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Re-Counting Poverty

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The November 2011 issuance by the U.S. Census Bureau of a new Supplemental Poverty Measure has rekindled interest in questions that have been raised at various times over the nearly half century since the first official measures were published. Are the poverty measures used for so many years really so flawed they need a total overhaul? If so, why weren't they fixed sooner? How and why did the new alternative recently unveiled by Census emerge from the pack? What are the politics? What's the social science? What core values are put in play by the choices we as a society make about how to measure poverty?

The Current Count

Debate over how best to gauge the depth and extent of poverty in the U.S. was well underway when, in 1964, the first government-produced poverty measures were published. The launching of the Kennedy/Johnson War on Poverty had already stoked the interest of academic researchers, government officials and policymakers in the subject, and critics were quick to highlight shortcomings in the methodology employed by Social Security analyst [Mollie Orshansky](#) in devising income levels below which families of differing types should be classified as "poor."

To be sure, Orshansky's methodology might now seem rather simplistic, given today's sophisticated computers and the elegant models they deploy. Orshansky's starting point was the U.S. Department of Agriculture's 1955 Household Food Consumption Survey (the most recent then available), which revealed that, on average, households that included three or more people spent about a third of their after-tax income on food, with households of one or two people spending a slightly larger share. Orshansky applied these multipliers to the costs of the economy food plan—the most frugal of USDA's "four nutritionally adequate" food plans—for families of each size. (A second set of thresholds was derived from the somewhat more generous "Low-Cost" food plan, but these drew little attention at the time.)

Other adjustments took account of farm/nonfarm status, number of family members who were children, families headed by females (a male spouse, if present, was assumed to head the family) and, for one and two-person units, aged/non-aged status. These adjustments produced a matrix of 124 poverty thresholds, although only the weighted average thresholds for each family size were typically cited. A detailed description by Gordon M. Fisher of the [derivation of Orshansky's poverty thresholds](#), including shortcomings and later modifications, can be found at the Census Bureau's website.

With the help of the Census Bureau's Demographic Survey division, Orshansky was then able to produce estimates of the extent of poverty nationally and among various subgroups, using data from the annual March supplement to the Current Population Survey, conducted by the Census Bureau in collaboration with the Bureau of Labor Statistics, in which households are asked about their money income in the previous year.¹ That survey, with some modifications and now dubbed the Current Population Survey Annual Social and Economic Supplement (CPS ASEC), remains the basic data source from which the official poverty estimates are derived.² In 1969, the Orshansky thresholds were formally adopted by the U.S. Bureau of the Budget (now the Office of Management and Budget) as the official delineators between the American poor and non-poor.³

The [poverty thresholds](#), updated annually by the Census Bureau to reflect price changes, are still used to prepare estimates of the number of Americans in poverty each year. The Department of Health and Human Services also publishes a somewhat simplified version of these measures, the [poverty guidelines](#), which are used to determine financial eligibility for various income-tested federal programs and for other administration purposes.

The Continuing Debate

Orshansky's guidelines—with relatively modest modifications—remain the official word on who is and who isn't poor in America. This is despite recurring criticism from both the left and right and the periodic convening, beginning in 1968, of numerous poverty-measure review committees, interagency task forces and expert bipartisan panels, along with the issuance of extensive technical reports on their findings and differences.⁴ And, on the basis of some of these deliberations, the Census Bureau has, in more recent years, published several [alternative measures](#) on its website, although these generally draw little attention.

The most straightforward explanation for the durability of the Orshansky measure is that, while it is not difficult to point to its deficiencies, devising widely acceptable remedies is far from simple. The sources of controversy range from basic philosophical differences to practical difficulties in concept, measurement and data collection. Here are a few of the most prominent:

- *Should poverty be defined as an absolute or a relative state?* The official poverty lines are absolute measures in that, apart from minor methodological modifications over time, they are adjusted

annually only for changes in the cost of living. However, as Fisher notes, even before the thresholds were made official, Orshansky herself had written in a 1963 article that “As the general level of living moves upward and expands beyond necessities, the standards of what constitutes an irreducible minimum also change.” What counts as not-poor in, say Mumbai, would not be judged so in Los Angeles or Houston. A review of evidence⁵ from Britain, Canada, and Australia, as well as the U.S., finds that in practice presumably absolute poverty standards show a clear tendency to rise in inflation-adjusted terms along with increases in real income among the general population. Still, as noted in the recently issued [report](#)⁶ on the design of an alternative poverty measure, the official thresholds were equal to about half of median income in 1963-1964. Because of income growth, by 1992, half of median income was above the official thresholds—in fact, more than 20% higher. Against the adoption of a relative measure, it is argued that once poverty is made relative, there is practically no hope of ever eradicating or even substantially reducing it. As the [Cato Institute’s Michael Tanner](#) put it in a recent NPR interview, under a relative measure even “if you doubled everybody’s income, the number of poor people wouldn’t change because you’d be doubling people at the top of the scale, as well as people at the bottom of the scale and you’d set up, essentially, an equivalence there so that it really wouldn’t change.”

