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A New Statistic: The US Census Bureau’s Supplemental Poverty Measure

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Abstract and Keywords

In 2011, the U.S. Census Bureau formally introduced a Supplemental Poverty Measure (SPM)—a response to the view that the official poverty rate does not provide an accurate count of who is poor in the United States. This article describes the SPM and highlights some of the strengths and limitations of this new statistic. The SPM improves on the official poverty measure by accounting for in-kind benefits and expenses in the calculation of resources, and by using data on expenditures on food, clothing, shelter, and utilities in the calculation of poverty thresholds. Further, these thresholds are adjusted for geographical differences in housing costs and are updated by using a moving average of expenditures. For 2010, the SPM poverty rates suggest a significant change in the composition of poverty in the United States relative to that suggested by the official measure. In particular, the SPM suggests that child poverty is less prevalent and that poverty among the elderly is more prevalent. It also suggests that poverty is more prevalent in the Northeast and Western regions of the country and less prevalent in the Midwest and Southern regions.

Keywords: Supplemental Poverty Measure, poverty measures, poverty rates, poor

1. Introduction

In 2011, the US Census Bureau formally introduced a Supplemental Poverty Measure (SPM). The SPM is a response to the view that the official poverty rate does not provide an accurate count of who is poor in the United States. Nor is it thought by some to be a sufficient statistic for measuring well-being among the less fortunate. This view was crystallized in a critique by Citro and Michael (1995), who proposed a revision in how poverty is measured. Among the improvements included in that revision would be better recognition of the role of in-kind benefits, geographical differences in the cost of living, and more flexible treatment of alternative family structures. The purpose of this chapter is to de-

scribe the SPM and to highlight some of the strengths and limitations of this new statistic.

Section 2 provides an overview of the SPM, drawing heavily on Short (2011) and the detailed work done jointly at the US Census Bureau and the US Bureau of Labor Statistics described therein. Section 3 considers some issues raised by the SPM, including its macroeconomic implications, its connection to the flow of antipoverty program dollars, and its treatment of particular consumption flows. Section 4 is a conclusion.

(p. 798) 2. The Supplemental Poverty Measure

2.1. Definitions and Construction

Table 25.1 shows the definitions of the components that are used to construct the SPM. The SPM measurement units better recognize the potential of people living at the same address to share resources. The official poverty measure’s emphasis on narrowly defined related family members effectively assumes that this possibility is limited.

The SPM thresholds are derived from data from the Consumer Expenditure Survey. The multiplier adjusts for additional expenses, such as personal care, nonwork-related transportation, and education, which are not captured directly (Garner and Short 2010). By contrast, the official thresholds rely on US Department of Agriculture food budgets for families experiencing economic difficulties and the assumption that families spend one-third of their income on food (Orshansky 1963).

The SPM threshold adjustments recognize scale economies related to family size and composition. Further, they also attempt to account for geographical differences in housing costs using data from the American Community Survey. Adjustments to the official thresholds ignore the latter issue altogether.

The moving average used to update the SPM thresholds will smooth over spending shocks that could otherwise induce volatile swings in the thresholds, and it makes the thresholds respond positively to changes in income but not one for one. This adjustment procedure is consistent with the relativist gradient examined (p. 799) by Ravallion (in this volume). The official thresholds are updated by using the Consumer Price Index for All Urban Consumers. This index is known to have several shortcomings (Boskin et al. 1996).

Table 25.1 Supplemental Poverty Measure	
Measurement units	All related individuals who live at the same address, including any coresident unrelated children who are cared for by the family (such as foster children) and any cohabitors and their children
Poverty threshold	The 33rd percentile of expenditures on food, clothing, shelter, and utilities (FCSU) of consumer units with exactly two children multiplied by 1.2 (to account for additional basic needs)
Threshold adjustments	Geographic adjustments for differences in housing costs and a three parameter equivalence scale for family size and composition
Updating thresholds	Five-year moving average of expenditures on FCSU
Resource measure	Sum of cash income, plus in-kind benefits that families can use to meet their FCSU needs, minus taxes (or plus tax credits), minus work expenses, minus medical out-of-pocket (MOOP) expenses

Source: Short (2011).

