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POOR MEASUREMENT: New Census Report on Measuring Poverty Raises Concerns

By Jared Bernstein and Arloc Sherman

On February 14, the Bureau of the Census released its latest report on alternative measures of poverty.¹ Among social scientists, there is considerable dissatisfaction with the official approach to poverty measurement, and this document is part of a welcome research initiative by Census analysts to improve the way that poverty in America is measured and understood. The Census Bureau has consistently produced important and insightful work in this area, carrying on the mission set forth by a 1995 National Academy of Sciences (NAS) report, *Measuring Poverty: A New Approach*. The NAS report has been widely viewed in the research community as the leading blueprint for future improvements in measuring poverty.

The latest Census release, however, departs in some respects from this tradition. Unlike past reports in recent years, this release is limited to a set of new measures that are flawed.

KEY FINDINGS

- The Census Bureau recently unveiled new alternative poverty measures “intended to provide a more complete measure of economic well-being.” The new poverty measures, which produce poverty rates as much as one-third below the official poverty rate, contain some features that have been characterized by poverty experts and past Census reports as flawed or incomplete.
- Unlike past Census reports on alternative measures of poverty, this report does not include a set of poverty measures that follow the recommendations of an expert panel of the National Academy of Sciences (NAS) and that are more complete than either the official poverty rate or the new measures. Poverty rates under the NAS measures are generally *higher* than the official poverty rate.
- The new measures are flawed (and biased downward) because, among other reasons, they do not account for families’ expenses for child care and medical care and attribute major new categories of income (such as potential income from home equity) to families without making the adjustments to the poverty threshold necessary to create a consistent measure of well-being.

¹ Available at www.census.gov/hhes/www/poverty/effect2004/effectofgovtandt2004.pdf.

Constructing alternative poverty measures invariably involves decisions that raise or lower the official poverty rate, either by changing what resources are counted as income or by altering the thresholds with which income is compared in order to determine poverty status.² Past Census reports contained two sets of alternative measures. One set, referred to as the NAS measures, were based on the recommendations of the NAS report. These measures explored changes to both the income side and the threshold side of this equation; the resulting poverty rates were generally *higher* than the official rate. Census has also continued to publish a separate, older set of measures, sometimes termed the “R and D tables,” that showed the effect only of changing the definition of income without changing the poverty line; these changes generally *lowered* the poverty rate.³

The latest Census report retains several features of the R and D tables but does not include the NAS tables. Moreover, Census is not currently working on any new written reports that include the NAS measures. Census currently plans to post the NAS poverty measures online, although with little or no public notice or explanation. This raises the possibility that when the Census Bureau publishes future reports on alternative measures of poverty, it will no longer include the NAS measures.

This is of particular concern because the alternative measures in the new Census report all incorporate features that both the NAS panel and past Census reports warned were faulty and that reduce the poverty rate substantially. The Census press release accompanying the new report says that the new measures “are intended to provide a more complete measure of economic well-being than the income definition that is used in the official poverty measure....” The measures in the new report are less complete and comprehensive, however, than the NAS-guided measures that the Census Bureau issued in the past.

The cumulative effect of the changes in poverty measurement that are presented in the new report is to lower the poverty rate (after accounting for public benefits and taxes) by 4.4 percentage points, or more than one-third, to 8.3 percent, from 12.7 percent under the official poverty measure.⁴ By contrast, the more balanced and complete approach to revising the poverty standard represented by the NAS-guided estimates included in last year’s Census analysis resulted in a range of estimates that were between 0.1 percentage points and 2.0 percentage points *higher* than the official measure, as shown in Figure 1 below.

These issues are examined in detail below.

² In addition, changes in the deflator used to adjust for price changes can make a difference. Many alternative measures also use a different equivalence scale to adjust for differences in family size.

³ The poverty rates under the various NAS measures that Census released last year were all above the official poverty rate. In some past years, and in some versions of the NAS measures, the NAS rates were below the official rate.

⁴ Our analysis of the new Census report focuses on the poverty measure that the report says is based on “disposable income.” The new report (like the old “R and D” tables) also includes some supplemental poverty measures that leave out various cash and cash-like benefits and are essentially “pre-transfer” poverty measures; those measures produce poverty rates higher than the official poverty rate. (Those supplemental measures illustrate how various types of income affect the poverty rate and are not meant to provide a complete picture of families’ actual economic well-being.) Because Census says its new report is “intended to provide a more complete measure of economic well-being,” we focus here on the “disposable income” measure.