- *Apart from their absolute nature, don’t the current poverty thresholds set too low a standard for determining who is poor?* Fisher notes that Orshansky never intended her poverty thresholds to be viewed as a measure of income *adequacy*, but rather of income *inadequacy*, noting that in the January 1965 article in which she described her findings, she observed that “if it is not possible to state unequivocally ‘how much is enough,’ it should be possible to assert with confidence how much, on an average, is too little.” In Orshansky’s view, “...there is no generally accepted standard of adequacy for essentials of living except food,” hence her reliance on multiples of observed food consumption patterns in defining her thresholds. Critics of this technique point out that, as a result, poverty measures do not take account of variations in work-related expenses such as transportation and child care as well as taxes and medical expenses nor of possibly substantial differences in available income between homeowners (with and without mortgages) and renters. Nor do they adjust for variations in living costs across geographic areas, for changes in family structure such as the increasing number of cohabiting unmarried couples or for child support obligations, all of which can have a possibly important effect on family income and expenses.
- *On the other hand, don’t the techniques used to estimate the number of persons below the thresholds exaggerate poverty since they don’t take account of non-cash government assistance programs targeted at the poor and near-poor?* As the magnitude of in-kind government benefit programs—such as food stamps/supplemental nutrition assistance, housing aid, child care and medical and energy bill reimbursements—has burgeoned, their omission from the CPS data used in official poverty counts has become more important. The same is true of the [Earned Income Tax](#)

[Credit](#) a refundable federal income tax credit paid by the Internal Revenue Service to earners in families (as well as some individuals) with low and moderate incomes. And while cash welfare payments are enumerated in the CPS, they tend to be underreported. Of course, other possible sources of income, notably illegal income or off-the-books income not reported to the tax authorities are also likely to be substantially underreported, if reported at all, by household members surveyed. But, since little is known about the magnitude of these exclusions, or their impact on resources available to households, any imputation would be highly problematic.

- *Isn't it difficult, even impossible, to estimate the value of certain kinds of benefits—notably medical benefits?* Over the years, computer simulations by outside researchers as well as by the Census Bureau have shown that imputing a value to government-provided non-cash benefits can produce a significant reduction in poverty counts among children and certain other demographic groups.⁷ All of these simulation researchers have struggled with how best, if at all, to take account of the value to families and individuals of the most costly of all government benefits—payments made under the Medicare and Medicaid programs to cover the medical expenses of the elderly, the disabled and low-income families with children. Early simulations experimented with assigning a medical insurance value to the resources of eligible families and individuals. However, that type of imputation was widely criticized on the grounds that medical benefit payments tend to be concentrated among subsets of the eligible population—such as the long-term disabled or terminally ill—and that, except to the extent that reimbursed medical costs would otherwise be paid out-of-pocket, families or individuals do not experience an increase in other disposable income as a result of Medicare and Medicaid eligibility. (Receiving a million dollars' worth of surgery, chemotherapy or kidney dialysis does not make one a millionaire.) Moreover, income tabulations of the general population do not take account of employer -subsidized private medical insurance.

The Proposed Improvement

Conscious of the political as well as theoretical controversy surrounding poverty measurement, the Census Bureau has stressed that the recently unveiled “[Supplemental Poverty Measure](#)” is just that—supplemental. It will neither replace the official count nor be used in determining eligibility for government programs. Moreover, the Census Bureau, together with the Bureau of Labor Statistics, plans to continue research into better methods to determine the thresholds that define poverty for families and individuals of varying demographic characteristics, as well as the consistency and accuracy of procedures used to determine how many of these families and persons have resources insufficient to raise them above those thresholds.