In order to represent better the resources that people have to meet their spending needs, the SPM resource measure adds to money income the value of in-kind benefits and subtracts from that total the several expenses that are deemed necessary. The Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC) is the main data source used to derive SPM resources. In-kind benefits programs include the Supplemental Nutrition Assistance Program (SNAP; previously known as the Food Stamps Program), the National School Lunch Program, the Supplementary Nutrition Program for Women, Infants, and Children (WIC), the Low-Income Home Energy Assistance Program (LIHEAP), and housing assistance—a variety of programs that are administered by the US Department of Housing and Urban Development and by state and local governments. The earned income-tax credit (EITC) is a cash receipt. Expenses also include child-care expenses, child support, and medical out-of-pocket (MOOP) costs. In contrast, the official poverty resource measure is gross before-tax money income, which includes earnings, Unemployment Insurance, Workers’ Compensation, Social Security, Supplemental Security Income, public assistance, veterans’ payments, survivor benefits, pension or retirement income, interest, dividends, rents, royalties, income from estates, trusts, educational as-

sistance, alimony, child support, assistance from outside the household, and other miscellaneous sources (US Census Bureau n.d.).

2.2. The Data

A person is deemed poor if his or her resources are less than the relevant poverty threshold. Table 25.2 shows the official and SPM thresholds for the representative family in 2009 and 2010. These are the only years for which the SPM thresholds are available to date. Median family income for a family of four was $74,406 in 2009 and $75,148 in 2010 (US Census Bureau 2011). Therefore, the official and SPM thresholds are approximately 29 and 32 percent of this median for these two years, respectively.

The 2010 poverty rates associated with these thresholds are given both overall and by age in Table 25.3. According to the SPM, overall poverty is higher and the (p. 800) age composition of the poor is quite different from that suggested by the official measure. In particular, child poverty is less prevalent and poverty among seniors is much more prevalent. Short (2011) notes that these differences are due to how the SPM treats expenses and in-kind benefits. Children benefit from several antipoverty programs. These benefits are reflected in the SPM, thereby reducing the incidence of poverty among children. On the other hand, seniors incur significant medical expenditures. In the SPM, these expenditures lower resources available to meet spending needs, thereby increasing the incidence of poverty among seniors.

Table 25.2 Two-Adult, Two-Child Poverty Thresholds

	2009	***2010***
Official	$21,756	$22,113
SPM[a]	$23,854	$24,343

Notes: SPM = Supplemental Poverty Measure;

(a) Not accounting for housing status.

Source: Short (2011).

Table 25.3 Percentage in Poverty Overall and by Age, 2010			
	Official	**SPM**	**Difference**
All people	15.2[a]	16.0	0.8*
Under 18 years	22.5	18.2	−4.3*
18 to 64 years	13.7	15.2	1.6*
65 years and older	9.0	15.9	6.9*

Notes: SPM = Supplemental Poverty Measure;

(*) Statistically different from zero at the 90 percent confidence level.

(a) Differs from published official rates as unrelated individuals under 15 years of age are included in the universe. Details may not sum to totals because of rounding.

Source: Adapted from Short (2011): Table 1.

Table 25.4 Percentage in Poverty by Region, 2010			
	Official	**SPM**	**Difference**
Northeast	12.9	14.5	1.7*
Midwest	14.0	13.1	−0.9*
South	17.0	16.3	−0.6*
West	15.4	19.4	4.0*

Notes: SPM = Supplemental Poverty Measure;

(*) Statistically different from zero at the 90 percent confidence level. Details may not sum to totals because of rounding.

Source: Adapted from Short (2011): Table 1.

Table 25.4 reports 2010 poverty rates by geographic region. According to the SPM, poverty is more prevalent in the Northeast and West relative to that suggested by the official measure. This finding is driven by the relatively high housing costs in these regions rela-

tive to those in the Midwest and South. Housing cost differentials are not captured in the official measure.

