2011-21, U.S. Census Bureau, July 2011, https://www.census.gov/library/working-papers/2011/demo/SEHSD-WP2011-21.html.

particularly the valuation of noncash benefits such as subsidized health care—proved to be just as thorny.[9]

Moving Toward the SPM: Decades of Research

Multiple Series of Alternative Poverty Measures

In attempting to address the shortcomings of the official poverty measure, dozens of alternative poverty measures were developed over multiple decades. For instance, in the 1980s the Census Bureau began providing alternative definitions of income that subtracted taxes from income and estimated the monetary value of noncash benefits, and showed the effects of these definitions on estimated poverty rates, in an "R&D" series of reports.[10] The approaches used in these reports for estimating the value of noncash benefits were discussed in a conference attended by analysts from the federal government, universities, and other research institutions.[11] Eventually, as variations of the Consumer Price Index (CPI) were developed by the Bureau of Labor Statistics, the Census Bureau began to include poverty estimates based on those indices in the R&D series as well.[12] Between 1992 and 1995, a panel from the National Academy of Sciences (NAS) met to develop recommendations for an improved poverty measure, in response to a congressional request from the Joint Economic Committee and funded through the Bureau of Labor Statistics, the Department of Health and Human Services, and the Food and Nutrition Service of the U.S. Department of Agriculture. The NAS report was published in 1995.[13] Since the report's publication, the Census Bureau has been publishing data on alternative poverty measures based on both the older R&D series and the newer NAS-based methodologies. Unlike the R&D series, which focused on alternative definitions of income and applying a different index to adjust thresholds for inflation, the NAS-based experimental measures made adjustments both to the

[9] For a discussion of the complexity in counting the value of subsidized health care as income, see the presentation by Ellwood and Summers, "Measuring Income: What Kind Should Be In?" in the proceedings from the *Conference on the Measurement of Noncash Benefits*, December 12-14, 1985, Fort Magruder Inn and Conference Center, Williamsburg VA, at https://www.census.gov/library/working-papers/1985/demo/measurement-conf.html, and the subsequent commentary by Alan Blinder and Albert Rees.

[10] See, for instance, Timothy Smeeding, *Alternative Methods for Valuing Selected In-Kind Transfer Benefits and Measuring Their Effect on Poverty*, U.S. Census Bureau, Technical Paper 50, 1982, https://www.census.gov/library/publications/1982/demo/tp-50.html; and John McNeil, *Measuring the Effect of Benefits and Taxes on Income and Poverty: 1979 to 1991*, U.S. Census Bureau, *Current Population Reports*, P60-182RD, 1992, https://www.census.gov/library/publications/1992/demo/p60-182rd.html. Additional R&D reports are available on the Census Bureau's website at https://www.census.gov/library/working-papers/1985/demo/measurement-conf.html (for the seminal papers that led to the R&D series), and by year (along with other reports) at https://www.census.gov/topics/income-poverty/library/publications.html, beginning with *Measuring the Effect of Benefits and Taxes on Income and Poverty: 1986* (Current Population Reports, series P60 No. 164-RD-1). Data using the alternative definitions of income were later included in the official reports on income and poverty from 1993 to 2002.

[11] *Conference on the Measurement of Noncash Benefits*, December 12-14, 1985, Fort Magruder Inn and Conference Center, Williamsburg VA; proceedings and related technical papers available at https://www.census.gov/library/working-papers/1985/demo/measurement-conf.html.

[12] Initially, the CPI-U-X1 and later the CPI-U-RS were used. They were developed by the Bureau of Labor Statistics to address the over-estimation of housing costs in the official measure's price inflator, the CPI-U. For details on the research to develop the CPI-U-RS, see http://www.bls.gov/cpi/cpiurs.htm.

[13] Constance F. Citro and Robert T. Michael, eds., *Measuring Poverty: A New Approach*, Panel on Poverty and Family Assistance: Concepts, Information Needs, and Measurement Methods, Committee on National Statistics, National Research Council, 1995. Available from National Academies Press online at http://www.nap.edu/catalog/4759/measuring-poverty-a-new-approach, and on the Census Bureau website at https://www.census.gov/library/publications/1995/demo/citro-01.html.

thresholds and the income definition, and estimated work-related expenses and medical out-of-pocket expenses.[14] Research continued, both at the Census Bureau and elsewhere, to refine the measurement methods and use the most current data sources available.[15]

Developing the SPM: Consolidating the Research, and Public Comment

In 2009, the Office of Management and Budget (OMB) organized an Interagency Technical Working Group (ITWG) for establishing a Supplemental Poverty Measure. At that point, dozens of experimental poverty measures focusing on the various aspects of poverty measurement discussed above had been developed. The ITWG put forth a single measure (the SPM) to consolidate the research and emphasize not only sound concepts and methodology in the measure's development, but also practicality in the measure's maintenance, computation, and usage. The ITWG did not intend to replace the official measure, and it was expected that refinement of both the SPM's methodology and its data sources would continue.[16]

How Is the SPM Currently Computed?

As mentioned above, the SPM differs from the official poverty measure in three broad ways. First, the measure of need is defined differently in the SPM's poverty thresholds. Second, the economic resources measured in the SPM differ from those counted in the official poverty measure. Third, the definition for "family" units used in the SPM is not the same.

In determining an individual's poverty status, the poverty thresholds are compared with his or her family's economic resources. Information on relationships within the household determines which threshold is appropriate to use and whose resources are to be compared with that threshold. This information on family relationship and resources is measured using household surveys, and the way it is measured is affected and limited by what is asked in the surveys.

Through 2016, the Census Bureau has produced estimates of individuals living in poverty as measured by the SPM using the Annual Social and Economic Supplement (ASEC) to the Current Population Survey (CPS) as the source of the family relationship and income information used to compute poverty status. The CPS ASEC is also the survey used to produce the official poverty estimates at the national level. Thus, the SPM poverty estimates are based on the detail available

[14] The R&D series of alternative poverty measures shown in the Census Bureau's annual poverty reports, while intended to illustrate the marginal effects of certain income types and noncash benefits on the overall poverty rate, could be misinterpreted to imply that those alternative income definitions were intended to represent the full range of resources available, and that the official thresholds described the level at which basic needs were fully met. The text of the Census Bureau reports avoided such characterization and instead focused on the effects of each definition on the overall poverty rate. In vetting the SPM, the Interagency Technical Working Group (ITWG) explicitly stated its intent to define resources and needs consistently, echoing similar commentary in the NAS report.

[15] The research (working papers and conference presentations) is published on the Census Bureau website at https://www.census.gov/topics/income-poverty/supplemental-poverty-measure/library/working-papers.html, and on the Bureau of Labor Statistics website at http://www.bls.gov/pir/spmhome.htm.
A review of the research into alternative methods for measuring poverty leading up to the SPM is available in CRS Report R41187, *Poverty Measurement in the United States: History, Current Practice, and Proposed Changes*, by (name redacted)

[16] Observations from the ITWG on developing the SPM have been published on the Census Bureau's website at https://www.census.gov/content/dam/Census/topics/income/supplemental-poverty-measure/spm-twgobservations.pdf. The Census Bureau submitted a notice in the *Federal Register* published on May 26, 2010, soliciting comments about the SPM. The notice, feedback, and comments are available at https://www.census.gov/topics/income-poverty/supplemental-poverty-measure/guidance/methodology.html.

in, and the limitations of, the CPS ASEC. If other surveys were to be used to estimate SPM poverty, their limitations and advantages would affect what information could be produced.

