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**The Supplemental Poverty Measure: Examining the Incidence and Depth of
Poverty in the U.S. Taking Account of Taxes and Transfers**

by

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The views expressed in this research, including those related to statistical, methodological, technical, or operational issues, are solely those of the authors and do not necessarily reflect the official positions or policies of the Census Bureau, or the views of other staff members. The author accepts responsibility for all errors. This paper is released to inform interested parties of ongoing research and to encourage discussion of work in progress. This paper reports the results of research and analysis undertaken by Census Bureau staff. It has undergone more limited review than official publications.

The Research SUPPLEMENTAL POVERTY MEASURE: 2009

Introduction

The current official poverty measure was developed in the early 1960s, and only a few minor changes have been implemented since it was first adopted in 1965 (Orshansky, 1963, 1965a, 1965b; Fisher, 1992). This measure consists of a set of thresholds for families of different size and composition that are compared to a resource measure to determine a family's poverty status. At the time they were developed, the official poverty thresholds represented the cost of a minimum diet multiplied by three (to allow for expenditures on other goods and services). Family resources were defined for this measure as before-tax money income.

Concerns about the adequacy of the official measure have increased during the past two decades (Ruggles, 1990), culminating in a Congressional appropriation for an independent scientific study of the concepts, measurement methods, and information needs for a poverty measure. In response, the National Academy of Sciences (NAS) established the Panel on Poverty and Family Assistance, which released its report titled *Measuring Poverty: A New Approach* in the spring of 1995, (Citro and Michael, 1995). Based on its assessment of the weaknesses of the current poverty measure, this NAS panel of experts recommended a measure that better reflects contemporary social and economic realities and government policy. In their report, the NAS panel identified several major weaknesses of the current poverty measure.

- *The current income measure does not reflect the effects of key government policies that alter the disposable income available to families and, hence, their poverty status.* Examples include payroll taxes which reduce disposable income, and in-kind public benefit programs such as the Food Stamp Program that free up resources to spend on nonfood items.
- *The current poverty thresholds do not adjust for rising levels and standards of living that have occurred since 1965.* The official thresholds were approximately equal to half of median income in 1963-64. By 1992, one half median income was over 120 percent of the official four-person threshold.
- *The current measure does not take into account variation in expenses that are necessary to hold a job and to earn income-- expenses that reduce disposable income.* These expenses include transportation costs for getting to work and the increasing costs of child care for working families resulting from increased labor force participation of mothers.
- *The current measure does not take into account variation in medical costs* across population groups depending on differences in health status and insurance coverage and does not account for rising health care costs as a share of family budgets.
- *The current poverty thresholds use family size adjustments that are anomalous and do not take into account important changes in family situations,* including payments made for child support and increasing cohabitation among unmarried couples.
- *The current poverty thresholds do not adjust for geographic differences in prices across the nation,* although there are significant variations in prices across geographic areas.

In response to these weaknesses, the NAS panel recommended changing the definition of both the poverty thresholds and family resources that are compared with those thresholds to determine poverty status. One of the goals of the NAS panel was to produce a measure of poverty that explicitly accounted for government spending aimed at alleviating the hardship of low-income families. Thus, taking account of tax and transfer policies, such as the food stamp program and the earned income tax credit (EITC), the measure can show the effects of these policies on various targeted subgroups, for example, families with children. The current official measure, which does not explicitly take account of these benefits, yields poverty statistics that are unchanged regardless of many of these policy changes.

In 1999 and in 2001, the Census Bureau released reports that presented a set of experimental poverty measures based on recommendations of the 1995 NAS panel report (Short et al. 1999, Short, 2001). Some additional variations on that measure were included in order to shed light and generate discussion on the various dimensions included in the proposed revision. Comparisons were made across various demographic subgroups in order to illustrate how their poverty rates were affected by the different measures. That work suggested that with these new measures a somewhat different population would be identified as poor than is typically described by the official poverty measure. This new poverty population would consist of a larger proportion of elderly people, working families, and married-couple families than are identified by the official poverty measure.¹

In March of 2010 an Interagency Technical Working Group listed suggestions for a Supplemental Poverty Measure (SPM). The Interagency Technical Working Group was charged with developing a set of initial starting points to permit the U.S. Census Bureau, in cooperation with the Bureau of Labor Statistics (BLS), to produce the SPM that would be released along with the official measure each year. Their suggestions included:

The *SPM thresholds* should represent a dollar amount spent on a basic set of goods that includes food, clothing, shelter and utilities (FCSU), and a small additional amount to allow for other needs (e.g., household supplies, personal care, non-work-related transportation). This threshold should be developed by the Bureau of Labor Statistics with expenditure data for families with exactly two children using Consumer Expenditure Survey data, and it should be adjusted (using a specified equivalence scale) to reflect the needs of different family types and geographic differences in housing costs. Adjustments to thresholds should be made over time to reflect real growth in expenditures on this basic bundle of goods at the 33rd percentile of the expenditure distribution.² For consistency in measurement with resources, the thresholds should include the value of non cash benefits.³

1 These experimental poverty measures have been updated regularly and are available at <http://www.census.gov/hhes/povmeas/methodology/nas/index.html>.

