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Measurement Challenges in Income Poverty: Estimating the Value of Social Transfers for the U.S. Supplemental Poverty Measure

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Abstract

This paper describes the methods used in the SPM measure to estimate the value of social transfers or in-kind benefits. The SPM takes into account governmental cash transfers and in-kind benefits, including nutritional assistance, energy assistance and housing assistance. It also takes into account child support received from outside the households as well as child support payments made outside the household. The paper discusses some of the measurement challenges surrounding these estimates and describes ongoing research on these issues aimed to improve the SPM.

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In the United States, the Census Bureau produces the official annual estimates of the number and percent of persons in poverty. The Census Bureau Income and Poverty Report, usually published in September each year, is one of the most commonly viewed reports on the Census Bureau website. The official estimates summarized in the report use a methodology developed in the early 1960s. For each family or unrelated individual, pre-tax cash income is compared to poverty thresholds that vary by family size and composition. The poverty thresholds are updated each year for inflation but do not vary by place of residence. The resource measure is money income before taxes and tax credits and excludes capital gains and non-cash benefits. The measure assumes that resources are shared among those who are related by blood, marriage or adoption.

Concerns about the adequacy of the official measure culminated in a congressional appropriation for an independent scientific study of the concepts, measurement methods, and information needed for a poverty measure. In response, the National Academy of Sciences (NAS) established the Panel on Poverty and Family Assistance, which released its report, *Measuring Poverty: A New Approach*, in the spring of 1995 (Citro and Michael, 1995).

In 2010, an interagency technical working group issued a series of suggestions on how to develop the new Supplemental Poverty Measure drawing on the recommendations of the 1995 NAS report. The technical working group recommended that when measuring poverty, the definition of family resources for comparison with the appropriate poverty thresholds should be disposable money and near-money income. Gross money income (the income concept used for the official measure) was to be adjusted by adding the value of near-money nonmedical in-kind benefits and subtracting taxes, out-of-pocket medical care expenses, child care costs, work-related transportation and miscellaneous expenses and child support payments. The thresholds were to be produced by the Bureau of Labor Statistics using data on expenditures on food, clothing, shelter and utilities. The unit of analysis for the new measure would be expanded to include cohabiting partners and their relatives as well as unrelated children.

Since 2011, the United States Census Bureau has been publishing alternative annual poverty estimates using the Supplemental Poverty Measure (SPM) (Short, 2015). While the new measure does not replace the official measure, the SPM uses a methodology that addresses many of the criticisms of the official measure and enables policy makers to answer measure the impact of specific government policies and programs on the levels of poverty. Unlike the official measure, the SPM takes into account geographic differences in the cost of living, new family structures, work-related expenses, medical out-of-pocket expenses, taxes and in-kind benefits. Table 1 provides a description of the major differences between the official and Supplemental poverty measures.

Table 1

| Poverty Measure Concepts: Official and Supplemental | | |
|--|--|--|
| | Official Poverty Measure | Supplemental Poverty Measure |
| Measurement Units | Families or unrelated individuals | Families, including any coresident unrelated children who are cared for by the family (such as foster children) and any cohabiters and their relatives, or unrelated, noncohabiting individuals |
| Poverty Threshold | Three times the cost of a minimum food diet in 1963 | The mean of expenditures on food, clothing, shelter, and utilities (FCSU) over all two-child consumer units in the 30th to 36th percentile range multiplied by 1.2 |
| Threshold Adjustments | Vary by family size, composition, and age of householder | Geographic adjustments for differences in housing costs by tenure and a three-parameter equivalence scale for family size and composition |
| Updating Thresholds | Consumer Price Index: all items | 5-year moving average of expenditures on FCSU |
| Resource Measure | Gross before-tax cash income | Sum of cash income, plus noncash benefits that families can use to meet their FCSU needs, minus taxes (or plus tax credits), minus work expenses, out-of-pocket medical expenses and child support paid to another household |

Table 2 shows the difference between the official and the SPM poverty rates for various demographic and geographic groups. This table is included in the Census Bureau’s annual report on the SPM. The overall poverty rate for 2014 using the SPM was 15.3 percent, significantly higher than the official rate of 14.9 percent. Table 2 compares the SPM rate to the official poverty rate for numerous demographic and geographic groups.