Definition of Need in SPM Poverty Thresholds

Goods and Their Costs

In drawing the "poverty line," neither the SPM nor the official poverty measure attempted to parse out exactly how much of every type of good or service, with corresponding prices, is needed by a family to form an overall budget. Instead, both the SPM and the official measure used data on families' spending. In the case of the official measure, this was the spending related to food. The official measure's thresholds were based on food costs in the 1960s and food spending patterns of families in 1955. According to a 1955 USDA food consumption survey, families spent approximately one-third of their income on food, on average; therefore, the costs of the food plans were multiplied by three to produce family income amounts.[17]

The SPM uses the costs of food, clothing, shelter, and utilities (FCSU) as measured in the Consumer Expenditure Survey (CE).[18] These items were selected because the panel considered them to be broadly accepted as universal needs and relatively noncontroversial. The panel did not specify exact amounts for items within these broad categories, but rather focused on overall spending patterns within the categories using CE data. Furthermore, the panel acknowledged that other items would be needed by families, such as non-work related transportation, personal care products, cleaning supplies, and the like; but rather than attempt to specify exact amounts for these items, the panel instead allowed for "a little more"—20% of the cost of FCSU—for miscellaneous items (that is, the threshold represents the cost of FCSU multiplied by 1.2).[19]

To obtain the dollar amount used as a starting point for computing the complete set of thresholds, an average is taken among consumer units[20] whose out-of-pocket expenditures on FCSU rank in

[17] The actual food plans took account of dietary needs by age and sex. For her purposes, Mollie Orshansky (the analyst who developed the official thresholds) performed some computations, using 1960 census data, to translate the food costs by age and sex into amounts by family size and composition. Furthermore, she made adjustments to the poverty thresholds (which represent total family income, not just food costs) for two-person families and for unrelated individuals to account for the comparatively higher fixed costs that those units face. For details, see Gordon Fisher, "The Development of the Orshansky Thresholds and Their Subsequent History as the Official U.S. Poverty Measure," 1992 (rev. 1997), reproduced on the Census Bureau's website at https://www.census.gov/library/working-papers/1997/demo/fisher-02.html.

[18] The selection of FCSU as the set of basic goods and services to be included in the thresholds was discussed in Constance F. Citro and Robert T. Michael, eds., *Measuring Poverty: A New Approach,* Panel on Poverty and Family Assistance: Concepts, Information Needs, and Measurement Methods, Committee on National Statistics, National Research Council, 1995, pp. 48-51, http://www.nap.edu/catalog/4759/measuring-poverty-a-new-approach. The Consumer Expenditure Survey is a nationwide household survey conducted by the U.S. Bureau of Labor Statistics to find out how Americans spend their money. For details, see https://www.bls.gov/opub/hom/cex/home.htm.

[19] The NAS panel was careful *not* to recommend any one specific level, but rather suggested a range of dollar amounts that might be considered reasonable in light of other studies of poverty. The panel discussed this approach in Chapters 1 and 2 of *Measuring Poverty: A New Approach* (op. cit.), and cited the studies they used and the corresponding threshold amounts of those studies in Table 2-5 of that volume. In 2010, the ITWG recommended the 33rd percentile of FCSU expenditures because it represented the midpoint of the NAS panel's range. See "Observations from the Interagency Technical Working Group on Developing a Supplemental Poverty Measure" at https://www.census.gov/content/dam/Census/topics/income/supplemental-poverty-measure/spm-twgobservations.pdf.

[20] Consumer units are defined somewhat differently from "families" in that they include non-relatives who make joint expenditure decisions. Further details are provided in the Consumer Expenditure Survey glossary at https://www.bls.gov/cex/csxgloss.htm and in the "Family Units in the SPM" section of this report.

the 30th to the 36th percentiles, among units with exactly two children, according to the Consumer Expenditure Survey.[21] Determining the average is the first step in computing the thresholds; the next step is adjusting that average by homeownership or rental status.

Adjustment of the Thresholds by Homeownership or Rental Status

Three sets of poverty thresholds are used in the SPM: one for homeowners with a mortgage, another for homeowners without a mortgage, and a third for renters. These differing sets of thresholds based on *tenure* (ownership or rental status) reflect that housing costs can differ greatly among these three groups. Housing costs make up roughly 40% to 50% of the expenditures represented in the SPM thresholds; for homeowners without mortgages the housing-related expenditures are at the lower end of that range, while renters and homeowners with mortgages tend toward the upper end of the range. Moreover, these groups tend to differ demographically as well. Homeowners without mortgages tend to be older but also have lower incomes on average than homeowners with mortgages. Homeowners with mortgages are younger, have greater income, and are more likely to be raising children. Renters have lower income than the homeowner groups but also tend to be younger and are more likely to be raising children than homeowners without mortgages.

Like the other costs used in the SPM thresholds, the housing costs are obtained using data from the Consumer Expenditure Survey. It provides information on housing costs by tenure for the United States as a whole, but it does not provide the level of geographic detail needed to perform geographic adjustment.[22]

Adjustment of the Thresholds by Geographic Variations in Housing Costs

The SPM adjusts for geographic differences in housing costs. It uses the American Community Survey's information on median rental costs in a geographic area and compares it to the national median rent.

To obtain comparable rent costs, a standard rental unit—two bedrooms with complete kitchen and plumbing facilities—is used. The median gross rent (including utility costs), based on ACS five-year data, is used in the comparison. Indices are computed by state: one index for each metropolitan area within the state, and an index representing all nonmetropolitan areas within the state.[23] Once the indices are computed, a portion of the reference threshold (the part representing

[21] This approach was suggested by the ITWG (see https://www.census.gov/content/dam/Census/topics/income/supplemental-poverty-measure/spm-twgobservations.pdf), and was based on earlier discussion by the NAS Panel in Constance F. Citro and Robert T. Michael, eds., *Measuring Poverty: A New Approach*, Panel on Poverty and Family Assistance: Concepts, Information Needs, and Measurement Methods, Committee on National Statistics, National Research Council, 1995, pp. 140-158, http://www.nap.edu/catalog/4759/measuring-poverty-a-new-approach.

[22] The costs of FCSU are multiplied by 1.2 to allow for miscellaneous costs after the adjustment by homeownership or rental status, and before geographic adjustment and family size scaling. For details, see Thesia I. Garner, "Supplemental Poverty Measure Thresholds: Laying the Foundation," Bureau of Labor Statistics, Division of Price and Index Number Research, December 29, 2010, https://www.bls.gov/pir/spm/spm_pap_thres_foundations10.pdf.

[23] In some cases, small metropolitan areas within a state may be aggregated into an "other metropolitan" category to protect respondents' confidentiality; see Section V of Trudi Renwick, "Geographic Adjustments of Supplemental Poverty Measure Thresholds: Using the American Community Survey Five-Year Data on Housing Costs," SEHSD Working Paper 2011-21, U.S. Census Bureau, July 2011, https://www.census.gov/library/working-papers/2011/demo/SEHSD-WP2011-21.html.

housing costs) is multiplied by them to produce SPM thresholds geographically adjusted for housing costs.[24]

Adjustment of the Thresholds by Family Size

The thresholds are adjusted for family size and composition to allow that costs increase as family size increases, but also that there are economies of scale—efficiencies can be obtained by sharing resources. The mathematical relationship that describes how the thresholds are adjusted by family size and composition is called the *equivalence scale*.

In the official measure, the equivalence scale is not computed explicitly, but rather driven by the food plan costs upon which the official thresholds were based. In contrast, the SPM uses mathematical formulas to adjust the thresholds by family size. The formulas are used to compute *scale factors.* A scale factor is a number that is multiplied by a standard dollar amount, representing the equivalent of one adult's needs, in order to increase the threshold proportionately to reflect the costs incurred by the increase in family size. The scale factors are computed using the number of adults and children in the family as inputs, along with important parameters.[25]

Adjustment of the Thresholds for Changes over Time

The SPM uses a different approach from the official measure in adjusting the threshold amounts over time. The official thresholds are adjusted annually for inflation using the CPI-U; no other adjustments are made. The SPM thresholds, in contrast, are recomputed based on the most recent five years of data on families' expenditures on FCSU, obtained from the Consumer Expenditure Survey. This approach differs conceptually from the official measure's inflation adjustment in three ways:

1. Instead of directly factoring in a measure of overall inflation, the SPM includes the effects of inflation through the amounts that families spent on FCSU (as reported in the Consumer Expenditure Survey).

[24] The remaining part of the threshold is not adjusted for geographic differences in costs. Unlike for housing costs, price data on the other goods in the SPM threshold are not available with sufficient statistical reliability for small geographic areas throughout the entire country. The CPI, which provides price indices on a variety of goods and services, is published for 26 metropolitan areas, and for the four regions of the country (Northeast, Midwest, South, and West) by population size groups, but is not published for every metropolitan area throughout the country. For details, see https://www.bls.gov/cpi/cpifact8.htm.

[25] Three parameters are used in the computation: (1) Children are assumed to incur fewer costs than adults. The weighting factor for the costs incurred by an additional child in the family is set to 0.5, or half the costs incurred by an additional adult (with an important exception noted below). (2) The first child in a single-adult family incurs greater expenses than the first child in a two-adult family. The weighting factor for the first child in a single-adult family is set to 0.8, or 80% of the costs incurred by the adult. Additional children thereafter are considered to incur half the costs of the adult (weighting factor of 0.5), just like their counterparts in multiple-adult families. (3) Even accounting for differing costs between adults and children, costs do not stay the same as family size increases. Costs increase, but not necessarily by the same amount for each additional person (even if the additional members are all adults), because family members share resources. The arithmetic used to incorporate the way family members incur costs and share resources is discussed in the methodological appendix of Liana Fox, *The Supplemental Poverty Measure: 2016*, U.S. Census Bureau, Current Population Reports, P60-261 (RV), September 2017. https://www.census.gov/content/dam/Census/library/publications/2017/demo/p60-261.pdf.

