

# Developing a Supplemental Poverty Measure

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## **Abstract**

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Since the debut of the first official U.S. poverty estimates in 1964, researchers, policy makers, and the general public have debated the measure's methodological strengths and policymaking value. In 2009, the Office of Management and Budget formed an Interagency Technical Working Group on Developing a Supplemental Poverty Measure in order to design a new poverty measure that incorporated alternative income definitions and resource thresholds. The U.S. Census Bureau, in cooperation with the Bureau of Labor Statistics, has since been charged with implementing the suggestions made by the Interagency Technical Working Group, and will release the new Supplemental Poverty Measure in the fall of 2011 based on data from the Annual Social and Economic Supplement to the Current Population Survey (CPS ASEC). This poster is designed to inform an academic audience of the 1) methodological design of the Supplemental Poverty Measure; 2) preliminary comparisons of poverty levels calculated using the official measure and newly designed Supplemental Poverty Measure; and (3) the potential impact of the Supplemental Poverty to the research and policy making community.

# Developing a Supplemental Poverty Measure:

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## Introduction

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This analysis is designed to report the methodological changes the Census Bureau, in partnership with the Bureau of Labor Statistics, is incorporating into the new Supplemental Poverty Measure (SPM) to be released in the fall of 2011. The SPM is designed to serve as an experimental measure that will calculate poverty rates using alternative income definitions and resource thresholds based on data from the Annual Social and Economic Supplement to the Current Population Survey (CPS ASEC). In preparation for the release of the SPM in the fall of 2011, this poster is designed to provide research and policy audiences with a framework for understanding the methodological design and interpretation of the new SPM. This poster will also report preliminary comparisons between poverty levels calculated using the official measure and newly designed Supplemental Poverty Measure.<sup>1</sup>

## Background

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The current official poverty measure was developed in 1963 and 1964 by Mollie Orshansky, a staff economist at the Social Security Administration. Poverty thresholds were derived by using the “Economy Food Plan” prepared and priced by the U.S. Department of Agriculture. Based on data from the 1955 Household Food Consumption Survey indicating that families of three or more people spent approximately one-third of their after-tax income on food in that year, Orshansky established poverty thresholds by applying a multiplier of three to the cost of the food plan. This poverty threshold was then adjusted for different family compositions based on the number of adults and children in a family and, for some family types, by the age of the family head. Except for some small changes (e.g. the elimination of separate thresholds for farm and nonfarm families and female-headed households), since being designated the “official” poverty threshold in 1969, the poverty thresholds have been updated for inflation on an annual basis using the Consumer Price Index for Urban Consumers (CPI-U).<sup>2</sup> Family resources compared to this poverty threshold are calculated by summing a family’s gross annual cash income from all sources, including earnings, pensions, interest income, rental income, asset income, and cash welfare. If a family’s gross cash income is below the calculated poverty threshold for a family of that size and composition, the family and its members are designated as “in poverty”.<sup>2</sup>

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<sup>1</sup> Kathy Short and Thesia Garner have released some preliminary estimates of 2008 poverty rates using the SPM approach. For this poster, 2009 estimates will be available.

<sup>2</sup> National Research Council. (2005). *Experimental Poverty Measures: Summary of a Workshop*. John Iceland, Rapporteur. Planning Group for the Workshop to Assess the Current Status of Actions Taken in Response to *Measuring Poverty: A New Approach*, Committee on National Statistics, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academy Press. 3.

Although the benefits of the current poverty measure include its methodological simplicity and longevity, this measure has become increasingly limited in its ability to adequately capture family needs and resource availability.<sup>2</sup>

As highlighted by the National Academy of Sciences (NAS) Panel in their 1995 report on *Measuring Poverty*, growth in housing costs, medical costs, and child care expenses relative to food costs have distorted the ratio of family income spent on food costs and the calculation of poverty thresholds based on this assumed ratio. In addition, gross cash income, the measure of family resources used for comparison against the current poverty thresholds, has become an increasingly limited measure of family resources over the past 45 years. The NAS Panel recommended adjusting the calculation of family resources to reflect after-tax income and to include near-money government benefits (such as nutritional assistance and housing subsidies) as government transfers have increasingly taken the form of non-cash welfare.<sup>2</sup>

Following the release of the 1995 NAS Panel report and recommendations, discussions in the research community have resulted in the development of a number of alternative poverty measures currently being produced and maintained by the Census Bureau. However, there are no consistent time series data for these alternative measures.<sup>3</sup>

In 2009, the Office of Management and Budget formed an Interagency Technical Working Group on Developing a Supplemental Poverty Measure in order to design a poverty measure that incorporated NAS recommendations on designing alternative income definitions and resource thresholds. This group included representatives from the Bureau of Labor Statistics, the U.S. Census Bureau, the Economics and Statistics Administration, the Council of Economic Advisers, the U.S. Department of Health and Human Services, and the Office of Management and Budget. The Census Bureau, in cooperation with the Bureau of Labor Statistics, has since been charged with implementing the recommendations proposed by the Interagency Technical Working Group, and will release the new Supplemental Poverty Measure in the fall of 2011.<sup>4</sup> The SPM is not designed to replace the official poverty measure, and will not be used to establish eligibility for government programs.

### **Methodological Design**

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The SPM to be released by the Census Bureau in the fall of 2011 will utilize different poverty thresholds, different income sources in the resources determination. The methods to be used will be based on the March 2010 suggestions of the Interagency Working Group, and recommendations from the 1995 NAS Panel. However, the Census Bureau, in consultation with the Bureau of Labor Statistics, will be making some decisions regarding how to precisely implement some these recommendations.

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<sup>3</sup> National Research Council. (2005). 1.

