

ESTIMATING THE VALUE OF FEDERAL HOUSING ASSISTANCE FOR THE SUPPLEMENTAL POVERTY MEASURE: Eliminating the Public Housing Adjustment

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Introduction

In 2009, the Office of Management and Budget's Chief Statistician formed an Interagency Technical Working Group (ITWG) on Developing a Supplemental Poverty Measure. In March 2010, the ITWG issued a series of suggestions to the Census Bureau and BLS on how to develop a new Supplemental Poverty Measure (Observations from the Interagency Technical Working Group on Developing a Supplemental Poverty Measure). Their suggestions drew on the recommendations of the 1995 report of National Academy of Sciences (NAS) Panel on Poverty and Family Assistance and the extensive research on poverty measurement conducted over the past 15 years, at the Census Bureau and elsewhere. The ITWG suggested that the resource measure include the value of nonmedical in-kind benefits, including the value of housing assistance.

This paper describes the methodology currently used by the Census Bureau to estimate the value of housing assistance in order to add this value to the resource estimate used in the Supplemental Poverty Measure (SPM).¹ The paper then presents an evaluation of the impact of a small change to this methodology, the elimination of the public housing adjustment, on SPM poverty rate estimates and the aggregate value of housing subsidies. Unless noted elsewhere, this paper uses data from the 2016 Current Population Survey Annual Social and Economic Supplement (CPS ASEC) collected in February, March and April of 2016 with a reference period of calendar year 2015.

Housing Assistance: Federal Administrative Estimates

Households can receive housing assistance from many different federal, state, and local programs. Federal housing assistance consists of a number of programs administered primarily by the U.S. Department of Housing and Urban Development (HUD). These programs traditionally take the form of rental subsidies and mortgage-interest subsidies, targeted to very-low-income renters and are either project-based (public housing) or household-based (vouchers). The programs generally reduce tenants' rent payments to a fixed percentage of their income after certain deductions.

¹ Since the early 1980s, the Census Bureau has used various methods to estimate the value of this assistance. See Renwick (2010) and Johnson, et al. (2011) for a more detailed description of the evolution of these methods.

For 2016, the HUD estimates the value of federal housing assistance benefits (exclusive of administrative and other costs) for all federal programs at \$38.6 billion and the number of participant households at 4.7 million. According to the latest HUD report, 3.5 million households received rental assistance in the form of vouchers while 1.0 million households lived in public housing.² This is a conservative estimate of the total number of households receiving assistance since it does not include an estimate of the number of participants nor value of local and state housing assistance. See Table 1.

Assigning a Value to Housing Subsidies

For the SPM, the value of housing subsidies is set at the difference between the market rent for the household and the expected tenant payment. The value of this subsidy is capped at the housing portion of the threshold minus the expected tenant payment. If this calculation results in a negative subsidy, the value of the subsidy is set to zero.

The market rent for the household is estimated using a statistical match with HUD administrative data from the Public and Indian Housing Information Center (PIC) and the Tenant Rental Assistance Certification System (TRACS). For each household, an attempt is made to match on state, core-based statistical area (CBSA), and household size. After matching the survey household to a household from the administrative records, the value of the market rent from the administrative records is assigned to the survey household.

Since the HUD administrative data typically include only estimates of market rent for tenant-based housing assistance programs, the rents imputed to CPS ASEC households living in public housing are adjusted. This adjustment factor is derived from HUD data on the average tenant payment and the average subsidy by type of assistance. The factor is updated each year with the latest HUD estimates.

The total tenant payment is estimated using the total income reported by the household on the CPS ASEC and HUD program rules. Generally, participants in either public housing or tenant-based subsidy programs administered by HUD are expected to contribute towards housing costs the greater of one third of their “adjusted” income or 10 percent of their gross income.

The value of subsidies is capped at the housing portion of the threshold for renters minus the household’s out-of-pocket housing expenditures. If the household’s out-of-pocket housing expenditures exceed the housing portion of the threshold, the cap is zero and therefore the subsidy is set to zero. For other households with the capped subsidy, the value of the subsidy is set at the housing portion of the threshold MINUS the out-of-pocket housing expenditures.