The scale factor methodology is based on the research of Dr. David Betson of Notre Dame; see, for example, David M. Betson, "Alternative Estimates of the Cost of Children from the 1980-86 Consumer Expenditure Survey," Institute for Research on Poverty Special Report no. 51, December 1990. http://www.irp.wisc.edu/publications/sr/pdfs/sr51.pdf.

2. Price changes on goods and services other than FCSU are not considered directly—only families' spending on FCSU. Families' FCSU spending, moreover, is not held to be any fixed percentage of families' overall income (unlike the official measure, where the thresholds were fixed at three times the cost of food in the 1960s and updated for overall inflation since then). That means if FCSU spending grows as a portion of family income, the SPM thresholds will rise to reflect that spending, even if family income does not rise. Conversely, if family income rises, and a greater portion of family income was spent on goods other than FCSU, the SPM thresholds would reflect only the changes in FCSU spending.
3. The SPM thresholds are set at approximately the 33rd percentile of FCSU spending, by ranking the FCSU spending across all two-child families in the Consumer Expenditure Survey sample. This is different from setting a fixed dollar amount in a single time period and adjusting for inflation thereafter. The SPM thresholds are computed so that even if the distribution of family expenditures changes over time, two-thirds of families will have reported spending more on FCSU than is allotted in the SPM thresholds.[26]

Additionally, the ITWG intended for the SPM methodology to be updated periodically, as poverty measurement research identifies ways to improve the measure and as new data sources become available. The official thresholds, on the other hand, are updated for inflation but no methodological changes to them have been planned: in keeping the methodology consistent, the Census Bureau continues to follow OMB's Statistical Policy Directive 14.

Definition of Resources in SPM Poverty Thresholds

The SPM takes account of a wider array of resources than the official measure, and it also takes account of taxes and expenses in a way the official measure does not. The official poverty measure uses money income before taxes as its definition of resources. While this definition was based on the best data available when the official measure was developed in the 1960s, it is inconsistent with the poverty thresholds as they were conceptually defined. The thresholds were constructed to represent the total amount of money families had available to spend; the food costs as identified by the USDA food plans and as consolidated by Orshansky into families of different sizes and compositions were meant to reflect the fraction of a family's money that was available to be spent on food. The degree of privation represented by the official thresholds was characterized by the food plans' effectiveness at providing a "fair or better" diet, but not necessarily a good diet, while keeping the food costs low.[27]

The SPM was designed to define the resources available to a family consistently with the needs specified in the thresholds (FCSU plus a bit extra for miscellaneous expenses, such as non-work

[26] This method of setting the thresholds at approximately the 33rd percentile has implications for interpreting SPM estimates, and is discussed further in the section "Limitations of the SPM and Outstanding Issues."

[27] The distinction between "good" and "fair or better" was explained by Betty Peterkin and Faith Clark, "Money Value and Adequacy of Diets Compared with the USDA Food Plans," *Family Economics Review*, September 1969, p. 8: "Diets were considered good if they provided the recommended allowances (1963) for all nutrients, and fair or better if they provided at least two-thirds of the allowances." They presented results of a 1965 survey of urban families that indicated less than 50% of families on the Economy Food Plan had a fair or better diet (implying at least 50% did not), while less than 10% of the families on the plan had a good diet; https://archive.org/details/familyeconomicsr6251inst_48.

related transportation and personal care). The items used to construct the income measure are presented below, and are discussed more fully in the Census Bureau's report on the SPM.[28]

Money Income and Other Resources

Money Income

The CPS ASEC, which is the data source used by the SPM to identify most resources, asks about 18 types of income. These include government cash benefits—such as Social Security, Unemployment Insurance, Workers' Compensation, Supplemental Security Income, public assistance received in the form of cash (such as Temporary Assistance for Needy Families)—or child support received.[29] Not all income sources included in the CPS ASEC are taxable income.

Estimated Value of In-Kind Benefits

Unlike the official measure, the SPM includes estimates of the monetary value of in-kind benefits, such as for food and subsidized housing, in the measure of income. These benefits are relevant because they are used to provide the items specified in the poverty thresholds.[30] The SPM incorporates estimated values for several in-kind benefits:

- **Supplemental Nutrition Assistance Program (SNAP).** The SPM includes SNAP in its resource definition because families use it to help meet their food needs—and food costs are included in the SPM thresholds. CPS ASEC asks respondents whether anyone in the household received SNAP, and if so, what the face value of the benefits was. Amounts for the entire household are prorated to the family units as defined for the SPM when the two types of units are not identical.[31]
- **Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).** The SPM includes WIC in its resource definition. However, the CPS ASEC does not ask respondents how much in WIC benefits they received, only whether they received benefits at all. For the purposes of estimating benefits, the Census Bureau assumes 12 months of participation when the respondent reports having received them. This assumption may overestimate the value of benefits received. To compute the benefit amounts received, the Census Bureau refers to WIC program information from the USDA, and uses age information reported in the CPS ASEC to determine which household members receive benefits.

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[28] Liana Fox, *The Supplemental Poverty Measure: 2016*, U.S. Census Bureau, *Current Population Reports*, P60-261 (RV), September 2017, https://www.census.gov/content/dam/Census/library/publications/2017/demo/p60-261.pdf. Methodological details are provided in the appendix of that report.

[29] A list of income sources measured by the CPS ASEC, and other details, are provided in Jessica L. Semega, Melissa A. Kollar, and Kayla R. Fontenot, *Income and Poverty in the United States: 2016*, U.S. Census Bureau, *Current Population Reports*, P60-259, September 2017, Appendix A, "Estimates of Income." https://www.census.gov/content/dam/Census/library/publications/2017/demo/P60-259.pdf.

[30] The SPM thresholds are computed based on Consumer Expenditure Survey data about families' spending on food, clothing, shelter, and utilities. However, because that survey captures spending from some but not all relevant types of in-kind benefits, the SPM thresholds may be too low, thereby understating poverty. Research is being conducted to improve SPM threshold computation. For more on this topic, see Thesia I. Garner, Marisa Gudrais, and Kathleen S. Short, "Consistency in Supplemental Poverty Measurement: Adding Imputed In-Kind Benefits to Thresholds and Impact on Poverty Rates for the United States," July 6, 2015, https://www.bls.gov/pir/spm/spm_imputed_inkind_benefits.pdf.

[31] In the CPS, a household includes all persons residing in the same housing unit, regardless of family relationship.

- **School Lunch.** Subsidized school lunches are included in the SPM resource definition. The CPS ASEC asks whether children "usually" ate lunch at school, and whether it was free or reduced price. No further information on benefit amounts is available from the CPS ASEC. For the purpose of computing the SPM, the children are assumed to have received lunches every day. The costs of school lunches are obtained from USDA's Food and Nutrition Service (information on the school breakfast costs are not available). This approach likely overestimates the value of school lunch benefits received.
- **Subsidized housing.** Because the SPM includes shelter costs in the thresholds, the SPM includes subsidized housing in its resource definition. The Census Bureau estimates the "market rent" value for the housing unit and subtracts from that an estimated amount paid by the tenant. The difference is the estimated housing subsidy. Market rent is estimated using administrative data from the Department of Housing and Urban Development (HUD), and the amounts paid are estimated using HUD program rules and income information on the CPS ASEC. For computing poverty status under the SPM, the estimated subsidies are capped at the housing portion of the threshold minus the estimated amount paid by the tenant—housing subsidies can free up resources for a family to purchase other goods, but housing benefits cannot be used to purchase other goods and services once the family's housing needs have been met.
- **Home energy assistance.** Utility costs are included in the SPM thresholds; therefore, home energy assistance is included in the SPM resource definition. The CPS ASEC asks about energy assistance received for the entire year, and the SPM uses this data. However, respondents may have difficulty reporting exact amounts of energy assistance when Low Income Home Energy Assistance Program (LIHEAP) payments are made directly to landlords or energy providers. The manner by which the assistance is provided can vary by state.