The Supplemental Measure, the product of an Interagency Technical Working Group (ITWG),⁸ draws heavily upon the recommendations of a 1995 [National Academy of Science report](#)⁹ as well as further research on poverty measurement conducted over the past 15 years. The ITWG in its own [report](#) issued in March 2010, endorsed many of the improvements in poverty definition and measurement recommended by the NAS, but

suggested additional enhancements. The final supplemental measure, as applied to 2010 CPS ASEC data, is described in detail in the [Census Bureau report](#) issued in November 2011. In summary, the new construct would:

- *Adopt a more sophisticated measure of need.* Rather than being a simple multiple of food expenditures, the new thresholds for differentiating between the poor and non-poor of various types would be defined in terms of the costs of basic expenditures for food, clothing, shelter, utilities plus a small additional allowance for other needs. Data from the Bureau of Labor Statistics [Consumer Expenditure survey](#) would be averaged over five years to produce estimates for families with two children and then adjusted to reflect differences in family size and composition as well as variations in housing costs. The thresholds distinguish among three housing status groups: owners without mortgages, owners with mortgages and renters. Data from the Census Bureau's [American Community Survey](#) are used to take account of geographic differences in housing costs.
- *Adopt a quasi-relativistic standard of poverty.* The poverty threshold would be set at the 33rd percentile of the expenditure distribution for all U.S. households. In other words, teetering on the threshold of poverty would mean being able to spend less on these basic items than two-thirds of Americans routinely spend. Adjustments would be made to these thresholds periodically to reflect changes in overall expenditure patterns and levels. As a result, if inflation-adjusted consumption levels, as measured by a five-year moving average of the CES, rise relatively evenly across all income levels, the poverty thresholds would rise proportionately. But if consumption gains were confined to higher income levels, and out-of-pocket spending among the lowest third rose little if at all, the thresholds would register only slight or no increase. Thus under the alternative measure the poverty line might rise in real terms if living standards at the low end of the income distribution actually improve, but they will not necessarily rise if gains are concentrated at higher income levels.
- *Employ a more comprehensive measure of family resources.* Family resources are defined to include not only cash income but the variety of in-kind federal benefits that can be used to meet the food, clothing, shelter costs included in estimating the poverty thresholds, plus tax credit payments. From this total, deductions are made for non-discretionary expenditures not specifically taken into account in the official measure computation, including tax obligations and work-related expenses such as transportation and child care. The difficulty of estimating medical costs and reimbursements is dealt with by excluding medical expenses in computing the poverty thresholds while also excluding government medical benefits from the computation of family resources. However, out-of-pocket medical expenses (elegantly dubbed MOOP) as well as child support payments to other households are counted as income deductions, their inclusion having been made possible by the addition of new questions to the CPS ASEC survey. Administrative data are also employed in the estimation of certain housing and food assistance programs.

- *Update the definition of family units.* Unlike the current official poverty measures, the supplemental measure employs a broader definition of the family unit, meant to include all those living in a housing unit who can be assumed to share income and other resources. Included in the enlarged family unit are not only all persons living in the household unit who are related by blood, marriage and adoption as counted in the official definition, but also unrelated children, such as foster children, who are being cared for within that residence. Cohabiting adults and their children are also counted as family units. (See “[Cohabiting Couples and Their Money](#),” by D’Vera Cohn, for an analysis of the impact of this modification.)
- *Encourage further research and improvement of data sources.* The report emphasizes the need for continuing improvement both of estimating procedures and, resources permitting, data collection. Items specifically mentioned for attention include estimating medical expenses of the uninsured, including in-kind benefits in estimating thresholds taking account of geographic differences in commuting and other transportation costs and employing other surveys to improve in-kind benefit estimates and produce small area analyses. Some of this [research is already underway](#).

The Bottom Line

In the aggregate, these many alterations have only modest effect on the overall measurement of poverty as applied to data from 2009 and 2010. However, some important differences with the official counts are observed:

- *Poverty Thresholds* As expected, the new methodology resulted in a higher set of poverty thresholds. For example, the official measure set the 2010 poverty line for a two-adult, two-child family at \$22,113 while the supplemental measure sets it at \$24,343. The revised measure also showed a somewhat larger increase in the poverty threshold between 2009 and 2010—\$489 versus \$357 for the official measure. Even though income was defined more broadly, the number of people counted in poverty also increased, from 46.6 million (a 15.1% poverty rate) under the official definition to 49.1 million (16.0%) under the supplemental definition.
- *Demographic Differences* While the size of the overall poverty population differs only modestly between the official and supplementary counts, some striking differences emerge in the configuration of the poverty population. As shown in Table 1 of the Census Bureau report, (reproduced below) 3.2 million fewer children under age 18 are counted as poor in the new measure as compared with the official count. Other groups showing declines include renters, blacks and those covered by only government-provided health insurance.¹⁰ Poverty rates show an especially substantial increase among the elderly (from 9.0% to 15.9%), as MOOP more than offset non-cash benefit receipts. The new measure also records a significant increase in poverty among Asians (4.6 percentage points) and, to a lesser extent, among Hispanics (1.5 points)—two groups with relatively

large proportions of recent immigrants who may not qualify for in-kind benefits. But poverty among non-Hispanic whites rises by nearly as much as among Hispanics, a statistically significant 1.0-point increase. Rates for female-headed family units show no significant difference between the two measures, while rates for married couples rise slightly. Among newly defined units in the supplemental measure (primarily cohabiting couples), poverty declines by 12.2 percentage points.

- *Degrees of Need* More striking are the impacts on the measured degree of need. The revised measure shows a somewhat smaller percentage of the population with financial resources less than half the poverty line (5.4% vs. 6.8% in the official measure), a result to be expected from the inclusion of non-cash benefits in the count. More striking is the far larger estimate of the “near-poor” –people whose resources place them in the range between the poverty threshold and twice that level. By the official count 18.8% of Americans reside in that borderline territory, whereas the supplemental alternative—which takes account of taxes and other non-discretionary expenses—finds nearly a third (31.8%) so situated.
- *Geographic Differences* The Supplemental Poverty Measure tabulations as well as the official counts derived from the CPS and American Community Survey provide breakdowns by geographic region and metropolitan statistical areas. However, the use of American Community Survey data to adjust for differences in housing prices among geographic areas permits a finer differentiation among areas. Among regions, the new measure records significant increases in poverty in the West (19.4% up from 15.4% in the official count) and Northeast (14.5% vs. 12.9%). Lower rates are observed in both the South and Midwest. While somewhat higher rates are computed for metropolitan areas, especially those outside principal cities, poverty rates in non-metro areas decline from 16.6% officially to 12.8% under the alternative measure. Because of sample size limitations, the Census Bureau cautions against using single year CPS-ACS data to compute estimates by state. The bureau recommends, when and if the data become available, using three-year averages for initial estimates and two-year averages to estimate state changes over time. However, the Census Bureau’s Trudi Renwick has produced [estimates of poverty by state](#)¹¹ for 2009 under the official and supplemental measures, using a five-year average of ACS data to estimate alternative measures of housing costs. She finds the largest increases in poverty rates in Alabama (up 3.76 percentage points from the official measure), Florida (3.11), Colorado (2.85), Tennessee (2.67) Georgia (2.53) and Nebraska (2.27). States with lower poverty rates under the new measure include Arkansas (-2.01 percentage points), New Mexico (-1.34), the District of Columbia (-1.24), Vermont (-1.09) and Michigan (-.081), West Virginia (-0.77) and New York (-0.33).

Table 1.
Number and Percent of People in Poverty by Different Poverty Measures: 2010