2 Bureau of Labor Statistics (2011, January), Experimental poverty measure website. <http://www.bls.gov/pir/spmhome.htm> (accessed: April, 2011).

3 The thresholds used in this study do not include these values. Research is ongoing to impute values to the CE data for this purpose, see Garner (2011) and Garner and Hokayem (forthcoming).

SPM family resources should be defined as the value of money income from all sources, plus the value of near-money benefits that are available to buy the basic bundle of goods, FCSU, minus necessary expenses for critical goods and services not included in the thresholds. Near-money benefits include nutritional assistance, subsidized housing, and home energy assistance. Necessary expenses that must be subtracted include income taxes, Social Security payroll taxes, childcare and other work-related expenses, child support payments to another household, and contributions toward the cost of medical care and health insurance premiums, or medical out-of-pocket costs (MOOP).⁴

Poverty Measures: Official, Supplemental, and Relative			
	Official Poverty Measure	Supplemental Poverty Measure	Relative Poverty
Measurement Unit	Families and unrelated individuals	All related individuals who live at the same address, any co-resident unrelated children who are cared for by the family (such as foster children), and any cohabitators and their children.	Household
Resource Measure	Gross before-tax money income	Sum of cash income, plus any federal government in-kind benefits that families can use to meet their food, clothing, shelter, and utility needs (FCSU), minus taxes (or plus tax credits), minus work expenses, minus out-of-pocket expenditures for medical expenses.	Disposable Income
Poverty Threshold	Cost of minimum food diet in 1963	The 33 rd percentile of FCSU expenditures of all consumer units with exactly two children	50 % median equivalized disposable income
Threshold Adjustments	Vary by family size and composition	Three parameter equivalence scale Adjust for geographic differences in housing costs using 5 years of ACS data	Square root of household size
Updating thresholds	Consumer Price Index: All items	Five year moving average of expenditures on FCSU	Annual update

This paper presents estimates of the prevalence of poverty in the US, overall and for selected demographic subgroups, for the official and SPM measures. In addition, a third measure is examined for comparison to the SPM. This is a relative poverty measure that is comparable to those used internationally. Relative poverty measures are described in Atkinson et al., (2002) and the second

4 For information see <http://www.census.gov/hhes/povmeas/methodology/supplemental/research.html>.

edition of the Canberra Group Handbook on Household Income Statistics (forthcoming)⁵. The relative measure is most commonly used in developed countries to measure poverty. It uses information about the distribution of household resources and counts as poor those individuals with household income below some percentage of the median of that distribution. The typical resource measure is disposable household income that is equivalized to control for variation in household size. The poverty threshold for this measure, then, represents the central tendency of the resource distribution, and poverty rates based on this measure provide information about the shape and size of the lower tail of that distribution. This measure is presented here to compare measurement properties to those of the SPM.

Poverty Estimates for 2009

The measures presented in this study use the 2010 Current Population Survey Annual Social and Economic Supplement (ASEC) with income information that refers to calendar year 2009.⁶ For the SPM measure, estimates from new questions about child care and medical out-of-pocket expenses (MOOP) are available for the first time and subtracted from income.⁷

The relative measure presented here is based on household disposable income, cash income minus taxes paid. Using income concepts defined by the Canberra Group for disposable income, in kind benefits are not included as income, however, tax credits, such as the EITC are included. Calculations follow recent OECD publications using the square root of family size as an equivalence scale and setting the poverty threshold at 50 percent of the median. That threshold is \$14,451 per adult equivalent for 2009.

The official 'Orshansky' thresholds are used for the official measure, however, unlike published estimates, unrelated individuals under the age of 15 are included here in the poverty universe. For the SPM they are assumed to share resources with the household reference person. The SPM threshold used in this study is a 2009 threshold based on out-of-pocket spending on food, clothing, shelter, and utilities (FCSU). Thresholds use 2005 – 2009 quarterly data from the Consumer Expenditure Survey (CE). Three housing status groups were determined and their expenditures on shelter and utilities produced within the 30-36th percentiles of FCSU expenditures. The three groups are: owners with mortgages, owners without mortgages, and renters.⁸ For consistency in measurement with the resource measure, the thresholds should include the value of non-cash benefits, though additional research continues on appropriate methods. The thresholds used here only include the value of SNAP benefits. The American

5 The handbook was prepared by an international Task Force operating under the auspices of the Conference of European Statisticians (CES) and sponsored by the United Nations Economic Commission for Europe (UNECE).

6 The data in this report are from the Annual Social and Economic Supplement (ASEC) to the 2010 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 at <www.census.gov/hhes/www/p60_236sa.pdf>.

7 Documentation on the quality of these data is available at <http://www.census.gov/hhes/povmeas/methodology/supplemental/research.html>

8 In this measure, subsidized renters are assigned the same threshold as renters and the subsidy that helps them meet that rent is added to income.

Community Survey (ACS) is used to adjust the FCSU thresholds for differences in prices across geographic areas.