This paper describes the methods used in the SPM measure to estimate the value of social transfers or in-kind benefits, the effect of these in-kind benefits and transfers on poverty estimates and discusses some of the measurement challenges surrounding these estimates.

The SPM resource measure is NOT consistent with the recommendations of the Canberra Group. Social transfers in kind were excluded from the Canberra operational definition of income “due to practical measurement issues” (UNECE, Section 3.4.5). The SPM resource measure is, however, consistent with the observations of the Expert Group on Poverty Statistics (Rio Group). It would constitute another example of the third prototype of resource measure that “pursues a much wider concept of income that implies surpassing the monetary limit by imputing non-market-valued items and including non-cash transfers. (Rio Group, p. 46).

There are important reasons to take into account public in-kind benefits in the U.S. poverty measure. Government programs spend billions each year to help families and individuals meet their basic needs. The cash income necessary to meet those needs varies depending on the in-kind benefits received. In addition, including the impact of in-kind benefits in the poverty measure provides an important tool to assess the poverty reducing impact of alternative policies and proposals. This is one of the major criticisms of the official poverty measure and one of the major motivations to move towards an improved measure.²

In general, the SPM includes in the resource measure programs that are designed to reduce spending on the items that are explicitly include in the thresholds: food, shelter, clothing and utilities. Since

² On the other hand, there is the concern for making the resource measure “consistent” with the poverty threshold concept. Garner and Short (2008) argue that only in-kind benefits that are included in the expenditure data used to construct the thresholds should be included in the resource measure. They conclude that it is appropriate to include SNAP benefits because the CE data include all expenditures for food, including purchases made with food stamps, but that “the values of other benefits are not included in resources since these are not reflected as spending needs in the thresholds.”(p. 14).² Garner and Short argue that since households receiving these in-kind benefits are included in the distribution from which the thresholds are set, to the extent that their participation in these programs reduces their outlays for basic goods and services, these reduced outlays are already reflected in the threshold. Ongoing research at BLS to impute the value of in-kind benefits into the CE data used to calculate the thresholds should resolve this issue. See Garner et al. (2015).

medical expenditures are not used in the threshold calculation, the value of medical assistance does not need to be added to resources. Likewise, since child care expenditures are not included in the threshold estimation, child care subsidies are not added to resources. Free public elementary and secondary education is a large government program but since educational expenditures or needs are not included in the threshold there is no need to add the value of free education to resources.

Table 3 provides summary estimates of total federal spending on benefits and services for people with low income. This total includes means-tested programs that provide benefits and services to people with limited income either by tying eligibility to a specific measure of income or by targeting assistance through funding allocation formulas or other need-related mechanisms. It does not include social insurance programs, such as Social Security, Medicare, or Unemployment Insurance. This total represents federal spending on low-income programs and benefits but there are numerous programs and benefits financed and administered at the state level not reflected in the \$744 billion total. Spending by nongovernmental organizations is also not included in this total.

Table 3 shows which of these programs are reflected in the official poverty measure and which are reflected in the SPM. The official poverty measure takes into account approximately \$100 billion or 14 percent of this federal spending while the SPM resource measure takes into account over \$300 billion or 42 percent. While the official poverty measure (OPM) takes into account only pre-tax cash income, the SPM broadens the resource measure to include the value of noncash benefits and tax credits/liabilities. The SPM takes into account a limited subset of these programs. In general, the SPM attempts to take into account government programs that reduce the need for families and individuals to spend resources on food, clothing, shelter and utilities --- the items included in the SPM thresholds. Neither measure is able to take into the account the value of nongovernmental benefits and services.

Methods Used to Value Cash and In-Kind Transfers for the SPM

The Census Bureau employs a variety of techniques to assign values to near-money or in-kind income. Estimates of the value of Supplemental Nutrition Assistance Program (SNAP) benefits and low-income energy assistance rely directly on the survey responses. The value of regular, reduced price and free school lunches is estimated combining the survey responses on the number of children receiving school lunch with administrative estimates of the average subsidy per lunch served. The value of the Supplementary Nutrition Program for Women, Infants, and Children (WIC) is estimated using survey responses to identify recipients and program data on average program outlays. The value of public housing and rental subsidies is estimated using a survey responses combined with data from administrative records. The appendix to this paper includes more detailed descriptions of the methodology used for each benefit.