Expenses Subtracted from Income

Families typically pay for their needs using after-tax income; for that reason, the SPM uses after-tax income in its definition of resources. However, the CPS ASEC does not ask respondents about taxes paid. In order to compute after-tax income, the Census Bureau estimates taxes using a model. The CPS ASEC income and demographic data are used to estimate the probability of families' filing statuses (such as married filing jointly or married filing separately), having itemized deductions, and having capital gains, using the distribution of those variables as found in IRS data (Statistics of Income, or SOI).[32]

[32] Details on the tax model are available in Amy O'Hara, "Tax Variable Imputation in the Current Population Survey," 2006 IRS Research Conference, June 14-15, 2006, Washington, DC, https://www.irs.gov/pub/irs-soi/06ohara.pdf; and Amy O'Hara, "New Methods for Simulating CPS Taxes," U.S. Census Bureau Technical Paper, 2004, https://www.census.gov/library/working-papers/2004/demo/oharataxmodel.html. Subsequent research on the effects of CPS questionnaire changes on the tax model is available in Bruce H. Webster Jr., "Evaluating the Use of the New Current Population Survey's Annual Social and Economic Supplement Questions in the Census Bureau Tax Model," Income Statistics Branch, U.S. Census Bureau, September 2011, https://www.census.gov/library/working-papers/2011/demo/SPM_Tax_Model_paper.html.

Work-Related Expenses Other than Child Care

Money that families spend as part of going to work is not available for meeting the needs specified in the SPM thresholds. Therefore, those expenses must be subtracted from income in order for the SPM's resource definition to be consistent with the thresholds. A flat amount, representing weekly work-related expenses other than child care, is multiplied by the number of weeks worked for every working family member. The flat amount is based on 85% of median weekly work expenses as reported in the Survey of Income and Program Participation. Apart from child care, most work expenses are linked to transportation to and from one's job. Work expenses—particularly commuting costs—can vary a great deal between geographic areas and across families in the same area. The NAS panel that developed recommendations for an improved poverty measure (mentioned above) observed that when making choices about residence and employment, families weigh the advantages of more expensive housing close to work (with lower commuting costs) versus less expensive housing further from work (with higher commuting costs).[33] The panel was therefore unable to recommend a method that accurately reflected the variations in work expenses across families and geographic areas that was substantially more precise than assigning a flat amount across families based on number of weeks worked. However, research into improving the measure of these work-related expenses is ongoing.[34]

Child Care Expenses

If child care is needed in order for a family member to work, then the additional resources brought in by that worker do not represent the full amount earned—child care costs must be subtracted to reflect the available money for purchasing the needs identified in the SPM thresholds. Respondents to the CPS ASEC are asked whether child care expenses are incurred while the parents are working, and if so, how much they are. When computing resources for the SPM, the sum of child care expenses and other work-related expenses are capped at the income of the lower-earning parent (so that for determining poverty status, expenses cannot exceed the amount brought in by working).

Medical Out-of-Pocket Expenses (MOOP)

As part of the section of the CPS ASEC questionnaire that asks about health insurance coverage, respondents are asked to report the amount of their health insurance premiums and other medical care costs that they paid out-of-pocket. These costs, called MOOP, are subtracted from income when computing available resources relevant for meeting needs defined in the SPM.

Poverty measurement scholars debated for decades about the approach to use when taking account of medical costs in relation to poverty. On one hand, poor health can affect people's quality of life, affect their ability to earn more income, and change their spending habits. Thus, it affects people's economic behavior, which, it can be argued, is relevant for measuring poverty. On the other hand, the causes of poor health are not always linked to monetary factors. Health issues are often caused by physical phenomena unrelated to economics, which can lead to the

[33] Constance F. Citro and Robert T. Michael, eds., *Measuring Poverty: A New Approach*, Panel on Poverty and Family Assistance: Concepts, Information Needs, and Measurement Methods, Committee on National Statistics, National Research Council, 1995, pp. 242-243, http://www.nap.edu/catalog/4759/measuring-poverty-a-new-approach.

[34] Research papers on work-related expenses and child care are published on the Census Bureau's website at https://www.census.gov/topics/income-poverty/supplemental-poverty-measure/library/working-papers/topics/work-related.html.

argument that health care should not be included in a poverty measure but rather considered as a separate indicator of well-being. Moreover, the choices about whether to be insured and what kind of insurance to purchase heavily influence levels of spending on health care, both for the healthy and the sick. At the same time, it seems incongruous to consider a person who is healthy (and who therefore does not need expensive health care) as poorer than a sick person who receives expensive health care but otherwise has the same resources as the healthy person.[35]

To resolve this conundrum, the SPM does not include health expenses as part of the threshold—as medical needs vary greatly and not always predictably. Instead, it subtracts MOOP from the resource definition, as those resources are considered to be necessary expenditures (if and when they are incurred) and are not available to be spent on the needs defined in the thresholds. This approach, moreover, does not include the value of health care dispensed by insurance providers or by public coverage. It only considers the portion spent out-of-pocket by patients and their families.

Child Support Paid

Because child support received is a form of money income and is counted as a resource in the SPM, any child support paid to another household would be double-counted if it were not subtracted from income. The person paying child support, moreover, cannot use the amounts paid to meet the needs specified in the SPM thresholds. The CPS ASEC includes child support received in its measure of money income, and because of a series of questions added in 2010 it now asks respondents whether child support is paid to other households and the amounts thereof. The SPM resource measure therefore includes child support received (if any) and subtracts child support paid (if any).

Family Units in the SPM

The SPM captures how some nonrelatives share needs and resources in a way the official poverty measure does not. The official measure defines a family as all persons related by birth, marriage, or adoption who reside in the same housing unit. That definition treats each partner in unmarried cohabiting couples as separate units. It also excludes unrelated individuals under age 15, such as foster children. Because the surveys on which poverty estimates are based do not ask income questions of persons under age 15, any children under that age who cannot be matched with an older person's income have an indeterminate poverty status and are excluded from tabulation totals.

The SPM defines family units—termed "SPM resource units"—differently from the official measure, using the detailed information on relationships among household members gathered by the CPS ASEC. This relationship detail includes the ability to identify foster children and, because of survey improvements in the 1990s and 2000s, cohabiting couples.[36] The SPM treats

[35] David Ellwood and Lawrence Summers discussed this incongruity in "Measuring Income: What Kind Should Be In?" presented at the *Conference on the Measurement of Noncash Benefits,* December 12-14, 1985, Fort Magruder Inn and Conference Center, Williamsburg VA; proceedings and related technical papers available at https://www.census.gov/library/working-papers/1985/demo/measurement-conf.html. The NAS panel discussed medical care needs and resources in Constance F. Citro and Robert T. Michael, eds., *Measuring Poverty: A New Approach,* Panel on Poverty and Family Assistance: Concepts, Information Needs, and Measurement Methods, Committee on National Statistics, National Research Council, 1995, pp. 223-237, http://www.nap.edu/catalog/4759/measuring-poverty-a-new-approach.

[36] The CPS ASEC is the source of income data for both the SPM and the annual national reports based on the official measure; the SPM uses household relationship information differently from the official measure. Information about (continued...)

cohabiting unmarried couples and any children they may have as part of the same unit and assigns thresholds and computes family income accordingly. This is done to more accurately reflect the way that people within households incur expenses and share resources to meet them.[37] Similarly, all foster children under age 22 are included in the SPM resource units. Not only do these changes reflect recent demographic trends,[38] but they also coordinate broadly with the "consumer unit" concept in the Consumer Expenditure Survey (CE).[39]

Still excluded from SPM tabulations, however, are members of the Armed Forces living in barracks, the incarcerated population, residents of nursing homes, other institutionalized persons, and the homeless population. These individuals are not eligible for interview in the CPS, as its primary purpose is to measure employment among the civilian noninstitutional population.[40]

Use of the SPM

As mentioned earlier, the ITWG never intended for the SPM to replace the official poverty measure or to fulfill administrative purposes. It supplements the official measure by allowing for analyses of the low-income population that would not otherwise be possible. Particularly visible and of possible relevance to Congress are the effects that taxes and tax credits, noncash transfer programs, and work-related and medical expenses have on poverty. The SPM also highlights differences in the demographic profile of those identified as poor.[41] Even with improved visibility into those areas, however, the SPM has important limitations to be considered.

(...continued)

unmarried partners has been collected in the CPS ASEC since 1996; in 2007 a question was added to identify couples in which neither partner is the householder. For details, see Rose Kreider, "Improvements to Demographic Household Data in the Current Population Survey: 2007," U.S. Census Bureau, Housing and Household Economic Statistics Division Working Paper, March 3, 2008, https://www.census.gov/population/www/documentation/twps08/twps08.pdf.