All three measure use different units of analysis. The official measure of poverty uses the census defined family. For the SPM, the ITWG suggested that the “family unit” should include all related individuals who live at the same address, as well as any co-resident unrelated children who are cared for by the family (such as foster children), and any cohabitators and their children. This definition corresponds broadly with the unit of data collection (the consumer unit) that is employed for the CE data used to calculate poverty thresholds, and are referred to as *SPM Resource Units*. The relative measure shown here uses the household as the unit of analysis. Selection of the unit of analysis for poverty measurement implies assumptions that members of that unit share income or resources with one another.

Thresholds are adjusted for the size and composition of the SPM resource unit relative to the two-adult-two-child threshold using an equivalence scale.⁹ The relative measure employs the square root of household size as is generally done in OECD publications. The official measure adjusts thresholds based on family size, number of children and adults, as well as whether or not the household is elderly. Orshansky set the official thresholds for the elderly below those of other householders.

Two Adult, Two Child Poverty Thresholds: 2009

Official	\$21,756
Relative	\$28,901
Research Supplemental Poverty Measure*	
Not accounting for housing status	\$23,854
Owners with a mortgage	\$24,450
Owners without a mortgage	\$20,298
Renters	\$23,874

*Garner and Hokayem, July, 2011.

Following the recommendations of the NAS report and the ITWG, SPM family resources are estimated as the sum of cash income, plus any federal government in-kind benefits that families can use to meet their food, clothing, shelter, and utility needs, minus taxes (plus tax credits), minus work expenses, minus out-of-pocket expenditures for medical expenses. The research SPM measure presented in this study adds the value of non-cash benefits and subtracts necessary expenses, such as taxes, child care expenses, and medical out-of-pocket expenses. The text box summarizes the additions and subtractions for the SPM measure; descriptions are in the appendix.

Table 1 shows poverty rates for the three measures for a number of population subgroups. The percent of the population that was poor using the official measure for 2009 was 14.3 percent (DeNavas et al.,

⁹ See Betson 1996 and appendix for description of the three-parameter scale.

2010). For this study, including unrelated individuals under the age of 15 in the universe results in a rate of 14.5 percent. The research SPM yields a rate of 15.8 percent for 2009. While SPM poverty thresholds are higher, other parts of the measure also contribute to differences in the estimated prevalence of poverty in the U.S. (see Short, 2011). The poverty rate under the relative measure is 19.5 percent.

Resource Estimates

$$\text{SPM Resources} = \text{Money Income from All Sources}$$

Plus:

Supplemental Nutritional Assistance (SNAP)
Free and reduced price school lunches
Supplementary Nutrition Program for Women
Infants and Children (WIC)
Housing subsidies
Low-Income Home Energy Assistance

Minus:

Taxes
Expenses Related to Work
Child Care Expenses*
Medical Out-of-pocket Expenses (MOOP)*
Child Support Paid*

*Items for which data from new CPS ASEC questions are used in the 2009 SPM estimates.

In general, SPM poverty rates are higher than official poverty rates. Poverty rates are highest for the relative measure.¹⁰ Comparing the SPM to the official shows that differences for subgroups include lower poverty rates for children, individuals included in new family units, Blacks, renters, those living in non metropolitan areas, in the Midwest, and those in families covered by public health insurance. All other groups have higher poverty rates using the SPM measure compared with the official measure.¹¹

Comparing the SPM to the relative measure finds almost all rates higher under the relative measure. A few are not statistically different including those for naturalized citizens, owners with mortgages, those residing in the West region and individuals with private health insurance. Note the high poverty rates for the elderly under the relative measure as well as the SPM measure compared with the official. This partially reflects that the official measure thresholds are set lower for elderly households while the other two thresholds do not vary by age.

Table 2 compares the distribution of people in the total population to the distribution of people classified as poor using the three measures. The elderly as a share of people in poverty is higher when the SPM is used, 12.5 percent compared to 7.8 percent with the official measure. Under the relative measure the share of the elderly is even higher, 12.8 percent. Use of the SPM also increases the share of the poor who are non-elderly adults, in married-couple families, with male householders, Whites and other races, Hispanics, the foreign born, homeowners, in suburban areas, in the Northeast and the

¹⁰ Poverty rates for the SPM and the relative measures are statistically different for naturalized citizens, owners with mortgages, residents in the West, and those with private health insurance.

¹¹ Official and SPM poverty rates for people in female householder families or groups, and for people residing in the South are not statistically different.

West, those with private insurance and the uninsured compared with the official measure. The share of the poor living in cohabiting units is reduced by about 8 percentage points for both the SPM and the relative measure.¹² Both measures include members with income who are not included in the family definition employed by the official measure.