Effect of In-kind Benefits

In order to isolate the role of in-kind benefits and refundable tax credits in these differences, Table 4 compares poverty rates for 2014 using the SPM resources measure to poverty rates using a resource measure that excluded in-kind benefits and refundable tax credits.

In-kind benefits reduced the overall SPM rate from 20.8 percent to 15.3 percent, a decline 5.5 percentage points. Table 4 shows that poverty rates declined for every major demographic and geographic group but the declines ranged from 2.1 percentage point for people aged 65 and older to 13.4 percentage points for people with public health insurance. Among the groups with the largest differences between the two estimates were children, Blacks and Hispanics.³

Table 5 compares the distribution of people classified as poor using the SPM to the distribution of people who would be classified as poor if in-kind benefits and tax credits were not included in the SPM resource measure. For example, the share of people under age 18 make up 31.4 percent of the poverty population when in-kind benefits and taxes are not considered but when in-kind benefits and tax credits are included they make up 25.5 percent. The inclusion of in-kind benefits and tax credits results in a smaller share of the poor who are under age 18, with public health insurance, renters, married couples or living in new SPM units (primarily unmarried cohabiters), Black, native-born U.S.

³ The differences among the two estimates for Blacks, children and Hispanics were not statistically significant.

citizens, living outside metropolitan areas, Hispanic, working full-time full-year, living in the South or the Midwest, and women.

On the other hand, the share of the poor who are disabled, naturalized citizens, less than full-time full-year citizens, living in metro areas (both inside and outside principal cities), men, Asians, noncitizens, White, uninsured, living in the West, elderly, with private health insurance, homeowners, not disabled, aged 18 to 64 and non workers is higher when in-kind benefits and tax credits are included in the resource measure.

Table 6 shows the distribution of income-to-poverty thresholds ratios for the entire population and for age and race groups. Dividing income by the poverty thresholds controls income by unit size and composition. In general, the comparison suggests that including in-kind benefits and tax credits results in a smaller percentage of the population in the lowest category of the distribution, those with resources below 50 percent of their respective threshold. The reduction in the percent of the population living below 50 percent of their respective thresholds is particularly large for children, Blacks and Hispanics. Not surprisingly, the change in the percent of the population with resources more than four times their threshold was small.

Effect of Individual Resource Elements on SPM Rates

1. Effect on overall SPM rates for the total population and by age

Table 7a shows the effect that various additions to resources had on the SPM rate in 2014, holding all else the same and assuming no behavioral changes. Additions are shown for the total population and for three age groups. Additions shown in the table include cash benefits that are accounted for in both the official and SPM measures as well as in-kind benefits and refundable tax credits that are accounted for only in the SPM.⁴ Removing one item from the calculation of SPM resources and recalculating poverty rates shows, for example, that without SNAP benefits, the SPM rate would have been 16.8 percent, rather than 15.3 percent. Not including refundable tax credits in resources, the poverty rate for all people would have been 18.4 percent rather than 15.3 percent, all else constant. Table 7a also shows the effects of individual resource elements for each major age group. Refundable tax credits reduce poverty rates for children under age 18 by 7.1 percentage points but only by 0.2 percentage points for people over the age of 65. On the other hand, the poverty rate for people age 65 and older would be 35.6 percentage points higher if social security benefits were not included in resources while the effect of Social Security for children is 2.2 percentage points.

2. Effect on SPM rates for resource units receiving each benefit

Table 7b shows the effect of each resource element on individuals living in SPM resource units⁵ receiving each individual benefit or transfer. This table shows the importance of benefits such as housing assistance to the SPM resource units receiving this benefit. Before including the value of housing subsidies in resources, units with housing subsidies have an SPM rate of 66.9 percent. Including the value of subsidies to resources reduces this poverty rate to 39.4 percent.