[37] The NAS panel discussed the treatment of cohabiting couples in Constance F. Citro and Robert T. Michael, eds., *Measuring Poverty: A New Approach*, Panel on Poverty and Family Assistance: Concepts, Information Needs, and Measurement Methods, Committee on National Statistics, National Research Council, 1995, pp. 301-307, http://www.nap.edu/catalog/4759/measuring-poverty-a-new-approach.

[38] In 1967, approximately three years after the official poverty measure was developed, only 0.4% of adults 18 and older lived with an unmarried partner, while 70.3% lived with a spouse. By 2016, those living with an unmarried partner had risen to 7.4% of adults, while those living with a spouse had fallen to 51.2% (U.S. Census Bureau, Current Population Survey, 1967-2016 Annual Social and Economic Supplements). The rise suggests that the effect of unmarried partnerships on poverty statistics is no longer negligible. For historical data on the living status of adults, see https://www.census.gov/data/tables/time-series/demo/families/adults.html, particularly Table AD-3 at https://www2.census.gov/programs-surveys/demo/tables/families/time-series/adults/ad3.xlsx.

[39] A glossary of concepts used in the Consumer Expenditure Survey is available at https://www.bls.gov/cex/csxgloss.htm.

[40] For details, see U.S. Census Bureau, *Current Population Survey: Design and Methodology*, Technical Paper 66, October 2006, https://www.census.gov/prod/2006pubs/tp-66.pdf.

[41] The difference in family unit definitions between the official measure and the SPM also has an effect on poverty rates. The SPM family unit definition, and its accompanying changes to family income and the assignment of thresholds, tends to lower the number and percentage of people classified as poor. This effect occurs even without including the complete array of changes to the resource definition that distinguish the SPM from the official measure, or the use of SPM threshold adjustments. Using SPM family units instead of the official measure's family designations reduced the poverty rate estimate for 2007 by one percentage point. For details, see Kathleen Short, "Poverty Measures that Take Account of Changing Living Arrangements and Childcare Expenses," paper presented at the August 2009 Annual Meeting of the American Statistical Association Section on Social Statistics, Washington DC, https://www.census.gov/library/working-papers/2009/demo/short-01.html.

Insights Obtainable from the SPM

Effects of Transfer Programs, Taxes, Tax Credits, and Expenses

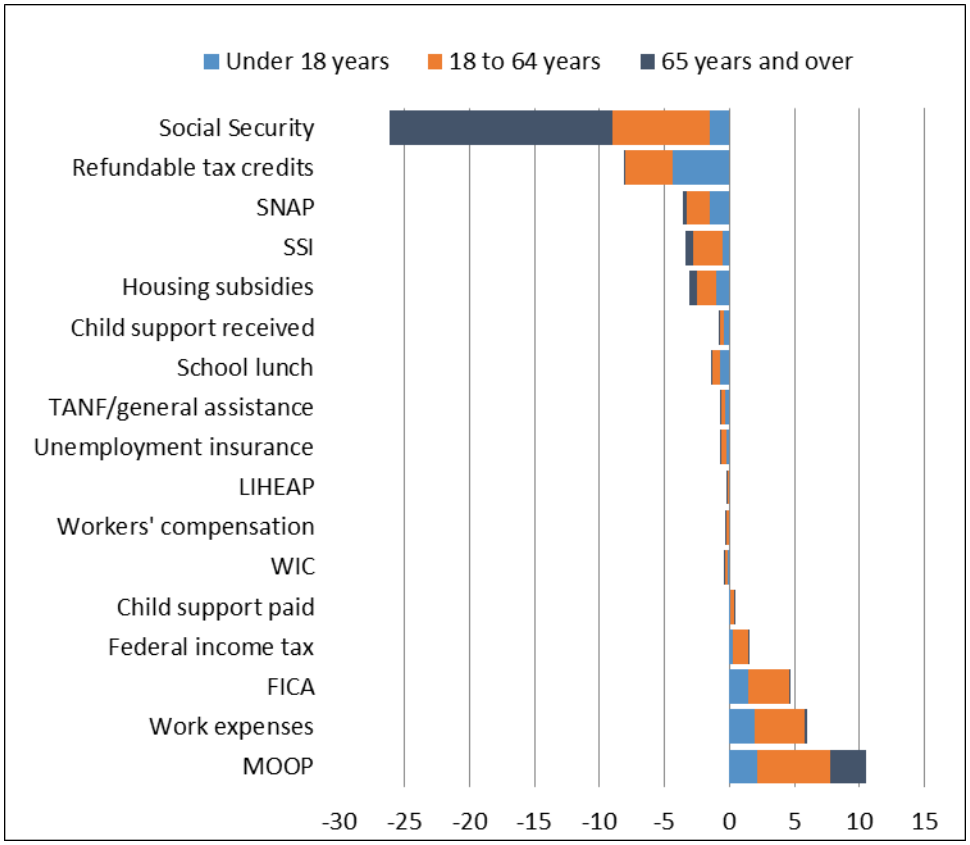
The official poverty measure captures only those government benefits that are paid in cash. This includes the largest government transfer program, Social Security, though it excludes Medicare. However, in terms of programs targeted to lower income people and families, the official measure excludes noncash medical, food, and housing benefits as well as benefits paid through the tax code. Over time, means-tested benefits paid in noncash forms or through the tax code have grown to account for most of what the federal government spends on low-income assistance. For example, in FY2015 the federal government spent $5.5 billion on veterans' pensions, $6.4 billion on TANF cash assistance, and $62.1 billion on Supplemental Security Income (SSI). These cash benefits are included in both the official poverty measure and the SPM. However, the federal government also spent a total of $80.6 billion on refundable tax credits, $103.1 billion on food assistance, and $44.6 billion on housing, much of which are benefits that are captured only in the SPM.[42]

Figure 1 illustrates the impact of various resource components on the number of people identified as poor using the SPM. Bars pointing left (negative) indicate the number of people kept out of the population identified as poor by the SPM's treatment of that resource component. The bars pointing right (positive) indicate the number of people added to the estimated poor population by the SPM's treatment of the component. These data show how the population estimated to be poor would change if the SPM omitted a particular component (either by subtracting resources, or failing to subtract taxes and expenses) but do not take into account any behavioral changes people would make in the absence of any one program, tax, credit, or expense. Furthermore, the data illustrate changes to the poverty population estimate with each component considered in isolation. People are often affected by multiple resource components; therefore, the numbers represented by separate bars should not be added together.

[42] Federal spending levels are from CRS Report R44574, *Federal Benefits and Services for People with Low Income: Overview of Spending Trends, FY2008-FY2015*, by (name redacted) and (name redacted)

Figure 1. The Effects of Each Transfer, Tax, or Expense on the Number of People Identified as Poor Using the SPM: 2016

Numbers of people in millions



Source: Congressional Research Service formatted reprint of Figure 8 in Liana Fox, *The Supplemental Poverty Measure: 2016*, U.S. Census Bureau, *Current Population Reports,* P60-261(RV), September 2017, p. 10, https://www.census.gov/content/dam/Census/library/publications/2017/demo/p60-261.pdf.

Notes: Numbers of people represent the change in the population identified as poor if the SPM's resource definition were changed to exclude or include the resource component labeled at left. This can be thought of as the marginal impact that each resource or expense had on the poor population in 2016. Because people often are affected by more than one of the resource components listed, cumulative effects of multiple resources cannot be computed by summing the bars. The impact on the estimated number of poor was computed for each component in isolation, leaving all else equal.

Child care expenses are included in work expenses.

SNAP: Supplemental Nutrition Assistance Program
SSI: Supplemental Security Income
TANF: Temporary Assistance for Needy Families
LIHEAP: Low Income Home Energy Assistance Program
WIC: The Special Supplemental Nutrition Program for Women, Infants, and Children
FICA: Federal Insurance Contributions Act tax (payroll tax for Social Security and Medicare)
MOOP: Medical out-of-pocket expenses

Comparison of Impacts among Resource Components

Social Security, along with SSI, TANF, and other cash welfare assistance; Unemployment Insurance; child support received; and Workers' Compensation, are money income sources that are included in both the official poverty measure and the SPM. Of these income sources, Social Security has the biggest impact on the number of persons kept out of poverty according to the

SPM (26.1 million persons in 2016). While it was designed to be a universal program and not targeted specifically to the poor, it has a large antipoverty effect nevertheless. While most of those kept above poverty by Social Security were ages 65 and older (17.1 million), a substantial minority were younger: 7.5 million were age 18 to 64, and 1.5 million were children under age 18. Some of those in the younger age groups are Social Security recipients themselves because of a disability, but others were kept out of poverty because an older family member received it.