The share of children, those in female householder families, Blacks, native born, renters, and people with only public insurance is smaller using the SPM, as are the shares of those living outside metropolitan areas and those living in the Midwest and the South compared to the official measure. The shares are higher with the SPM for those residing in the suburbs and the Northeast and West regions compared to the relative and the official measures, as neither of those measures adjusts for geographic price differences.¹³

The official poverty measure does not account for taxes or non-cash benefits aimed at improving the economic situation of the poor. The relative measure, using disposable income, does include the effects of tax credits, such as the EITC, but does not incorporate the value of in-kind benefits. Besides taking account of necessary expenses, the SPM includes taxes and non-cash transfers allowing us to examine the effects of these anti-poverty programs. Table 3 examines the effect that each addition and subtraction has on the SPM poverty rate, holding all else the same and assuming no behavioral changes, for all people and for children and the elderly. Removing one item from the calculation of family resources and re-calculating poverty rates shows that the EITC reduces poverty rates overall; without including the EITC in resources the poverty rate for all people would have been 17.7 percent rather than 15.8 percent, all else constant. For children, accounting for the EITC results in lower poverty rates, from 22.0 percent to 17.9 percent. WIC lowers poverty rates of children slightly.

Table 3 also shows the effect on poverty rates of subtracting necessary expenses. For example, for all people subtracting MOOP from income raises poverty rates from 12.4 percent to 15.8 percent. Subtracting MOOP also raises the poverty rates of children and the elderly. For the elderly, SPM rates increase by about 7 percentage points with the subtraction of MOOP from income.

Comparing the distribution of income with that of SPM resources also allows an examination of the effects of taxes and transfers. Table 4 shows the distribution of income to poverty threshold ratios for various groups. Dividing by the poverty threshold controls income by unit size and composition, though it does so differently across the three measures. Note that the relative measure is already equivalized by household size. In general the comparison suggests that there is a smaller percentage of the population in the bottom of the distributions using the SPM. For most groups, including the value of targeted non-cash benefits have reduced the percent of the population in the lowest category. This is true for the groups shown here, except for the elderly. The elderly show both a higher percent below 0.5 of the poverty line with the SPM. As shown earlier, many of the non-cash benefits included in the SPM are not targeted to the elderly population. Transfers received by the elderly are in cash, especially Social Security payments, and are captured in all three measures. Note that the percent of the elderly with

12 The share of the poor for the SPM and the relative measures are not statistically different for this group.

13 The share of the poor for the SPM and the official measure are not statistically different for those in metropolitan areas, and for the official and relative measure for those residing in the Northeast and the Midwest.

cash income below half their threshold is lower than that of other age groups under the official measure. This is also true using the relative measure. Subtracting MOOP and adding noncash benefits in the SPM eliminates statistical differences across the three age groups. On the other hand, both the SPM and the relative measures show smaller percentages with resources 4 or more times the thresholds. Both of these measures use after-tax income, compared with the official that does not, bringing down the value of income from the highest categories.

One other way to capture the differences between the measures is to examine mean income or resource gaps. Poverty gaps measure the depth of poverty by showing the mean of the differences between the poverty threshold and income for those who are poor. If income or SPM resources are negative, the deficit is set equal to the threshold, suggesting that no deficit may exceed the measure of need represented by the basic bundle of goods. This exercise is of interest because we observe that there are many more negative SPM resources than there are negative values of cash income. This is an artifact of the subtraction of necessary expenses from income, primarily medical out-of-pocket spending. There are 166,000 families with negative cash income and 2.1 million with negative SPM resources. It appears that resources are likely to be negative as a result of subtracting MOOP. Examining a measure without MOOP subtracted yields about 254,000 units with negative SPM resources. That suggests about 1.8 million families with expenses that exceed income after subtracting MOOP. We might suppose that these families would meet these expenses by drawing down assets or incurring debt.

Table 5 shows calculated mean income/resource gaps for those classified as poor under each measure. Overall, poverty gaps are greatest using the relative measure and lowest using the SPM. This pattern is generally true except for nonelderly adults and the elderly, where the official estimates are lowest. The SPM has the highest gap for the elderly, primarily because of the effect of MOOP. Mean income deficits for Whites, Blacks, and Hispanics are highest using the relative measure. Obviously, the poverty gaps are a function of the poverty threshold. As the relative measure has the highest threshold, the size of the gaps is also higher. This leads us to examine an additional measure in order to compare gaps across the three measures.

Following previous work on experimental poverty measures (Short et al., 1998), we can look closer at the average poverty gaps and the distribution of income or SPM resources among those in the poverty population by using a different index. Foster et al. (1984) proposed a class of poverty measures (the Foster-Greer-Thorbecke (FGT) indexes) that examines these elements more closely. These measures take the form

$$P_{\alpha}(y, z, \alpha) = \frac{1}{n} \sum_{i=1}^q \left(\frac{z_i - y_i}{z_i} \right)^{\alpha}$$

where P is the FGT poverty measure, α is a measure of poverty aversion (a larger α gives greater emphasis to the poorest poor), Y is a vector of income in increasing order, and z_i is the poverty line for person i . The index is calculated where the poverty gap is positive, or $(z_i - y_i) > 0$.