<sup>4</sup> Developing A Supplemental Poverty Measure [100429203-0204-01]. 75 Fed. Reg. 33948. May 26, 2010.

## Establishing a Threshold

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For the purpose of calculating the SPM, the definition of a “poverty measurement unit” includes all related individuals who live at the same address, any co-resident unrelated children who are cared for by the family (such as foster children), as well as any cohabiters and their children.<sup>5,6</sup>

In keeping with the recommendations of the NAS Panel, poverty thresholds under the SPM are based on expenditures for a set of basic commodities derived from the Consumer Expenditure Survey. These basic commodities include purchases for: food, shelter, clothing and utilities (FSCU). In setting a threshold for expenditures on these goods, the Census Bureau calculates FSCU expenditures from a reference sample that includes all family units with exactly two children.<sup>7</sup> This reference sample is designed to reflect trends regarding the changing composition of families in the United States, particularly those in lower-income households where a growing number of children live in families with only one adult. Expenditure data for family units with two children that do not contain two adults will be adjusted using an equivalence scale to make comparable expenditure comparisons. Expenditure data on FCSU commodities from the most recent five years will provide additional stability in determining the distribution of expenditures on these commodities on a year-to-year basis. The threshold for expenditures on these goods will be assigned at the 33<sup>rd</sup> percentile<sup>8</sup> of this distribution.<sup>5</sup>

Data on median gross rents for a two-bedroom apartment from the American Community Survey (ACS) will be used to create housing price indexes based on geographic location. These will be established for most Metropolitan Statistical Areas (MSAs) (those large enough to be identifiable on the CPS ASEC public use file), with remaining MSAs and non-metropolitan areas summarized by state. Additionally, adjustments for the threshold based on housing status (distinguishing renters, owners with a mortgage, and owners without a mortgage) will be calculated using adjustment factors to reflect the relative shelter expenditures for these three groups.

To account for expenditures outside of these basic FCSU commodities, the value of FCSU expenditures at the 33<sup>rd</sup> percentile will be inflated by a multiplier of 1.2 to establish SPM poverty thresholds.<sup>9</sup>

Thresholds based on various family sizes will be calculated by adjusting the thresholds by a three parameter equivalence scale, which is consistent with adjustments made in the alternative poverty measures presently published by the Census Bureau.

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<sup>5</sup> Observations from the Interagency Technical Working Group on Developing a Supplemental Poverty Measure. March 2010. <http://www.census.gov/hhes/www/poverty/>.

<sup>6</sup> This differs from the existing definition of family used in calculating the official poverty rate, which includes only those related by birth, marriage or adoption.

<sup>7</sup> This diverges from the NAS recommendations, which use a two-adult, two-child reference family unit.

<sup>8</sup> The NAS recommends taking a range; the 33<sup>rd</sup> percentile is at the center of this range and selects a point below the median but above those in extreme need.

<sup>9</sup> The multiplier of 1.2 is the midpoint of the range recommended by the NAS panel.

## **Estimating Resources for the Poverty Measurement Unit**

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Poverty measurement unit resources are compared to appropriate thresholds to determine poverty status. Following the recommendations of the 1995 NAS Panel report, resources are estimated as the sum of cash income, plus any federal government in-kind benefits that allow families to meet their FCSU needs. Taxes, work-related expenses,<sup>10</sup> child support payments, and medical out-of-pocket expenses (MOOP) are deducted from the resources available to poverty measurement units in meeting their assigned poverty threshold. The CPS does not collect information on taxes paid, but uses modeling to simulate federal, state and social security tax burdens based on reported income and current tax law. The Census Bureau is currently evaluating data from new questions added to the CPS ASEC regarding child care spending, medical out-of-pocket spending and child support paid. If the quality of the data from these new survey items is satisfactory, these responses will be used to adjust income. As per the NAS recommendations, other work related expenses will be subtracted as a fixed amount at 85 percent of the median expenses estimated from the Survey of Income and Program Participation (SIPP).

## **Updating Over Time**

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The SPM will be recalculated annually as new data are released on the income available to families and new expenditure data is available to calculate thresholds and expected available resources. Research on methods used to impute the value of family unit resources, such as estimation of in-kind benefits, work-related expenses, and taxes will continue and methodological innovations which improve estimates of these resources will be incorporated into the calculation of the SPM periodically. One advantage of the SPM will be in its ability to change gradually over time. The Interagency Working Group described the measure as a work in progress, and therefore the SPM requires regular updating of as many components of the threshold and income calculations as possible.<sup>5</sup>

## **Outcomes and Implications**

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Preliminary poverty estimates for 2009 using the new SPM approach will be released in December 2010. This poster will use these new estimates to compare official poverty rates to SPM poverty rates for the total population as well as for different demographic subgroups. The poster will also compare official and SPM poverty estimates by region and place of residence.

Although the SPM is not intended to replace the official poverty measure, it will have important implications for researchers, policy makers, and the general public. The ability to calculate a consistent SPM that includes more dynamic threshold calculations and nuanced resource measures is expected to fill critical data gaps when evaluating 1) short and long-term economic trends facing various demographic groups; 2) variance across geographic areas, and 3) the short and long-term impact of government initiatives designed to alleviate poverty. To fully understand and effectively utilize the new SPM to answer questions related to these and other issues, data users must become familiar with the definitions, rationales, and intended benefits behind the design of this new measure.

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<sup>10</sup> As established through the 1995 NAS panel, work-related expenses include both commuting expenses and child care costs.

## References

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National Research Council. (1995). *Measuring Poverty: A New Approach*. Panel on Poverty and Family Assistance, Constance F. Citro and Robert T Michaels, eds. Committee on National Statistics. Washington, DC: The National Academy Press.

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