Poverty Thresholds

The poverty thresholds (also called “poverty lines”) are income levels that the Census Bureau compares to actual family income to determine poverty status. Everyone with family income below the poverty line is considered poor. The current, official thresholds are referred to as the “Orshansky thresholds,” after government economist Mollie Orshansky, who derived them years ago.⁵ For the new report, Census analysts started from the Orshansky threshold for a family of two adults and two children and adjusted this value for different family sizes using a modest technical modification known as the “three-parameter equivalence scale” that derives from the work of the NAS. This family-size adjustment is appropriate. (Note: it does not have a significant effect on the estimated poverty rates.)

Other aspects of the new Census approach raise concerns. The NAS panel’s first and most basic recommendation for setting new thresholds was to ensure comparability between the thresholds and the measure of income. “In developing poverty statistics,” the panel explained, “any significant change in the definition of family resources should be accompanied by a consistent adjustment of the poverty thresholds.” For example, all else being equal, when broadening the poverty definition to include the savings to families from owning their own home, one should adopt a higher poverty line than if one were considering families’ cash income alone. (See discussion of valuing home equity below.)

While the NAS-guided measures developed in previous Census reports follow the practice of ensuring comparability between changes in the threshold levels and in measuring resources, the recent Census report does not.⁶ This omission, in combination with the lopsided nature of changes in the measurement of family resources described below, is the chief reason that the new poverty estimates are so much lower than the estimates under the official definition of poverty. In essence, the new report adds in many resources that are not currently counted as income, thereby boosting income levels, but compares this new income level to the same threshold. Not surprisingly, the poverty rate falls. This is a flawed approach. A fundamentally different income definition requires a different poverty threshold. The categories of family resources that are counted as income should be parallel to the categories of need taken into account in determining the poverty thresholds. The current thresholds are based on the expenditure needs of a family, considering its pre-tax cash income. Different thresholds are needed to determine a threshold for need when income is expanded to include (for instance) the imputed value of owning a home.

In addition, over the long term, the NAS-guided poverty lines tend to rise somewhat faster than the current thresholds. The current report emphasizes a change in the method of adjusting for inflation that makes the poverty line rise more slowly over time. Specifically, in the new report, Census uses an alternative inflation adjustment (under which annual inflation is lower) to adjust the poverty line for all years *since 1977*. That is, the report readjusts the

⁵ Orshansky herself is a vocal critic of the use of these thresholds today. See Bernstein, 2003, *New York Times* op-ed, <http://select.nytimes.com/gst/abstract.html?res=FA0814FB3E590C758EDDA00894DB404482>

⁶ Besides the NAS-guided measures, many previous Census reports also contain an older series of alternative poverty measures, known as the “R and D measures,” that examine the effects of various changes to the income definition while retaining the official thresholds.

poverty line retroactively for years since 1977, based on a revised, lower inflation rate. This lowers the poverty thresholds in 2004 by about one-eighth, which in turn reduces the poverty rate by 2.1 percentage points.⁷

The Census Bureau has shown the effect of this lower inflation adjustment in past reports, but until now it also has shown the faster-rising NAS-guided approach to adjusting the thresholds each year for growth in expenditures on basic needs. If the higher, NAS-style poverty thresholds were used without altering the definition of income, the effect would be to *raise* the poverty rate by 0.7 percentage points.⁸

Resource Measures

The new Census report makes certain appropriate adjustments to family income in order to get a better picture of material well-being than that afforded by the official measure. For example, as in previous reports, the alternative measures include the effect of taxes and near-cash public benefits like food stamps. In key areas, however, the new report's measures of family resources are problematic.

Home Equity: The new Census report treats home owners as having income from the equity they have in their home. (Their assumed income from home equity is set equal to what they might receive if they took out a reverse annuity mortgage.) Contrary to past NAS and Census recommendations, however, the new measure fails to make a matching adjustment to the poverty line (which would essentially raise the poverty line to reflect the full cost of housing consumption for both renters and owners). A previous Census report cautioned that imputing income from home equity without making such a matching adjustment would be “inconsistent” and “not complete.”⁹ When the home equity feature is paired with an appropriate adjustment to the poverty line, many experts believe it may be a valid approach to capturing the difference in economic well-being between homeowners and renters. Without this poverty line adjustment, however, this change artificially lowers the poverty rate.¹⁰

Child Care: As in past reports, the current report subtracts “imputed work expenses” from income prior to comparing income to the poverty thresholds. But unlike past Census work, the new report does not subtract the cost of child care as part of this step. This has

⁷ This comparison is based on the new report's “disposable income” poverty measure, which Census highlights as “more comprehensive” than the current measure.