This class of measures has several attractive features. First it collapses to the head count ratio if $\alpha=0$ and to a normalized poverty gap if $\alpha=1$. Normalizing the gaps controls for the problem encountered above and allows us to compare gaps across the three measures. When $\alpha=2$ the index is sensitive to the distribution of incomes among the poor. As α increases, more weight is placed on those households or individuals with the lowest incomes. Thus, the weights are based on a notion of relative deprivation experienced by poorer households.¹⁴

Table 6 lists these poverty statistics for the official, the SPM, and the relative measure. As in our calculation of poverty gaps we set all negative incomes to zero.¹⁵ The FGT poverty measures, computed for persons, show the poverty rates or headcount ratios we have presented earlier. The normalized poverty gap, FGT1, is lower for the SPM than either of the other two measures reflecting the enhanced income for those at the bottom of the distribution by including noncash benefits. Of the three measures only the SPM accounts for these benefits. The table also shows normalized poverty gaps by age group. Using these measures, gaps are lowest for children and non-elderly adults with the SPM measure. Gaps are lowest for the elderly under the official measure, and highest for the elderly using the relative measure. The measure of severity, FGT2, suggests a lower concentration of poor at the very bottom of the distribution using the SPM as well for all persons, children, and non-elderly adults. This result suggests that the intensity of poverty is softened by the addition of in-kind transfers to the income of the needy for these groups, and that this effect is captured in the SPM, and not in the official or relative poverty measures presented here.

Summary

This paper laid groundwork for preparing estimates of a Supplemental Poverty Measure for the U.S. at the Census Bureau. Estimates presented here are based on the CPS 2010 ASEC and refer to calendar year 2009.¹⁶ Results showed poverty rates for the official poverty measure, the *research SPM*, and a *relative measure of poverty*. The *research SPM* resulted in slightly higher poverty rates than the official measure for most groups, the relative poverty rates were the highest. In addition, the distribution of

14 Joliffe et al., 2003, used FGT indexes to examine the effect of SNAP benefits on child poverty. Finding that poverty rates for children were not much reduced by including food stamp benefits with cash income, they examined the resulting depth and severity of poverty using these indexes. They showed that accounting for food stamps, the average decline in the poverty gap index was 20 percent while the decline in the squared poverty gap was 28 percent. This is so because while SNAP benefits often did not bring children over the poverty line, it did bring their income closer to that line. Their study suggested that examining only poverty rates does not show the important impact of in kind benefits on poverty

15 Including negative resource amounts in FGT index calculations yield a normalized gap that is not statistically different from the official measure, but a higher FGT2.

16 Beginning in 2010, new questions were included in the CPS ASEC to collect information about child care expenses while parents work and medical out-of-pocket expenditures, child support paid to other households, and whether or not a homeowner had a mortgage. In this paper, the values for these items are incorporated in the estimates presented here.

people in the total population and the distribution of people classified as in poverty using the two measures were examined.

Other findings show that the SPM allows us to examine the effects of taxes and in kind transfers on the poor and on important subgroups of the poverty population. As such, there are lower percentages of the SPM poverty populations in the very high and very low resource categories than we find using the other measures. Because noncash benefits help those in extreme poverty, there were lower percentages of individuals with resources below half the SPM threshold. FGT indexes showed lower poverty gaps and poverty severity using the SPM than either the official or the relative measures. These findings are similar to those reported in earlier work using a variety of experimental poverty measures that followed recommendations of the NAS poverty panel (Short, 1999, 2000, and 2001).

Future research

This study presented estimates of the poverty prevalence in the U.S. employing research on the SPM. Research on this measure continues in a number of important dimensions. These areas include taking account of in kind benefits in the thresholds, examining the effect of adjusting medical expenses for the uninsured, incorporating geographical differences in costs relating to transportation, and estimating these measures in other surveys that include the SIPP and the ACS.

The ITWG suggested that research be conducted examining the medical expenses of the uninsured. Caswell and Short (forthcoming) examine this issue. Including non cash benefits in thresholds is also being further explored by Garner and Hokayem (forthcoming).

The ITWG also suggested improving the method used here to assign work related expenses, particularly related to commuting costs. Other researchers have suggested that geographic adjustments for differences in housing costs should also control for differences in transportation costs. Rapino, McKenzie, and Marley (forthcoming) examine this issue.

In their 1995 report, the NAS panel recommended that the Census Bureau should use the SIPP for estimating resources for the new poverty measure. As they noted, the SIPP is well designed for this purpose. Earlier work (Short, 2003) employed these data for such estimates. This research shed light on estimates of resources based on the CPS ASEC and the inherent limitations in the use of those data. Updating this work will be part of the research design for the SPM measure.

Other lines of research will include incorporating an SPM measure using the ACS. While more restricted in the available information than the CPS ASEC, these data allow estimates for smaller areas of geography than other data sets. The goal in this work is to prepare a limited but nationally consistent SPM measure for smaller localities.