Among social security recipients, the pre-transfer SPM rate was 48.4 percent. Social security benefits reduces this rate to 14.1 percent, a 34.3 percentage point decrease in the poverty estimate. Likewise, for supplemental security income recipients, poverty estimates fall from 53.5 percent to 27.6 percent, a decline of 25.9 percentage points. On the other hand, public assistance (TANF/General Assistance) decreases poverty rates by 11.3 percent --- from 50.7 percent to 39.4 percent.

⁴ The estimates in this paper are from the 2015 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 <ftp://ftp2.census.gov/library/publications/2015/demo/p60-252sa.pdf>

⁵ The SPM uses a different unit of analysis than the official poverty measure. The official poverty measure assumes that resources are shared only among people related by blood, marriage or adoption. The SPM expands this resource unit to include co-habiting partners and their relatives as well as unrelated individuals under 15 years of age. These resource units are referred to as SPM resource units.

Further Research

a) Correcting for underreporting?

One question is whether or not survey responses and/or imputation should be benchmarked to match administrative estimates of the number of participants and outlays on program benefits. There is considerable evidence that many of these survey responses are subject to underreporting. Survey counts of the number of recipients and the total amount of benefits fall short of administrative data for these programs. Research matching survey respondents to administrative and tax records have documented the extent of this underreporting for several programs. For example, Meyer et al. (2015) found that for the period 2000-2012, the CPS ASEC collected only about half the public assistance payments. They found less underreporting for Social Security, SSI and Social Security Disability. Meyer et al. (2015) found that on average, the CPS ASEC estimates of aggregate SNAP benefits between 2000 and 2012 averaged less than 60 percent of administrative estimates.

Table 8 provides summary data on the aggregate amount of benefits reported for the 2015 CPS ASEC. The represent reported receipt during calendar year 2014. These aggregates are compared to administrative data on benefits, usually for FY2014.

The Census Bureau has never made this type of adjustment to either income or in-kind benefit estimates. The administrative data necessary to make this kind of an adjustment is often not available in a timely fashion. Second, it would be difficult to provide a rationale for adjusting one element of the income measure but not others. On the other hand, policymakers and service providers would like to see the full impact of their programs on the poverty count. This full impact cannot be assessed without adjustments to the data.

Other researchers have adjusted CPS ASEC data to correct for underreporting. For example, in a May 2015 report Arloc Sherman and Danilo Trisi from the Center on Budget and Policy Priorities used the Urban Institute's TRIM model to correct for underreporting.⁶

They found that for 2012, the poverty rate using the adjusted data is 2.2 percentage points lower for all people, and 4.6 percentage points lower for children, than using the unadjusted SPM data.

b) Including in-kind benefits when using data sets that do not ask about the receipt of benefits and transfers?

While the CPS ASEC is the data set used to estimate both the SPM and the official poverty measure for the nation, it is relatively small and not a reliable source of single year estimates for states and smaller geographies. (In order to publish state SPM rates, the Census Bureau combines three years of CPS ASEC data.) The American Community Survey (ACS), with a sample of more than 3 million households each year, is the recommended source for poverty estimates for states and smaller jurisdictions. However, the ACS does not include questions about most of the in-kind benefits included in the SPM resource measure. Therefore, in order to estimate the SPM using ACS data, program and benefit receipt must be imputed. The Census Bureau has undertaken a project to use a statistical match between the CPS ASEC and the ACS to impute the necessary variables onto the ACS (Renwick, 2015).

⁶ Sherman and Trisi correct the underreporting in the Census data for six government assistance programs: the Supplemental Nutrition Assistance Program (SNAP, formerly food stamps), Supplemental Security Income (SSI), housing assistance (such as rental vouchers and public housing), Temporary Assistance for Needy Families (TANF), the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and the Low Income Home Energy Assistance Program (LIHEAP). The corrections use baseline data from the Transfer Income

Model Version III (TRIM III) policy microsimulation model developed and maintained by the Urban Institute under contract with the Department of Health and Human Services' Office of the Assistant Secretary for Planning and Evaluation. Like the SPM, TRIM starts with data from Census' Current Population Survey but uses a different method of filling in questions skipped by survey respondents, in order to closely match actual numbers and characteristics of benefit recipients shown in program records.