⁸ Using the three-parameter scale for family-size adjustment used in the recent report, and the official definition of money income, the overall poverty rate in 2004 was 12.6 percent under the poverty thresholds in the new Census report (which are pegged to the official thresholds) but would have been 13.3 percent using the NAS thresholds. Source: Economic Policy Institute tabulations of the March 2005 Current Population Survey.

⁹ Kathleen Short, *Experimental Poverty Measures: 1999*, Current Population Reports Series P60-216 (U.S. Census Bureau: October 2001), page 11, at www.census.gov/prod/2001pubs/p60-216.pdf.

¹⁰ Census tables accompanying the new report indicate that the report's treatment of home equity lowers the poverty rate by 1.2 percent in 2004. For the effects of counting home equity, compare the poverty rates under definition 1a (12.6 percent) and definition 1b (11.4 percent) in Table RD-REV POV01, available at www.census.gov/hhes/www/poverty/effect2004/effect2004.html.

the effect of raising income relative to a measure that subtracts child care expenditures, and consequently producing a lower poverty rate.¹¹ This is problematic given the large number of low-income single mothers who have entered the workforce over the last decade. These women must now pay child care expenses in order to earn an income, and those expenses should be viewed as part of necessary work expenses.

The new Census document explains this failure to subtract child care along with the other work expenses by noting that Census is in the process of “making changes” to the method by which it imputes child care costs. But throughout the history of the Census Bureau’s analyses of alternative poverty measures, Census has been changing and improving its approach to this and other aspects of poverty measurement. Including any one of Census’s past methods for imputing child care would have been analytically preferable to leaving out this expense altogether. Moreover, the omitted child care measures appear to be in less flux than other adjustments that are included in the new report, such as the valuation of home equity, which a past Census report characterized as “not complete” and “an item for ongoing research.”

Out-of-Pocket Medical Costs: This is another cost that the NAS recommended addressing but that is not included in the new report. Here, too, the omission creates a bias, raising the measure of available income and lowering measured poverty. In past Census reports, the NAS-guided measures consistently accounted for medical expenses, either by subtracting them from income or, equivalently, by adding them to the poverty thresholds. (Subtracting these expenses from income would raise the poverty rate by about 3.0 percentage points.)

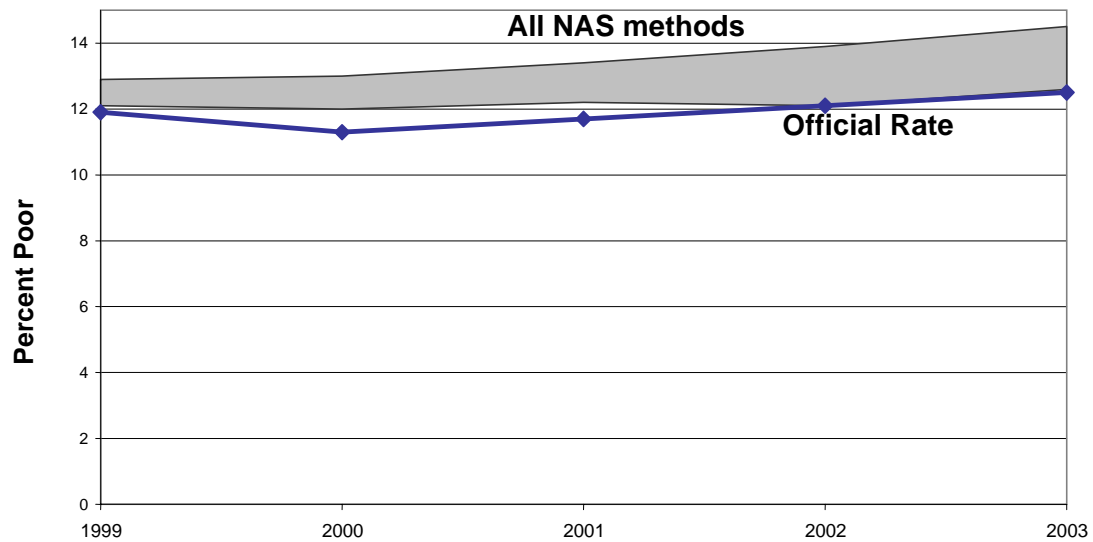
Overall Impact of the Changes

The cumulative effect of these changes in the new measures is to lower the U.S. poverty rate in 2004 by 4.4 percentage points — or more than one-third — from its official level. By contrast, the more complete and balanced alternative measures released by the Census Bureau last year that followed the guidance of the National Academy of Sciences showed higher poverty rates than under the official measure. (This is shown in Figure 1, which plots the official poverty measure and the range of 12 different NAS measures. Note that the range of alternative measures is consistently above the official rate and that the range increases over time.)