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(Many of the unpublished Poverty Measurement working papers and presentations listed here are available at: <http://www.census.gov/hhes/povmeas/publications/working.html>)

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**Table 1: Percent of People in Poverty by Different Poverty Measures:
2009**

	Number* (in thousands)	Official*		Research SPM		Relative Poverty	
		(percent below threshold)					
		Est.	s.e.†	Est.	s.e.†	Est.	s.e.†
All People	304,280	14.5	0.2	15.8	0.2	19.5	0.2
Children	75,040	21.2	0.3	17.9	0.3	25.9	0.4
Nonelderly Adults	190,627	13.0	0.2	14.9	0.2	16.9	0.2
Elderly	38,613	8.9	0.3	15.6	0.4	19.6	0.4
In married couple family	186,618	7.2	0.2	9.9	0.2	11.9	0.2
In female householder family	60,533	27.9	0.5	28.6	0.5	22.6	0.5
In male householder family	31,816	17.4	0.4	22.2	0.5	39.0	0.5
In new SPM family groups	25,314	32.3	0.6	20.2	0.7	25.1	0.7
White, not Hispanic	197,436	9.5	0.2	10.7	0.2	13.2	0.2
Black, not Hispanic not	36,938	25.7	0.6	24.0	0.6	34.1	0.7
Other	21,005	15.7	0.7	18.4	0.6	20.8	0.6
Hispanic Origin	48,901	25.4	0.5	28.6	0.6	33.2	0.6
Nativity							
Native born	266,674	13.8	0.2	14.3	0.2	18.4	0.2
Foreign born	37,606	19.1	0.4	26.1	0.5	26.9	0.5
Naturalized citizen	16,024	10.8	0.4	17.5	0.6	17.8	0.6
Not a citizen	21,581	25.2	0.6	32.4	0.7	33.7	0.7
Tenure							
Owner	208,483	7.5	0.2	9.8	0.2	11.3	0.2
Owner/Mortgage	148,818	5.8	0.2	8.3	0.2	8.1	0.2
Owner/No mortgage/rentfree	63,307	12.5	0.3	14.0	0.4	20.0	0.3
Renter	92,155	29.8	0.4	29.0	0.4	37.4	0.4
Residence							
Central city	97,856	18.8	0.4	20.3	0.4	24.4	0.4
Suburb	158,827	11.1	0.2	13.5	0.3	15.3	0.3
Not metro	47,897	16.7	0.4	13.9	0.5	23.4	0.5
Region							
Northeast	54,654	12.3	0.4	14.1	0.4	16.7	0.4
Midwest	66,096	13.4	0.3	12.5	0.3	18.2	0.3
South	112,312	15.8	0.3	16.3	0.3	21.8	0.3
West	71,218	15.0	0.3	19.2	0.4	19.3	0.4
Health Insurance coverage							
With private insurance	196,245	4.5	0.1	7.1	0.1	7.0	0.1
With public, no private insurance	59,045	36.4	0.4	31.5	0.5	47.6	0.5
Not insured	48,984	28.0	0.5	31.4	0.5	35.5	0.5

Source: U.S. Census Bureau, Current Population Survey, 2010 Annual Social and Economic Supplement.
For information on confidentiality protection, sampling error, nonsampling error, and definitions,
see http://www.census.gov/hhes/www/p60_238sa.pdf [PDF].

* Includes unrelated individuals under 15 years of age.

† s.e. obtained using replicate weights (Fay's Method)

Table 2: Distribution of People in Total and Poverty Population: 2009

	Total Population		Official*		Research SPM		Relative Poverty	
	Est.	s.e.†	Est.	s.e.†	Est.	s.e.†	Est.	s.e.†
People	304,280	74.7	44,029	488.0	47,945	537.0	59,284	574.0
	(percent of column total)							
Children	24.7	0.0	36.1	0.3	28.1	0.3	32.8	0.3
Nonelderly Adults	62.6	0.0	56.1	0.3	59.4	0.3	54.4	0.3
Elderly	12.7	0.0	7.8	0.2	12.5	0.3	12.8	0.2
In married couple family	61.3	0.2	30.6	0.6	38.5	0.6	37.4	0.6
In female householder family	19.9	0.2	38.3	0.6	36.1	0.6	39.8	0.6
In male householder family	10.5	0.1	12.6	0.3	14.7	0.3	12.2	0.3
In new SPM family groups	8.3	0.1	18.6	0.5	10.7	0.4	10.7	0.5
White, not Hispanic	64.9	0.0	42.7	0.6	44.2	0.5	44.0	0.5
Black, not Hispanic	12.7	0.0	21.6	0.5	18.5	0.4	21.2	0.4
Other	7.6	0.0	7.5	0.3	8.1	0.3	7.4	0.3
Hispanic Origin	16.1	0.0	28.3	0.6	29.2	0.5	27.4	0.5
Nativity								
Native born	87.6	0.1	83.7	0.4	79.6	0.4	83.0	0.4
Foreign born	12.4	0.1	16.3	0.4	20.4	0.4	17.1	0.4
Naturalized citizen	5.3	0.1	3.9	0.2	5.9	0.2	4.8	0.2
Not a citizen	7.1	0.1	12.3	0.4	14.6	0.4	12.3	0.4
Tenure								
Owner	68.5	0.3	35.3	0.6	42.5	0.6	39.7	0.6
Owner/Mortgage	48.9	0.3	19.5	0.5	25.8	0.5	20.4	0.5
Owner/No mortgage/rentfree	20.8	0.2	17.9	0.6	18.5	0.5	21.4	0.5
Renter	30.3	0.3	62.5	0.6	55.7	0.6	58.2	0.6
Residence								
Central city	32.2	0.4	41.8	0.9	41.5	0.7	40.2	0.7
Suburb	52.1	0.5	40.0	0.9	44.7	0.8	40.9	0.8
Not metro	15.7	0.5	18.2	0.8	13.8	0.6	18.9	0.6
Region								
Northeast	18.0	0.0	15.3	0.4	16.1	0.4	15.4	0.4
Midwest	21.7	0.0	20.2	0.5	17.3	0.4	20.3	0.4
South	36.9	0.1	40.3	0.6	38.1	0.5	41.2	0.5
West	23.4	0.0	24.2	0.5	28.5	0.5	23.1	0.5
Health Insurance coverage								
Member with private insurance	64.5	0.1	20.0	0.5	29.1	0.5	23.3	0.4
With public, no private insurance	19.4	0.2	48.8	0.5	38.8	0.5	47.4	0.4
Not insured	16.1	0.2	31.2	0.5	32.1	0.4	29.3	0.4