² Approximately 200,000 households received other federal housing assistance. See: <https://www.huduser.gov/portal/datasets/assthsg.html>

Critiques of the SPM Approach to Valuing Housing Subsidies

Numerous concerns have arisen regarding the methodology used by the Census Bureau to assign values to housing subsidies for the SPM. These concerns stem from the discrepancy between the administrative estimates of expenditures on housing assistance and the total value of housing subsidies assigned to SPM resource units. These comparisons suggest that SPM estimates may be underestimating the value of housing assistance and the number of people receiving this assistance. Many of these concerns were addressed in a November 2015 working paper (Renwick and Mitchell, 2015). This paper examined the impact of a small change in the methodology for calculating housing subsidies in the SPM: the adjustment factor for households living in public housing.

Concerns about this adjustment factor were first brought to the attention of analysts at the Census Bureau by staff of the Center on Budget and Policy Priorities. They had two concerns: (1) that the adjustment was being applied to too many households in the CPS ASEC and (2) that the size of the adjustment was probably too large. The adjustment was applied to too many households because the number of households reporting residence in public housing in the CPS ASEC exceeds the number of public housing units. Furthermore, they argue that the size of the adjustment was too large because the data source used to estimate the relative value of the two options did not include all the outlays associated with public housing.

At first glance, housing assistance does not appear to be “underreported” on the CPS ASEC. The 2016 CPS ASEC estimated 5.8 million households with some kind of housing assistance while HUD reports 4.7 million receiving assistance in 2015.

However, there is some evidence that respondents do not understand the distinction between living in public housing and receiving a voucher or other rental assistance. The CPS ASEC asks two questions designed to distinguish between those who live in public housing and those who receive a voucher that enables them to pay lower rent. See appendix for the precise wording of the questions. While HUD administrative data estimates 1.0 million public housing units, 4.0 million households reported living in public housing in the 2016 CPS ASEC. The HUD administrative data estimates 3.5 million households receiving vouchers; the 2016 CPS ASEC estimates only 1.8 million households.^{3,4} See Table 1.

In the earlier working paper (Renwick and Mitchell, 2015), we used the match between the CPS ASEC and HUD administrative data to look at these misreports. In that paper, we matched the 2013 CPS ASEC to the PIC and TRACS HUD administrative data for 2012 and 2013. In that analysis, we found 1,483 SPM units with records that matched to the PIC that

³ The estimates in this paper are from the 2016 Annual Social and Economic Supplements (ASEC) to the Current Population Survey (CPS). The estimates in this paper (which may be shown in text, figures, and tables) are based on responses from a sample of the population and may differ from actual values because of sampling variability or other factors. As a result, apparent differences between the estimates for two or more groups may not be statistically significant. All comparative statements have undergone statistical testing and are significant at the 90 percent confidence level unless otherwise noted. Standard errors were calculated using replicate weights. Further information about the source and accuracy of the estimates is available <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

⁴ HUD estimates can be found: <https://www.huduser.gov/portal/datasets/assthsq.html>. The 4.7 million estimate is calculated by taking the total number of units (5.0 million) times the occupancy rate of 94%.

reported housing assistance and had a valid entry for type of assistance. Of the 1,483 SPM units with matches to the PIC, 660, or 45 percent, also matched the assistance type. In other words, 55 percent did not match the assistance type.

The size of the adjustment factor used for the SPM has been derived from HUD data on average outlays for different types of housing assistance. In order to approximate market rent, we add together the average tenant payment and the average subsidy for each type of housing. For example, in 2016, we used the ratio of 74 percent, based on average \$799 per unit “market rent” for public housing and \$1,087 per unit market rent for voucher programs. These average subsidy values were taken from the HUD online data base, “A Picture of Subsidized Households.”⁵ As noted by the Center on Budget and Policy Priorities, the expenditures included in the HUD report do not take into account the value of land and buildings that contribute to the rental value of the units. They suggest that the adjustment factor be eliminated given this and other problems with the calculation of the adjustment factor and the lack of adequate data to accurately assess the relative market value of the two options. (Their memo to us is attached as an appendix to this working paper.)

Given these concerns, this working paper documents the impact of eliminating the public housing adjustment. The elimination of the adjustment was included in the recommendations of the 2015 Renwick and Mitchell working paper:

Using the matched data set confirms the hypothesis that there is some confusion by respondents regarding the type of housing assistance received. Given this confusion, it seems reasonable to eliminate the public housing adjustment in the SPM estimates.