2.3. Effects of Government Programs

An important motivation for constructing the SPM is to assess the impact of antipoverty programs. This is more easily done if resources and thresholds reflect the (p. 801) value of in-kind benefits, expenses, and credits that influence individuals’ and families’ spending capacities. By excluding one at a time the resources or expenses associated with a particular program or cost, the effect of that program or expense on the poverty rate can be estimated, if we are also willing to assume that no change in behavior occurs in response to the change under consideration. Ben-Shalom and his coauthors (in this handbook) conduct this kind of exercise for 2004 by using data from the Survey of Income and Program Participation. Table 25.5 shows the result of this exercise reported by Short (2011) for 2009 and 2010 using the SPM. For example, if SNAP was excluded from resources, then the 2010 poverty rate would be higher because people would have fewer resources available to meet their spending needs. On the other hand, if Federal Insurance Contributions Act (FICA) taxes are excluded from resources, then the poverty rate would be lower because it would appear that people have more resources available to meet their spending needs.

Table 25.5 Effect of Excluding Individual Elements on SPM Rates

	2009	2010
SPM	15.3	16.0
EITC	17.2	18.0
SNAP	16.8	17.7
Housing subsidy	16.1	16.9
School lunch program	15.6	16.4
WIC	15.4	16.1
LIHEAP	15.3	16.1
Child support paid	15.2	15.9
Federal income tax before		
credits	14.9	15.6
FICA	13.8	14.6
Work expense	13.7	14.5
MOOP	12.0	12.7

Notes: Rates for all people in poverty.

Source: Adapted from Short (2011): Tables 3a and 3b.

What percentage of people has resources that fall within certain cutoffs relative to the poverty threshold? This is an important question because in addition to the prevalence of poverty, social policy makers might also be concerned with the depth and severity of poverty. Table 25.6 provides two answers to this question for 2010. According to the SPM, a smaller percentage of people are in deep poverty, defined as less than half of the poverty threshold. Also, a smaller percentage of people are in the top bin with a resource ratio of more than four times the poverty threshold. (p. 802) Taking account of the value of in-kind benefits, expenses, and credits, as the SPM does, clearly bunches the population toward the center of the distribution.

Table 25.6 Percentage of People by Ratio of Income/Resources to Poverty Threshold: 2010

	Official	SPM
Less than 0.5	6.8	5.4
0.5 to 0.99	8.4	10.7
1.0 to 1.99	18.8	31.8
2.0 to 3.99	30.2	34.8
4 or more	35.8	17.3

Notes: All people; SPM = Supplemental Poverty Measure.

Source: Adapted from Short (2011): Table 4.

3. Issues with the SPM

3.1. Macrodynamics

The SPM is the latest of several alternative poverty measures produced by the Census Bureau. From the perspective of macroeconomics, considerable interest is in whether an alternative measure has dynamic (trend and cyclical) properties that are distinct from the official measure. Dalaker (2005) examines this issue by using poverty measures that use alternative definitions of income and price indices. He concludes that these adjustments do not yield alternatives measures with distinct dynamic properties although they do induce level effects. Meyer and Sullivan (2010a) contest this finding on the grounds that it depends in part on a highly problematic imputed value of annuitized home equity that is included as a resource in some of the Census Bureau’s alternative poverty measures. It is too soon to say how this issue will play out with the SPM. We only have one first difference of approximately 0.8 percentage points, the change from 2009 to 2010. Short (2011) reports that this change is not statistically different from the change in the official poverty over the same time period. As indicated by Tables 25.3 and 25.4, however, there are clearly level and composition differences between the SPM and the official measure.