Source: U.S. Census Bureau, Current Population Survey, 2010 Annual Social and Economic Supplement.

For information on confidentiality protection, sampling error, nonsampling error, and definitions, see http://www.census.gov/hhes/www/p60_238sa.pdf [PDF].

* Includes unrelated individuals under 15 years of age.

† s.e. obtained using replicate weights (Fay's Method)

Table 3. Effective of Individual Elements on SPM poverty Rates:
2009

	All persons		Children		Elderly	
	Est.	s.e.†	Est.	s.e.†	Est.	s.e.†
Research SPM	15.8	0.2	17.9	0.3	15.6	0.4
EITC	17.7	0.2	22.0	0.3	15.7	0.4
SNAP	17.3	0.2	20.8	0.3	16.2	0.4
Hsg subsidy	16.6	0.2	19.3	0.3	16.6	0.4
School lunch	16.1	0.2	18.8	0.3	15.6	0.4
WIC	15.9	0.2	18.1	0.3	15.6	0.4
LIHEAP	15.8	0.2	18.0	0.3	15.6	0.4
Child support	15.6	0.2	17.8	0.3	15.5	0.4
FICA	14.3	0.2	16.0	0.3	15.3	0.4
Work expense	14.0	0.2	15.5	0.3	15.2	0.4
MOOP	12.4	0.2	15.0	0.3	8.5	0.3

Source: U.S. Census Bureau, Current Population Survey, 2010 Annual Social and Economic Supplement.

For information on confidentiality protection, sampling error, nonsampling error, and definitions, see http://www.census.gov/hhes/www/p60_238sa.pdf [PDF].

† s.e. obtained using replicate weights (Fay's Method)

Table 4: Percent of People by Ratio of Income/Resources to Poverty Threshold, 2009

	less than 0.5		0.5 to 0.99		1.0 to 1.99		2.0 to 3.99		4 or more	
	Est.	s.e.†	Est.	s.e.†	Est.	s.e.†	Est.	s.e.†	Est.	s.e.†
Official*										
All People	6.4	0.1	8.1	0.1	18.7	0.2	30.7	0.2	36.2	0.2
Children	9.8	0.2	11.4	0.2	21.4	0.3	30.3	0.3	27.2	0.3
Nonelderly Adults	5.8	0.1	7.1	0.1	16.4	0.2	30.0	0.2	40.7	0.3
Elderly	2.6	0.2	6.3	0.2	24.8	0.4	35.1	0.5	31.2	0.4
White, not Hispanic	4.2	0.1	5.3	0.1	15.4	0.2	31.6	0.2	43.5	0.3
Black, not Hispanic not	12.0	0.4	13.7	0.5	24.5	0.5	29.1	0.6	20.8	0.6
Hispanic Origin	10.6	0.4	14.9	0.4	28.3	0.5	29.6	0.5	16.7	0.4
SPM										
All People	5.2	0.1	10.5	0.2	31.7	0.2	35.1	0.2	17.4	0.2
Children	5.1	0.2	12.9	0.3	38.4	0.3	32.3	0.4	11.3	0.2
Nonelderly Adults	5.3	0.1	9.7	0.1	29.0	0.2	36.6	0.2	19.5	0.2
Elderly	5.2	0.2	10.4	0.3	32.0	0.4	33.7	0.5	18.7	0.4
White, not Hispanic	4.0	0.1	6.8	0.1	27.0	0.2	40.0	0.3	22.2	0.3
Black, not Hispanic not	7.0	0.3	17.0	0.5	41.4	0.7	27.0	0.6	7.6	0.3
Hispanic Origin	8.2	0.3	20.4	0.5	43.2	0.6	22.7	0.5	5.4	0.2
Relative										
All People	6.8	0.1	12.6	0.1	30.5	0.2	36.0	0.2	14.0	0.2
Children	10.4	0.3	15.5	0.3	32.8	0.4	31.6	0.4	9.7	0.2
Nonelderly Adults	6.0	0.1	10.9	0.1	28.2	0.2	38.7	0.3	16.1	0.2
Elderly	4.0	0.2	15.7	0.4	37.4	0.5	31.3	0.4	11.6	0.3
White, not Hispanic	4.2	0.1	9.1	0.2	28.8	0.3	40.7	0.3	17.3	0.2
Black, not Hispanic not	14.0	0.5	20.1	0.6	34.0	0.6	26.1	0.6	5.8	0.3
Hispanic Origin	11.6	0.4	21.6	0.6	36.2	0.6	25.3	0.5	5.3	0.2

Source: U.S. Census Bureau, Current Population Survey, 2010 Annual Social and Economic Supplement.