The remaining resource components shown in **Figure 1** are not included in the official poverty measure but are included in the SPM. Of these, none individually have as large an impact on the estimated poor population as Social Security. After it, the components with the most impact are MOOP (with 10.5 million persons added to the poverty population once those expenses are taken into account); refundable tax credits (with 8.1 million kept out of the estimated poor population because they or a family member received the credits), work expenses, including child care (6.0 million added to the poverty population, on the margin); FICA (4.7 million added to the poverty population, on the margin); and SNAP (3.6 million kept out of the poor population, on the margin).

Differences in the Demographic Profile of the Poor

As seen above, people can be affected by multiple resource components considered in the SPM. As a result, the profile of the poor population as identified by the SPM is different from that identified by the official poverty measure. Fewer children are identified as poor in the SPM because many government assistance programs, such as WIC, TANF, and the Additional Child Tax Credit (ACTC), are targeted toward families with children. Conversely, more working-age adults are in poverty in the SPM because they are more likely to have work expenses (including child care expenses). These expenses are partially offset by EITC, but only working families receive it. Working families with children could get ACTC, but they have to have qualifying children. Slightly more of the aged are below poverty under the SPM than under the official measure because they are more likely to incur MOOP, which are subtracted from income. While MOOP can be high for the aged, their effect on poverty rates is mitigated by the fact that homeowners without a mortgage (such as aged persons who have paid off their mortgages and still live in that house) have lower housing expenses—and in turn lower poverty thresholds—than do mortgage-paying homeowners and renters.

Further details are given in the Census Bureau's report, *The Supplemental Poverty Measure: 2016*.[43]

Geographic Differences

As shown in **Table A-1** in the **Appendix**, poverty thresholds in the SPM vary geographically and are typically different from their corresponding official poverty threshold. The SPM thresholds for New York illustrate within-state variation. SPM thresholds for the Binghamton metro area are lower than their corresponding official poverty threshold, while for New York City they are considerably higher (between $2,000 and $8,000 higher in 2016 than their corresponding official threshold).

Nevertheless, regional patterns emerge. Poverty rates in the Northeast and West tend to be higher under the SPM than under the official measure, in part because of the relatively higher thresholds

[43] Liana Fox, *The Supplemental Poverty Measure: 2016,* U.S. Census Bureau, *Current Population Reports,* P60-261 (RV), September 2017, https://www.census.gov/content/dam/Census/library/publications/2017/demo/p60-261.pdf.

in those regions, compared with the Midwest and the South. The SPM thresholds in 2016 for California (a western state) and Alabama (a southern state) illustrate the most extreme examples: the highest poverty threshold (for homeowners with mortgages in the San Jose-Sunnyvale-Santa Clara metro area, California) and the lowest poverty threshold (for homeowners without mortgages in nonmetropolitan Alabama) were found to apply in these states.

As a caveat, while the SPM thresholds tend to increase poverty rates in the Northeast and Midwest and decrease poverty rates in the South and West compared with the official measure, the thresholds are not the only driver of SPM poverty rates. Regional differences in income, noncash benefits, and items subtracted from SPM resources (such as MOOP or work expenses) also drive differences in regional poverty rates.

Limitations of the SPM and Outstanding Issues

Data Considerations

Because it is based mainly on survey data, the SPM warrants the same caveats as do any estimates based on surveys (including the official poverty measure): the data are estimates based on a sample of the population and, as a result, have margins of error. Additionally, means-tested transfers and certain types of non-transfer income are underreported in the CPS ASEC.[44]

Portions of SPM resources—notably the values of taxes and some noncash benefits—are not asked of respondents in the CPS ASEC and need to be estimated using models. The models take care to use administrative data where appropriate to ensure that the estimated amounts reflect external totals and distributions; nevertheless, the estimated amounts are not perfect. For example, the estimated total benefits from both the EITC and the child tax credit are substantially lower than those found when examining federal income tax returns.[45] Thus, the estimates understate the impact these two tax provisions have on poverty as measured by the SPM.

Cash Valuation of Noncash Benefits: Not Fully Interchangeable

The SPM includes the values of in-kind food and housing benefits in measuring resources. While resources such as these are used to meet the needs (FCSU) specified in the thresholds, and thus it is consistent to include them as resources in the SPM, in-kind benefits, unlike money income, are not *fungible*. That is, barring illegal trading, they cannot be used to meet any expense that arises, but only the needs for which they are specified. While the FCSU amounts in the thresholds are based empirically on spending patterns, it should not be assumed that every family's needs are the same. Because a family could use money income to meet its specific levels of need, but does not

[44] For a discussion of the underreporting of means-tested transfers, see Laura Wheaton, "Underreporting of Means-Tested Transfer Programs in the CPS and SIPP," Urban Institute Research Report, February 6, 2008, http://www.urban.org/research/publication/underreporting-means-tested-transfer-programs-cps-and-sipp/view/full_report. For an analysis of income underreporting comparing CPS ASEC income to National Income and Product Accounts, see Jonathan L. Rothbaum, "Comparing Income Aggregates: How Do the CPS and ACS Match the National Income and Product Accounts, 2007-2012," U.S. Census Bureau, SEHSD Working Paper 2015-01, January 14, 2015, https://www.census.gov/content/dam/Census/library/working-papers/2015/demo/SEHSD-WP2015-01.pdf.

[45] See Laura Wheaton and Kathryn Stevens, *The Effect of Different Tax Calculators on the Supplemental Poverty Measure*, Urban Institute, April 2016. For 2012, federal tax returns reported a total of $64.1 billion for the EITC, but the tax model used by the Census Bureau accounted for only 71% of that total, a shortfall of close to $19 billion. There was also a shortfall on the estimate of the Additional Child Tax Credit (ACTC), the refundable portion of the child tax credit, totaling about $11 billion for that year.

have the same flexibility with in-kind benefits, the in-kind benefits are worth somewhat less than their face value to families whose needs are met in one area but not another.

In measuring resources, the SPM method caps housing benefits because a large housing subsidy can only fill housing needs. Housing benefits are capped at the housing portion of the SPM poverty threshold minus the amount of rent paid by a tenant. On the other hand, SNAP benefits are counted at their full face value, even though their "value" to the recipient might be less than that amount.

Out-of-Pocket Medical Costs Are Measured, But Not the Full Benefit of Subsidies

The SPM accounts for expenses for health care and insurance by subtracting MOOP from family resources. That is, it does not count the "value" of health insurance as a resource, and subtracts from resources health insurance premium payments, deductibles, copayments, and other out-of-pocket health expenses made by the family. Medical needs are not included in the SPM poverty thresholds.

This treatment of medical expenses does not take account of all the economic effects of subsidized medical care generally. Two families with different health insurance arrangements, and different health care needs, but the same amounts of MOOP would be treated identically by the SPM: their (identical) MOOP would be subtracted from their income. However, those same families may not be equally as well off if one of the families kept its out-of-pocket costs down by purchasing a less comprehensive insurance plan than the other family and decided to forego certain types of health care. The SPM thresholds were defined to include the recurring needs of food, clothing, shelter, utilities, and a little more for miscellaneous expenses; MOOP are subtracted from family income because they cannot be used to meet the needs identified in the threshold.

This treatment of medical expenses also means that some of the largest noncash benefits programs—Medicare, Medicaid, and premium assistance under the Patient Protection and Affordable Care Act—are not explicitly taken into account in determining SPM poverty status. There has been some research into methods and measures that would incorporate medical risk, and how it is affected by health insurance, into measures of economic well-being to complement the current SPM.[46]

Lump Sum Nature of Tax Credits

Tax credits, when they are provided to filers, are given as a lump sum based on income in the previous year. The SPM imputes taxes in the year they are earned, but in reality the credit will not appear in the family's income until the following year. Furthermore, tax credits are given as a lump sum, but poverty is a spell phenomenon. Both the SPM and the official poverty measure examine resources in a full calendar year compared with a threshold based on the calendar year. The economic status of families, however, can change throughout the year. A family may experience poverty because one or more workers in the family lost a job and months passed before the worker was able to find another one, putting the family in a poverty spell for that duration. The tax credit, therefore, may or may not provide relief during the poverty spell, depending on the spell's timing in the year and the severity of expenses faced by the family

[46] See Michael J. O'Grady and Gooloo Wunderlich, eds., *Medical Care Economic Risk: Measuring Financial Vulnerability from Spending on Medical Care*, National Academies Press, 2012.

throughout the year. Longitudinal datasets like the Survey of Income and Program Participation can unmask the length of time people and families spend in poverty. However, they typically have smaller sample sizes than the CPS ASEC, which limits their ability to provide detailed geographic analyses.