Characteristic	Number** (in thousands)	Official**				SPM				Difference	
		Number		Percent		Number		Percent		Number	Percent
		Est.	90 percent C.I. ¹ (±)	Est.	90 percent C.I. ¹ (±)	Est.	90 percent C.I. ¹ (±)	Est.	90 percent C.I. ¹ (±)		
All People	306,110	46,602	850	15.2	0.3	49,094	908	16.0	0.3	*2,492	*0.8
Age											
Under 18 years	74,916	16,823	378	22.5	0.5	13,622	376	18.2	0.5	*-3,201	*-4.3
18 to 64 years	192,015	26,258	556	13.7	0.3	29,235	602	15.2	0.3	*2,976	*1.6
65 years and older	39,179	3,520	161	9.0	0.4	6,237	216	15.9	0.6	*2,716	*6.9
Type of Unit											
In married couple unit	185,723	14,200	581	7.6	0.3	18,295	622	9.9	0.3	*4,095	*2.2
In female householder unit	61,966	17,786	513	28.7	0.7	17,991	552	29.0	0.8	206	0.3
In male householder unit	32,224	5,927	289	18.4	0.8	7,317	308	22.7	0.8	*1,391	*4.3
In new SPM unit	26,197	8,690	341	33.2	1.0	5,490	339	21.0	1.2	*-3,200	*-12.2
Race and Hispanic Origin											
White	243,323	31,959	698	13.1	0.3	34,747	728	14.3	0.3	*2,789	*1.1
White, not Hispanic	197,423	19,819	571	10.0	0.3	21,876	605	11.1	0.3	*2,057	*1.0
Black	39,031	10,741	406	27.5	1.0	9,932	388	25.4	1.0	*-810	*-2.1
Asian	14,332	1,737	161	12.1	1.1	2,397	191	16.7	1.3	*660	*4.6
Hispanic (any race)	49,972	13,346	420	26.7	0.8	14,088	459	28.2	0.9	*742	*1.5
Nativity											
Native born	267,884	38,965	801	14.5	0.3	39,329	845	14.7	0.3	364	0.1
Foreign born	38,226	7,636	288	20.0	0.7	9,765	327	25.5	0.7	*2,128	*5.6
Naturalized citizen	16,801	1,910	119	11.4	0.7	2,829	158	16.8	0.9	*919	*5.5
Not a citizen	21,424	5,727	263	26.7	1.1	6,936	288	32.4	1.2	*1,209	*5.6
Tenure											
Owner	207,290	16,529	565	8.0	0.3	20,205	659	9.7	0.3	*3,676	*1.8
Owner/mortgage	138,324	8,366	389	6.0	0.3	11,419	471	8.3	0.3	*3,053	*2.2
Owner/no mortgage/rent-free	72,180	9,036	413	12.5	0.5	9,581	429	13.3	0.6	*544	*0.8
Renter	95,606	29,199	740	30.5	0.6	28,093	746	29.4	0.6	*-1,106	*-1.2
Residence											
Inside MSAs	258,350	38,650	932	15.0	0.3	42,979	879	16.6	0.3	*4,329	*1.7
Inside principal cities	98,774	19,584	585	19.8	0.5	20,748	611	21.0	0.6	*1,164	*1.2
Outside principal cities	159,576	19,066	742	11.9	0.4	22,231	738	13.9	0.4	*3,165	*2.0
Outside MSAs	47,760	7,951	544	16.6	0.7	6,114	449	12.8	0.7	*-1,837	*-3.8
Region											
Northeast	54,782	7,051	327	12.9	0.6	7,969	342	14.5	0.6	*918	*1.7
Midwest	66,104	9,246	410	14.0	0.6	8,678	356	13.1	0.5	*-569	*-0.9
South	113,275	19,210	577	17.0	0.5	18,503	533	16.3	0.5	*-707	*-0.6
West	71,949	11,094	447	15.4	0.6	13,944	512	19.4	0.7	*2,849	*4.0
Health Insurance Coverage											
With private insurance	195,874	9,336	360	4.8	0.2	14,631	464	7.5	0.2	*5,295	*2.7
With public, no private insurance	60,332	22,694	600	37.6	0.8	19,126	559	31.7	0.8	*-3,568	*-5.9
Not insured	49,904	14,571	408	29.2	0.7	15,337	474	30.7	0.8	*766	*1.5

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

** Differs from published official rates as unrelated individuals under 15 years of age are included in the universe.

¹ Confidence Interval obtained using replicate weights (Fay's Method).

Note: Details may not sum to totals because of rounding.

Source: U.S. Census Bureau, Current Population Survey, 2011 Annual Social and Economic Supplement. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see <www.census.gov/hhes/www/p60_239sa.pdf>.

The Future

Despite the likely employment of the alternative poverty measure by researchers, any significant impact on government programs in the near future is probably unlikely. Conservative critics, as well as academics generally, will likely welcome the inclusion of a more complete measure of income among the needy. However, many may oppose the inclusion of even a modestly relativistic element in determining poverty thresholds. And across the political spectrum, arguments will continue about whether benefits are properly valued on an annual basis and other factors affecting imputations.

Absent federal action—and congressional reaction—the poverty guidelines, as derived from the official poverty thresholds (see above), will remain the standards used by federal agencies in determining eligibility for various cash and in-kind benefit assistance programs. Eligibility for these programs is generally determined on an individual not geographic basis (though states may set different standards for welfare and Medicaid assistance). However, should agencies propose to adopt the revised measure in computing program guidelines, Congress would no doubt pay attention to the possible impact of any shift in benefit distributions among states. Congress will also have to decide if it will provide the funds needed to continue some of the survey upgrades used in computing the current version of the Supplemental Measure as well as further recommended improvements.