What accounts for these differences? The Census press release accompanying the new report says: “The report provides alternative national poverty rates that range from 8.3 percent, using a more comprehensive definition of income that includes the value of noncash benefits and excludes taxes.... The official U.S. poverty rate of 12.7 percent was announced last summer.” This implies that the reduction in poverty — a difference of 4.4 percent points — is due to noncash benefits and taxes.

¹¹ Earlier research by the Census Bureau shows that child care expenses alone raised poverty in 1997 by 0.3 percentage points or more.

Poverty Rates, Official Compared to NAS Alternatives: 1999 to 2003



Note: The gray area covers the range of the 12 alternative NAS rates.

But data that Census has released online show that only about one-third of the reduction (1.6 percentage points) is due to noncash benefits and taxes. More of the reduction is due to the use of an alternative measure of inflation applied retroactively to years since 1977 (which, as noted, accounts for 2.1 percentage points of the decline) and to the previously described, flawed approach to valuing home equity without adjusting the poverty thresholds (which accounts for 1.2 percentage points of the decline).

By contrast, the NAS-guided poverty measures generally show *more* poverty than the official measure, largely because they subtract medical expenses and work expenses — including child care — from families’ income and use new, higher poverty thresholds.

Changes Included in New Census “Disposable Income” Measure of Poverty, Using a CPI-RS Inflation Adjustment	
	Percentage-point change from official poverty rate (2004)
Smooth existing poverty lines (3 parameter scale)	-0.1%
Add net capital gains	-0.0%
Treat home equity as income	-1.2%
Subtract some work expenses	+0.7%
Add noncash benefits and net taxes	-1.6%
Count less inflation since 1977 (CPI-RS)	-2.1%
COMBINED IMPACT OF NEW CENSUS MEASURE	-4.4%

Valid Uses of the New Data

The data in the report have some valid uses. The report says its approach provides “a more focused assessment of the effect of government programs...while holding constant the measure of need (the thresholds).” Understood in this way, the tables can be illuminating. They show, for example, that public benefits cut poverty rates nearly in half in 2004 (from 19.4 percent based on market income to 10.4 percent based on disposable income). These comparisons in some ways resemble comparisons previously issued by Census, ourselves, and others.¹²

The new report is also accompanied by supplemental tables, released online, that provide useful details on how each adjustment to the income measure affects the poverty rate.¹³

Unfortunately, by not including the NAS-inspired measures in the new report and by failing to include the Census Bureau’s past cautions about the limitations of the new measures, the report could leave some readers with the misimpression that the new measures by themselves provide an adequate overall assessment of the poverty rate.

Conclusion

The Census Bureau says its new report is meant to provide “a more complete measure of economic well-being,” but the report ignores issues such as child care and medical expenses that Census staff, with help from outside experts, included in many past estimates of poverty under a comprehensive, revised poverty standard.

In addition, by not following some of the key recommendations made by the National Academy of Sciences regarding improved poverty measurement — most notably, to use poverty thresholds that are consistent with the measure of income being used — and by not including or discussing the NAS-guided measures of poverty, the new report presents an overly positive view of the extent of poverty in America.

It would be of particular concern if the Census Bureau plans to continue publicizing only those poverty rates that are much lower than the current rate, and providing no indication that the lower rates are derived from poverty measures that are controversial in the research community and that many researchers regard as flawed.

¹² In past work comparing expanded income measures to existing poverty lines, CBPP has cautioned readers about the limitations of these comparisons. CBPP has noted problems with using existing poverty lines, failing to account adequately for families’ work expenses, and other measurement issues, and advised that any attempt to redefine the official poverty measure should address these issues. See Arloc Sherman, *Public Benefits: Easing Poverty and Ensuring Medical Coverage*, revised August 2005, www.cbpp.org/7-19-05acc.htm.

¹³ See www.census.gov/hhes/www/poverty/effect2004/effect2004.html.