Nature of the SPM: a Relative or an Absolute Measure?

There has been some debate about whether the SPM is closer to a relative or an absolute poverty measure. A relative poverty measure is one in which poverty is defined with respect to some percentile of the income distribution (e.g., half of median income), while an absolute measure uses a fixed dollar cutoff updated for inflation over time.

Relative poverty measures keep pace with changes in the income distribution over time and identify the economically worst-off portion of the population, but they may not necessarily be tied to a particular level of well-being. Because relative poverty measures are based on the income distribution, it is possible for poverty to increase even when incomes throughout the distribution rise if the distribution of income becomes wider. This potential disconnection between the poverty rate and levels of well-being is considered to be a weakness of relative measures.

Absolute poverty measures are set to a fixed income amount representing a level of economic well-being at a point in time, adjusted periodically for inflation. They are consistent over time in representing the number of people below a resource level, and are more sensitive over time than relative measures to detecting the shares of the population unable to obtain this level, and presumably, economic well-being.[47]

[47] Absolute poverty measures are predicated on comparing levels of well-being over time, and the assumption that those levels of well-being are truly consistent. This is difficult to ascertain for two reasons: prices on items purchased by the poor may rise at a different rate from prices generally, and the types of available goods and services change over time.

For instance, cell phones were developed in the 20th century, and according to the Pew Research Center, 62% of U.S. adults owned a cell phone in 2002. By 2016, this percentage had risen to 95% (surveys conducted 2002-2016, http://www.pewinternet.org/fact-sheet/mobile/, downloaded July 20, 2017). Over the same period, the availability of pay phones declined, from over 1.7 million in 2002 to 99,832 in 2016 (Federal Communications Commission, Industry Analysis and Technology Division, Data and Statistical Reports, "Payphone Statistics: 1997-Most Recent," https://www.fcc.gov/file/12198/download, downloaded July 20, 2017). Not only do these trends illustrate a new product offering a level of convenience that was not available before, but also the reduction of a type of infrastructure that someone with limited resources might have used, in previous years, as a substitute for purchasing their own phone plan as a way to reduce expenses. This change in the range and cost of available options complicates the comparison of well-being for low-income persons with regard to telephone service over the past few decades. To compare well-being over time, additional goods and services should be considered, as well as the degree to which one good or service can be substituted for another.

Technological change, and its effects on whether goods are considered luxuries or necessities, is not new to the economics literature. A classic example appears in Chapter II, Part II of Adam Smith, *The Wealth of Nations* (1776), regarding the use of linen shirts in the 18th century versus earlier eras.

As a result, some have expressed skepticism as to whether any poverty measure can truly be considered "absolute." For example, Smeeding, et al., claim that an absolute poverty measure "conveys an unwarranted objectivity" and that "a poverty standard cannot be established independently of the economic and social context within which needs arise and are defined."; Timothy Smeeding, et al., "Poverty, Inequality, and Family Living Standards Impacts across Seven Nations: The Effect of Noncash Subsidies for Health, Education, and Housing," *Review of Income and Wealth*, vol. 39 no. 3, 1993, pp. 229-256.

For a discussion of how poverty lines had been considered in the 19th and 20th centuries, 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," Joint Newsletter of the Government Statistics Section and the (continued...)

The SPM includes aspects of both relative and absolute measures in its computation, and gauging whether the SPM is closer to one or the other is an unresolved question. The SPM thresholds are based on roughly the 33rd percentile of expenditures on FCSU, using the five most recent years of CE data. In this sense, the SPM can be thought of as relative because the thresholds are computed based on a percentile within the distribution of expenditures. On the other hand, the thresholds are not computed using overall income, but rather expenditures, and only for a limited set of basic goods (FCSU, plus 20% extra for miscellaneous expenses). It is theoretically possible for incomes to rise at a different rate than expenditures on basic goods, which if true would imply that the SPM is not a relative measure.[48] Moreover, expenditures on FCSU are driven not only by income but also by prices, which can be affected by factors other than the income distribution.

The question of whether the SPM is relative or absolute has meaning for those trying to evaluate whether the SPM accurately describes the poor population both in a single year and over time.[49] It also highlights the value judgments involved in determining what is meant by "poverty" and in expressing that determination using a concrete metric.[50] In the case of the official poverty measure, the level of well-being is characterized by the likely nutritional impact of the Economy Food Plan, with fewer than 1 in 10 families on that plan meeting their recommended nutritional requirements, and about half of families on that plan failing to get two-thirds of them (see footnote 27). The description of the SPM in this report, and the tables provided in the **Appendix**, are intended to help readers better gauge for themselves the levels of well-being on which the SPM is based.

(...continued)

Social Statistics Section of the American Statistical Association, Summer 1996, pp. 10-12, reproduced on the Census Bureau's website at https://www.census.gov/library/working-papers/1995/demo/fisher-01.html.

[48] Preliminary evidence examining SPM thresholds and median income over time suggests that it is reasonable to be skeptical of whether the SPM thresholds are driven primarily by the income distribution, though the evidence thus far is not conclusive. See Daniel Moskowitz, Ron Haskins, and Timothy Smeeding, "Is the Census Bureau's supplemental poverty measure a relative measure of poverty?" The Brookings Institution, Center on Children and Families, May 11, 2010, https://www.brookings.edu/research/is-the-census-bureaus-supplemental-poverty-measure-a-relative-measure-of-poverty/.

[49] In addition to the demographic analysis of who is poor under the official measure and under the SPM, such as that presented in Census Bureau reports and in the "Insights Obtainable from the SPM" section of this report, others have compared the SPM's poor population with consumption-based measures—that is, taking account of spending, which may be based on access to credit or using up savings, and not solely on income. For example, see Bruce Meyer and James X. Sullivan, "Identifying the Disadvantaged: Official Poverty, Consumption Poverty, and the New Supplemental Poverty Measure," *Journal of Economic Perspectives*, vol. 26 no. 3, Summer 2012, pp. 111-136. Meyer and Sullivan conclude that in comparison with the official measure, the SPM "adds to poverty individuals who have higher consumption levels and are more likely to be college graduates; to own a home and a car; to live in a larger housing unit; and to have other more favorable characteristics than those who are dropped from poverty."

In a different study of material hardship (John Iceland and Kurt Bauman, "Income Poverty and Material Hardship: How Strong is the Association?" National Poverty Center Working Paper No. 04-17, December 2004), using longitudinal data, Iceland and Bauman noted differences in material hardship between the long-term poor and the temporarily poor, with the long-term poor possessing fewer amenities.

[50] While the NAS panel, whose writing laid the groundwork for the SPM, noted that "the panel has taken great care to make clear at each step ... the character and status of the scientific evidence and the role of judgment" (Constance F. Citro and Robert T. Michael, eds., *Measuring Poverty: A New Approach*, Panel on Poverty and Family Assistance: Concepts, Information Needs, and Measurement Methods, Committee on National Statistics, National Research Council, 1995, Preface, p. xvii, http://www.nap.edu/catalog/4759/measuring-poverty-a-new-approach), one member, Dr. John Cogan, dissented from the panel's approach. Cogan argued that the panel's recommendations "are not scientific judgments. They are value judgments made by scientists—with a particular point of view. In essence, the panel has mostly eschewed the role of scientific panel and has instead assumed the role of a government policy maker," (*Measuring Poverty*, op. cit., Appendix A, p. 386).

Appendix. Poverty Thresholds under the SPM and the Official Poverty Measure

Unlike the official poverty measure, which uses 48 poverty thresholds that are updated annually for inflation and applied nationwide, the SPM thresholds are computed using additional variables, resulting in thousands of thresholds once they are geographically adjusted. The SPM thresholds are based on Consumer Expenditure Survey (CE) data for food, clothing, shelter, and utilities (FCSU), and adjustments are made thereafter by housing tenure (that is, for homeowners with mortgages, homeowners without mortgages, and renters), by geographic variations in housing costs for each housing tenure group, and by family composition.[51]

Three tables are shown below, to illustrate the dollar amounts used to determine poverty status in both the SPM and the official measure. **Table A-1** focuses only on SPM poverty thresholds for a two-adult two-child family, by housing tenure, and illustrates the range of geographic cost variation. In contrast, **Table A-2** illustrates how the SPM thresholds vary by family composition, but without geographic adjustment. **Table A-3** presents the official poverty thresholds, for comparison.