3.2. Allocation of Antipoverty Program Resources

Table 25.4 indicates that the regional composition of poverty is different according to the SPM. In particular, poverty rates are higher in the West and Northeast (p. 803) and lower in the South and Midwest. Short (2011) emphasizes that the SPM will not replace the offi-

cial poverty measure because the latter is embedded in existing legislation, and it guides program eligibility and funding distribution. The separation of the SPM from program eligibility and funding distribution is meaningful. Nelson and Short (2003) note that correcting the official poverty measure for differences in the cost of living across states, as is done in the SPM, would reallocate federal assistance dollars across states. They consider an example of the federal allocation of $3.1 billion for the State Children’s Health Insurance Program (SCHIP) in fiscal year 2004 based on state-level data on low-income children (ages zero to 18) averaged from 1999 to 2001. Switching away from the official measure would have shifted the composition of low-income children across states. This shift would have led to additional funding for 17 states, including California ($35.3 million, 6.6 percent), New York ($25.2 million, 11.6 percent), and New Jersey ($17.5 million, 27.1 percent). It would have led to reduced funding for 25 states, including Texas (-$30.1 million, -9.1 percent), Louisiana (-$9.4 million, -14.5 percent), and Alabama (-$7.9 million, -14.5 percent). The SPM’s silence on the distribution of program funds may grow discordant if it rises in prominence.

3.3. Wealth and Well-Being

A striking finding is the high poverty rates among seniors when using the SPM as shown in Table 25.3. It draws attention to the treatment of assets in the SPM. Fry and colleagues (2011) document several facts about wealth among households headed by adults aged 65 and older from 1984 to 2009. First, their median net worth grew from $120,457 to $170,494 between 1984 and 2009, an increase of 42 percent. Second, home equity was an important source of this increase. Third, only 8 percent of households headed by adults aged 65 and older had no or negative net worth in 2009. Moreover, Short (2011) reports that in 2010 homeowners with mortgages are 23 percent of the SPM poverty population and homeowners without mortgages (those who own their homes free and clear) are 20 percent of this population. It is not clear how many of these homeowners are adults aged 65 and older. Meyer and Sullivan (2010b) estimate that many persons in this age cohort receive significant consumption flows from housing and/or the depletion of assets. These flows are not captured well by the SPM. The SPM, however, does not claim to be a measure of asset poverty. As emphasized by McKernan and coauthors (in this handbook), income and asset poverty can be different things. A comprehensive measure of well-being would account for both.

3.4. Limited Access

Construction of the SPM required the addition, starting in 2010, of new questions to the CPS ASEC about child-care expenses, medical expenses, and child support (Short 2011). Therefore, it would be difficult to construct retroactively the SPM for (p. 804) earlier years. Further, there appears to be no guarantee that the SPM will continue to be produced in the future. Short (2011) reports that the funding needed to sustain the expanded survey, to make the micro details of the survey publicly available, and to enable timely

production of the SPM is not secure. These restrictions pose severe risks to the usefulness of the SPM for research and policy analysis going forward.

4. Conclusion

The SPM improves on the official poverty measure by accounting for in-kind benefits and expenses in the calculation of resources and by using data on expenditures on food, clothing, shelter, and utilities in the calculation of poverty thresholds. Further, these thresholds are adjusted for geographical differences in housing costs and are updated by using a moving average of expenditures. For 2010, the SPM poverty rates suggest a significant change in the composition of poverty in the United States relative to that suggested by the official measure. In particular, the SPM suggests that child poverty is less prevalent and that poverty among the elderly is more prevalent. It also suggests that poverty is more prevalent in the Northeast and Western regions of the country and less prevalent in the Midwest and Southern regions. Finally, the within composition of poverty is different from that suggested by the official poverty measure. According to the SPM, a lower percentage of the poor are in deep poverty, defined as resources less than 50 percent of the poverty line.

A motivation for constructing the SPM is the desire to obtain a statistic that better signals to American society what percentage of its population falls below a particular level of well-being. The fact that the SPM presents a significantly different view of who is poor relative to that indicated by the official poverty measure suggests that targeted public policies have made progress in alleviating poverty for children. According to the SPM, less progress appears to have been made in reducing the incidence of poverty among the elderly. This latter finding, however, is controversial. Current research on consumption and asset holdings by the elderly in the low end of the income distribution suggests that their well-being may not be as compromised as suggested by the SPM. It is too soon to say how these competing perspectives will be reconciled. The SPM is likely to stimulate further study of poverty measurement and of antipoverty policy. Therefore, this new statistic’s arrival on the scene is welcome.

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