Appendix

1. Cash Transfers

a. Pre-tax cash transfers

The value of pre-tax cash transfers is taken into consideration in both the official and the Supplemental Poverty measures. These cash transfers include social security, supplemental security income, unemployment insurance, worker's compensation benefits, and educational assistance. Each person aged 15 or older is asked about receipt of each program. Those who report that they received benefits from a program are next asked the amount of benefits received and the length of reciprocity. Respondents have a choice of providing the amounts as weekly, monthly or annual basis. All amounts are converted to annual totals as the survey responses are processed.

b. Tax credits

Two of the largest social transfers from the federal government to low-income individuals and families are the Earned Income Tax Credit and the Additional Child Tax Credit. In FY2013 these two programs represented 57.5 billion and 21.6 billion in assistance. These social transfers are not included in the official poverty measure. The CPS ASEC does not ask about tax credits received but relies on a tax model to estimate tax obligations and credits for each tax filing unit in the sample.

2. Nutritional Assistance

a. Food Stamps/Supplemental Nutritional Assistance Program (SNAP)

SNAP is the most important federal food assistance program, providing low-income households with electronic benefits they can use like cash at most grocery stores. The U.S. Department of Agriculture administers SNAP at the federal level through its Food and Nutrition Service (FNS). State agencies administer the program at State and local levels, including determination of eligibility and allotments, and distribution of benefits. The Farm Bill of 2008 changed the name of the program from food stamps to SNAP but states maintained the flexibility to keep the food stamp name, change the name to SNAP or to another alternate name.

The CPS ASEC asks each household about its receipt of food stamp/SNAP benefits. The questionnaire asks about total SNAP benefits for the household and the number of people in the household receiving benefits. When there is more than one family in the household, the ASEC prorates the SNAP benefits based on each "eligible" family's share of the total number of people in the household receiving benefits.⁷

b. School Meals

The school lunch program offers children free meals if family income is below 130 percent of federal poverty guidelines, reduced price meals if family income is between 130 and 185 percent of the guidelines, and a subsidized meal for all other children. The School Lunch program provided \$11.7 billion in fiscal year 2014. Average daily participation was 30.5 million students. Of these, 71.6 percent received free or reduced price lunches.⁸

The Census Bureau currently uses program data on the average outlays on regular, free and reduced price school lunch to estimate the value of benefits for participants in the program. The CPS question asks how many children "usually" ate school lunch and whether or not it was a free or reduced price school lunch. If the response to the usually ate school lunch question is positive, the child is assumed to eat school lunch each school day in the calendar year. No value is given to school lunches for family members who did not "usually" eat school lunch.

⁷ "Eligible" is defined as either a family receiving public assistance or SSI or a family with income below its poverty threshold. If the number of persons in the household is greater than the number of persons in families receiving public assistance or SSI plus the number of persons in families with income below the poverty threshold, then the remaining family is assumed to be eligible for SNAP. Since federal eligibility for SNAP is based on gross income below 130% of the poverty guideline, the second criteria for "eligibility" should probably be income less than 130% of the threshold rather than 100% of the threshold.

⁸ <http://www.fns.usda.gov/pd/child-nutrition-tables>

The School Breakfast program serves fewer students than does the School Lunch program. Approximately 2.3 billion breakfasts were subsidized in fiscal year 2014. Fiscal year 2014 Federal school breakfast spending totaled about 3.7 billion.⁹

Short (2003) examined the impact on poverty rates of taking into account school breakfast. Using SIPP data (the CPS ASEC does not include a question about school breakfast), Short found that calculating a value for the school breakfast subsidy in the same way as was done for the school lunch program added approximately \$2 billion to income of families in the SIPP in 1996. While 24 percent of families reported school lunch participation, only 9.1 percent reported school breakfast participation. Of officially poor families, 37.3 percent participated in the school lunch program and 25.5 percent in the school breakfast program. The average value of the school breakfast subsidy for poor families (using the official definition) was \$256 per year. The poverty rate (using the official thresholds) fell from 12.8 percent to 12.7 percent when the value of school breakfasts was added to income.¹⁰ Since the CPS ASEC does not ask about participation in the school breakfast program, the value of school breakfasts is not included in the SPM resource measure.

c. Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)

The Special Supplemental Nutrition Program for Women, Infants, and Children - better known as the WIC Program is designed to provide food assistance and nutritional screening to low-income pregnant and postpartum women and their infants, and to low-income children up to age five. Incomes must be at or below 185 percent of the poverty guidelines and applicants must be nutritionally at-risk (having abnormal nutritional conditions, nutrition-related medical conditions, or dietary deficiencies). Benefits include supplemental foods in the form of food items or vouchers for purchases of specific food items. The SPM includes the value of WIC benefits in its resource measure.

The CPS ASEC asks whether or not respondents received benefits from the WIC program. According to USDA, average WIC benefits for 2014 were \$43.64 per month per participant.¹¹ Total WIC expenditures for food were \$4.3 billion dollars.¹²

Since the CPS ASEC question does not ask how many months the person received WIC benefits, the assumption is made that each person received benefits for the full 12 months of the reference year.

3. Low-Income Home Energy Assistance Program (LIHEAP)

The Low-Income Home Energy Assistance Program provides three major types of energy assistance. Under this program, states may help pay heating or cooling bills, provide allotments for low-cost weatherization, or provide assistance during energy-related emergencies. States determine eligibility and can provide assistance in various ways, including cash payment, vendor payment, two-party checks, vouchers/coupons, and payments directly to landlords.

The CPS ASEC asks the following questions on energy assistance:

The government has an energy assistance program which helps pay heating and cooling costs. This assistance can be received directly by the household or it can be paid directly to the electric company, gas company, or fuel dealer. In 2014, (have you/has this household) received assistance of this type from the federal, state, or local government?

Do you remember receiving an additional or unexpected check that was sent during the year to help pay heating or cooling costs?

Was it used to pay heating or cooling costs?

Altogether, how much energy assistance has been received in 2014?

The Census Bureau SPM adds the reported value of energy assistance for each household to cash income. When there are multiple families in a household, the reported benefits received are prorated across the families according to the number of household members in each family.

⁹ <http://www.fns.usda.gov/pd/child-nutrition-tables>

¹⁰ Kathleen Short, "Alternative Poverty Measures in the Survey of Income and Program Participation: 1996", January 3, 2003.

¹¹ WIC Annual Summary, <http://www.fns.usda.gov/pd/wisummary.htm>

¹² <http://www.fns.usda.gov/pd/wic-program>

4. Housing Subsidies

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 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 subsidies. The programs generally reduce tenants' rent payments to a fixed percentage of their income after certain deductions, currently 30 percent. According to the Congressional Research Service, for FY 2013 the total value of housing assistance was 33.8 billion. This includes programs run administered by HUD as well as Rural Rental Assistance payments from the United States Department of Agriculture.

Since the CPS ASEC reports only current housing assistance status, assumptions must be made regarding the duration of subsidies. The Census Bureau currently assumes that a subsidy reported in the CPS ASEC was received for all 12 months of the previous calendar year.

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.¹³ 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.

For the SPM, the "market rent" for the household is estimated using a statistical match with United States Housing and Urban Development (HUD) administrative data from the Public and Indian Housing Information Center (PIC) and the Tenant Rental Assistance Certification System (TRACS).

¹⁴ 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 gross and contract 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 data published in the "Picture of Subsidized Households" which reports 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. HUD regulations define "adjusted household income" as cash income excluding income from certain sources minus numerous deductions. Only some of these exclusions and deductions can be modeled using CPS ASEC data.

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 also set to zero. For other households with the capped subsidy, the value of the subsidy will be set at the housing portion of the threshold MINUS the out-of-pocket housing expenditures.

Subsidies are calculated at the household level. If there are two or more SPM resource units in a single household, we prorate the value of the subsidy based on the number of persons in each unit relative to the number of persons in the household.