Removing the public housing adjustment reduces the overall poverty rate from 14.3 percent to 14.2 percent, changing the poverty status for 486,000 individuals. For those living in public housing, the poverty rate fall from 33.6 percent to 27.7 percent. The impact of housing assistance on SPM poverty increases from 0.8 percentage points to 0.95 percentage points. For those living in public housing, the impact of housing assistance increases the SPM by 6.0 percentage points, from 18.0 percentage points to 24.0 percentage points. See Table 2.

The aggregate estimated value of housing subsidies (before capping) increases from \$28.5 billion to \$38.6 billion. The difference between the revised CPS ASEC estimate of the total value of housing subsidies and the HUD administrative estimate is not statistically significant. See Table 1.

Conclusion

Given confusion among survey respondents on the type of housing assistance they receive, as well as evidence that our current method of adjusting the value of public housing may be undervaluing this type of housing assistance, we recommend eliminating the disparate valuation of public housing and treating all types of subsidized housing equally. Eliminating

⁵In addition to the concerns raised by the Center on Budget and Policy Priorities about these average amounts, the calculation has become more difficult in recent years as the categories of assistance in the HUD publication have changed. Last year units receiving vouchers were divided into “Housing Choice Vouchers” and “Project-Based Section 8” so a weighted average of the average subsidy for these was compared to the average subsidy for those in public housing.

the public housing adjustment factor also improves the validity of our housing subsidy estimates, resulting in aggregate subsidy values that more closely match administrative data. We recommend this change be implemented in the SPM immediately.

Table 1: Comparison of Survey Estimates to HUD Administrative Estimates						
	CPS ASEC	SE	HUD Administrative Data	SE	Difference	
Number of Units (thousands)						
Total	5,762	148	4,715	na	1,047	*
Public Housing	4,012	125	1,021	na	2,991	*
Voucher/Housing Assistance	1,750	77	3,482	na	-1,733	*
Value of Housing Assistance(millions)						
Total old method before cap	\$28,472	\$868	\$38,557	na	-\$10,085	*
Total new method before cap	\$38,998	\$1,106	\$38,557	na	\$441	
* An asterisk following an estimate indicates change is statistically different from zero at the 90 percent confidence level.						
Details may not sum to totals because of rounding.						
Sources: 2016 Current Population Survey Annual Social and Economic Supplement and Picture of Subsidized Housing: 2016, U.S. Department of Housing and Urban Development						

Table 2: Comparison of SPM Estimates with and without Public Housing Adjustment

	Estimate with the Public Housing Adjustment	SE	Estimate without the Public Housing Adjustment	SE	Difference	
Overall Poverty Rate	14.33	0.17	14.18	0.17	-0.15	*
Overall Number in Poverty (thousands)	45,707	548	45,221	545	-486	*
Poverty Rate for Public Housing Recipients	33.63	1.42	27.66	1.25	-5.96	*
Poverty Count for Public Housing Recipients (thousands)	2,740	143	2,254	124	-486	*
Aggregate Housing Subsidies Added to SPM Resources After Capping (millions)	\$20,367	\$601	\$23,262	\$670	\$2,896	*
Mean Housing Subsidies	\$4,546	\$81	\$4,982	\$89	\$436	*
Marginal Impact of Housing Subsidies	0.80	0.04	0.95	0.04	0.15	*
Marginal impact on public housing recipients	17.98	1.07	23.95	1.13	5.96	*

* An asterisk following an estimate indicates change is statistically different from zero at the 90 percent confidence level.

Details may not sum to totals because of rounding.

Sources: 2016 Current Population Survey Annual Social and Economic Supplement

Works Cited

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Appendix One

CPS Questions

The CPS ASEC asks three questions about housing assistance.⁶

Is this public housing, that is, is it owned by a local housing authority or other public agency? 1 Yes 2 No

Are you paying lower rent because the Federal, State, or local government is paying part of the cost? 1 Yes 2 No

Is this through Section 8 or through some other government program?
1 Section 8 2 Some other government program 3 Not sure

⁶ Responses to the third question are not currently used in the housing assistance calculations.