Table A-1. Supplemental Poverty Measure (SPM) Thresholds in 2016 for a Two-Child, Two-Adult Family in Selected Metropolitan and Nonmetropolitan Areas

Amounts in 2016 dollars. Thresholds do not include estimated values for noncash benefits. The corresponding official poverty threshold in 2016 was $24,339.

	Homeowners With a Mortgage	Homeowners Without a Mortgage	Renters
Thresholds before geographic adjustment[a]	$26,336	$22,298	$26,104
Alabama, nonmetro[b]	$21,033	$18,622	$20,900
Birmingham-Hoover, AL MSA	24,408	20,961	24,212
Mobile, AL MSA	24,189	20,809	23,997
Montgomery, AL MSA	24,364	20,931	24,169
New York, nonmetro	$23,370	$20,242	$23,194
Albany-Schenectady-Troy, NY MSA	27,066	22,804	26,821

[51] "Family" here is used loosely. The more accurate term is "consumer unit" for the initial computations performed by the Bureau of Labor Statistics, leading up to reference thresholds by tenure group for consumer units with two adults and two children, since these computations are performed using the CE and the consumer unit concept is used in the CE. "SPM resource unit" is used for the remaining computations, resulting in the SPM thresholds; these remaining steps involve demographic survey data and are performed by the Census Bureau. Both of these terms differ from the Census Bureau's definition of a family: for details see the section "Family Units in the SPM."

	Homeowners With a Mortgage	Homeowners Without a Mortgage	Renters
Binghamton, NY MSA	23,122	20,070	22,950
New York-Newark-Jersey City, NY-NJ-PA MSA	32,238	26,389	31,896
Wisconsin, nonmetro	$23,210	$20,131	$23,036
Oshkosh-Neenah, WI MSA	23,093	20,050	22,922
Madison, WI MSA	26,643	22,511	26,405
Milwaukee-Waukesha-West Allis, WI MSA	25,489	21,711	25,273
California, nonmetro	$26,058	$22,106	$25,832
Bakersfield, CA MSA	24,934	21,326	24,728
Los Angeles-Long Beach-Anaheim, CA MSA	33,523	27,280	33,157
San Jose-Sunnyvale-Santa Clara, CA MSA[b]	37,848	30,278	37,400

Source: Congressional Research Service, excerpted from U.S. Census Bureau, "SPM Thresholds by Metro Area: 2016," https://www2.census.gov/programs-surveys/demo/tables/p60/261/pov-threshold-2016.xlsx.

Thresholds without geographic adjustment computed by Juan D. Muñoz, and under the guidance of Thesia I. Garner, Division of Price and Index Number Research, Bureau of Labor Statistics (BLS), using the U.S. Consumer Expenditure Interview Survey. The thresholds are not BLS production quality. The work is solely that of the BLS authors and does not necessarily reflect the official positions or policies of the Bureau of Labor Statistics, or the views of other BLS staff members. See https://www.bls.gov/pir/spm/spm_chart2_2016data.htm.

Threshold geographic adjustments computed by U.S. Census Bureau using housing data from American Community Survey 5-Year Estimates, 2011-2015.

Notes: MSA = Metropolitan Statistical Area.

a. Only the thresholds for a four-person family, with two adults and two children, are shown here. The full complement of thresholds varies by family size, ages of the members, and whether the adult is a single parent, as well as by housing status (as shown in the three columns here). See **Table A-2**.

b. Among all geographic areas computed, Alabama nonmetro had the lowest threshold, and the Metropolitan Statistical Area (MSA) of San Jose-Sunnyvale-Santa Clara, CA, had the highest. The geographic areas in this table were selected to illustrate the range of dollar amounts used as SPM thresholds and to provide examples using one state from each of the four Census regions of the country: Northeast (New York), Midwest (Wisconsin), South (Alabama), and West (California).

Table A-2. Supplemental Poverty Measure (SPM) Thresholds by Housing Status, Number of Adults, and Number of Children under 18 Years, Without Geographic Adjustment: 2016

Thresholds in 2016 dollars. Selected thresholds presented for SPM resource units ("families") of eight members or fewer. Additional thresholds may be computed for families of larger sizes. The number of total family members (adults and children) is listed vertically, as are headings for housing status and single-parent status; the number of members that are children is shown in columns.

	Number of Children								
	0 (adults only)	1	2	3	4	5	6	7	8
Homeowners With a Mortgage									
One person (unrelated individual)	$12,206								
Two people	17,210	18,419							
Two or more adults									
Three people	26,336	23,181							
Four people	32,211	29,337	26,336						
Five people	37,657	34,980	32,211	29,337					
Six people	42,783	40,255	37,657	34,980	32,211				
Seven people	47,658	45,249	42,783	40,255	37,657	34,980			
Eight people	52,327	50,016	47,658	45,249	42,783	40,255	37,657		
...									
One adult with child/children									
Single parent	NA	18,419	21,866	25,094	28,153	31,075	33,884	36,596	39,225
Homeowners Without a Mortgage									
One person (unrelated individual)	$10,334								
Two people	14,571	15,595							
Two or more adults									
Three people	22,298	19,626							
Four people	27,272	24,839	22,298						
Five people	31,883	29,616	27,272	24,839					
Six people	36,223	34,083	31,883	29,616	27,272				
Seven people	40,351	38,311	36,223	34,083	31,883	29,616			
Eight people	44,304	42,347	40,351	38,311	36,223	34,083	31,883		
...									

	Number of Children								
	0 (adults only)	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
One adult with child/children									
Single parent	NA	15,595	18,514	21,247	23,836	26,311	28,689	30,985	33,210
Renters									
One person (unrelated individual)	$12,098								
Two people	17,059	18,256							
Two or more adults									
Three people	26,104	22,976							
Four people	31,927	29,078	26,104						
Five people	37,325	34,671	31,927	29,078					
Six people	42,406	39,900	37,325	34,671	31,927				
Seven people	47,238	44,850	42,406	39,900	37,325	34,671			
Eight people	51,866	49,575	47,238	44,850	42,406	39,900	37,325		
...									
One adult with child/children									
Single parent	NA	18,256	21,674	24,873	27,905	30,801	33,585	36,274	38,879

Source: Congressional Research Service, excerpted from U.S. Census Bureau, "SPM Thresholds by Metro Area: 2016," https://www2.census.gov/programs-surveys/demo/tables/p60/261/pov-threshold-2016.xlsx.

Two-adult two-child reference thresholds without geographic adjustment computed by Juan D. Muñoz, and under the guidance of Thesia I. Garner, Division of Price and Index Number Research, Bureau of Labor Statistics (BLS), using the U.S. Consumer Expenditure Interview Survey. Scaling by the number of adults and children performed by the U.S. Census Bureau.

Notes: The two-adult two-child reference thresholds are not BLS production quality. The work is solely that of the BLS authors and does not necessarily reflect the official positions or policies of the Bureau of Labor Statistics, or the views of other BLS staff members. See https://www.bls.gov/pir/spm/spm_chart2_2016data.htm.
NA: Not applicable.
Ellipses (...) indicate that thresholds for additional members are possible to compute but are not displayed.

The thresholds above use a geographic housing cost index equal to 1.000 (that is, housing costs without any geographic cost adjustment).

Table A-3. Official Poverty Thresholds for 2016 by Family Size and Number of Related Children Under 18 Years

Thresholds in 2016 dollars. The total number of family members (adults and children), and the age of the householder where applicable, are listed vertically; the number of family members that are children is shown in columns.

	Related Children under 18 Years								
Size of Family Unit	**None**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8 or more**
One person (unrelated individual):									
Under age 65	$12,486								
Aged 65 and older	11,511								
Two people:									
Householder under age 65	16,072	16,543							
Householder aged 65 and older	14,507	16,480							
Three people	18,774	19,318	19,337						
Four people	24,755	25,160	24,339	24,424					
Five people	29,854	30,288	29,360	28,643	28,205				
Six people	34,337	34,473	33,763	33,082	32,070	31,470			
Seven people	39,509	39,756	38,905	38,313	37,208	35,920	34,507		
Eight people	44,188	44,578	43,776	43,072	42,075	40,809	39,491	39,156	
Nine people or more	53,155	53,413	52,702	52,106	51,127	49,779	48,561	48,259	46,400

Source: Congressional Research Service reprint of table from U.S. Census Bureau, https://www2.census.gov/programs-surveys/cps/tables/time-series/historical-poverty-thresholds/thresh16.xls.

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