5. Private Transfers

While there are many transfers to low-income families and individuals from family members and nongovernmental organizations, the SPM resource measure does not fully take into these transfers. Some cash transfers from nonprofit organizations and relatives should be captured in the "other income category" that asks respondents to include regular financial assistance from any source. One time gifts or lump sum payments are not included in the Census Bureau definition of regular income and are explicitly excluded from the other income category.

Two private transfers that are included in the SPM resource measure are child support and alimony. The amount of child support or alimony received from sources outside the household is included in

¹³ For a more complete explanation of the SPM approach, see Johnson et al. (2011).

¹⁴ <http://www.huduser.org/portal/picture2008/index.html>.

cash income. The amount of child support paid outside the household is subtracted from the resource measure. These adjustments have relatively small effects on SPM rates.

Works Cited

Citro, Connie F. and Robert T. Michael (ed.). *Measuring Poverty: A New Approach*, Washington, DC, National Academy Press, 1995.

Garner, Thesia I. and Kathleen S. Short. "Creating a Consistent Poverty Measure over Time Using NAS Procedures: 1996-2005." May 20, 2008.

Garner, Thesia I., Marisa Gudrais and Kathleen S. Short, "Consistency in Supplemental Poverty Measurement: Adding Imputed In-Kind Benefits to Thresholds and Impact on Poverty Rates for the United States": Paper presented at the Joint Statistical Meetings, Seattle, WA, August 9, 2015.

<http://www.bls.gov/pir/spm/spm-imputed-inkind-benefits-jsm.pdf>

Johnson, Paul, Trudi Renwick and Kathleen Short, "Estimating the Value of Federal Housing Assistance for the Supplemental Poverty Measure," Poverty Measurement Working Paper, U.S. Census Bureau, 2010.

Meyer, Bruce D., Wallace K.C. Mok and Jame X. Sullivan, The Underreporting of Transfers in Household Surveys: Its Nature and Consequences. June 2015.

<http://harris.uchicago.edu/sites/default/files/AggregatesPaper.pdf>

Meyer, Bruce D. and Nikolas Mittag, Using Linked Survey and Administrative Data to Better Measure Income: Implications for Poverty, Program Effectiveness and Holes in the Safety Net. NBER Working Paper 21676, October 2015.

<http://www.nber.org/papers/w21676.pdf>

Meyer, Bruce D., Wallace K.C. Mok and James X. Sullivan, "Household Surveys in Crisis," Journal of Economic Perspectives, May 2015.

Meyer, Bruce D., Wallace K. C. Mok and James X. Sullivan. "The Under-Reporting Of Transfers In Household Surveys: Its Nature And Consequences." NBER Working Paper Series, Working Paper 15181, July 2009.

Renwick, Trudi. "Using the American Community Survey (ACS) to Implement a Supplemental Poverty Measure (SPM), SEHSD Working Paper #2015-09, June 2015.

Rio Expert Group on Poverty Statistics. *Compendium of Best Practices in Poverty Measurement*. Rio de Janeiro, September 2006.

Sherman, Arloc and Danilo Trisi, "Safety Net More Effective Against Poverty Than Previously Thought: Correcting for Underreporting of Benefits Reveals Stronger Reductions in Poverty and Deep Poverty in All States", Center on Budget and Policy Priorities, May 6, 2015.

Short, Kathleen. "Alternative Poverty Measures in the Survey of Income and Program Participation 1996." Poverty Measurement Working Paper, U.S. Census Bureau, January 3, 2003.

Short, Kathleen. "The Supplemental Poverty Measure: 2014," *Current Population Reports*, P60-254, U.S. Census Bureau, September 2015.

Short, Kathleen. "Experimental Poverty Measures: 1999." U.S. Census Bureau, P60-216", October 2001.

Short, Kathleen, Thesia Garner, David Johnson and Patricia Doyle. "Experimental Poverty Measures: 1990-1997." U.S. Census Bureau, P60-205, June 1999.

Spar, Karen and Gene Falk, "Federal Benefits and Services for People with Low income: Programs and Spending FY2008-FY2013," Congressional Research Service, January 15, 2015.

United Nations Economic Commission for Europe. *Canberra Group Handbook on Household Income Statistics*. Second Edition, 2011.

<http://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/2011/3.add.1.e.pdf>