For information on confidentiality protection, sampling error, nonsampling error, and definitions, see http://www.census.gov/hhes/www/p60_238sa.pdf [PDF].

* Includes unrelated individuals under 15 years of age.

† s.e. obtained using replicate weights (Fay's Method)

Table 5: Poverty Gaps*: 2009 (dollars)

	Official		Research SPM		Relative measure	
	Est.	s.e.†	Est.	s.e.†	Est.	s.e.†
SPM Families	9,017	87.2	8,420	95.7	10,819	95.9
Children	11,051	134.4	9,450	147.6	13,449	141.7
Nonelderly Adults	8,285	83.0	8,394	100.1	10,359	101.1
Elderly	4,855	140.9	6,237	133.3	6,025	117.5
Race/ethnicity						
White, not hispanic	7,872	103.5	7,592	117.9	9,311	134.9
Black , not hispanic	9,582	192.9	7,782	205.1	11,898	207.6
Hispanic origin	10,062	205.0	9,692	211.0	12,088	189.8

Source: U.S. Census Bureau, Current Population Survey, 2010 Annual Social and Economic Supplement.
For information on confidentiality protection, sampling error, nonsampling error, and definitions,
see http://www.census.gov/hhes/www/p60_238sa.pdf
[PDF].

† s.e. obtained using replicate weights (Fay's Method)

* Gaps are calculated across individuals (see Atkinson p.115)

Table 6: FGT Indexes

	Official*		Research SPM		Relative Poverty	
	Est.	s.e.†	Est.	s.e.†	Est.	s.e.†
FGT0: Head count index	14.5	0.2	15.8	0.2	19.5	0.2
FGT1: Poverty gap normalized	7.1	0.1	6.0	0.1	8.1	0.1
FGT2: Squared poverty gap	5.1	0.1	4.0	0.1	5.0	0.1
Children						
FGT0: Head count index	21.2	0.3	17.9	0.3	25.9	0.4
FGT1: Poverty gap normalized	10.5	0.2	7.9	0.2	11.5	0.2
FGT2: Squared poverty gap	7.4	0.2	5.2	0.1	7.2	0.2
Nonelderly Adults						
FGT0: Head count index	13.0	0.2	14.9	0.2	16.9	0.2
FGT1: Poverty gap normalized	6.5	0.1	5.7	0.1	7.1	0.1
FGT2: Squared poverty gap	4.7	0.1	3.9	0.1	4.4	0.1
Elderly						
FGT0: Head count index	8.9	0.3	15.6	0.4	19.7	0.4
FGT1: Poverty gap normalized	3.3	0.1	3.8	0.2	6.4	0.2
FGT2: Squared poverty gap	2.2	0.1	2.4	0.1	3.3	0.1

Source: U.S. Census Bureau, Current Population Survey, 2010 Annual Social and Economic Supplement.

For information on confidentiality protection, sampling error, nonsampling error, and definitions,

see http://www.census.gov/hhes/www/p60_238sa.pdf [PDF].

† s.e. obtained using replicate weights (Fay's Method)

APPENDIX – SPM METHODOLOGY

Poverty Thresholds

The SPM threshold used here is based on out-of-pocket spending on food, clothing, shelter, and utilities (FCSU) and a multiplier of 1.2 to account for additional basic needs. Five years of Consumer Expenditure Survey (CE) data are used. The estimation sample to determine the 33rd percentile of FCSU expenditures is composed of all consumer units that include exactly two children, related to the family or not. Unmarried partners and those who share expenses with others in the consumer unit are also included. FCSU expenditures are converted to adult equivalent values before the 33rd percentile, based on the average of expenditures in the 30th to the 36th percentile range, is estimated (Garner, 2010). A three-parameter equivalence scale (See: Betson 1996, Johnson et al. 1995, Short et al., 1999, Short 2001) is applied to the 33rd percentile value, times 1.2, to produce an overall FCSU threshold for a unit composed of two adults and two children.

To account for differences in housing costs, a base threshold for all consumer units with two children was calculated, and then the overall shelter and utilities portion was replaced by what consumer units with different housing statuses spend on shelter and utilities. Three housing status groups were determined and their expenditures on shelter and utilities produced within the 30-36th percentiles of FCSU expenditures. The three groups are: owners with mortgages, owners without mortgages, and renters. New questions in the 2010 ASEC are used to ascertain the presence of a mortgage (Semega and Sarkar, 2010.). These data and housing tenure information are used to assign appropriate thresholds to each household.

For consistency in measurement with the resource measure, the thresholds should include the value of non-cash benefits. The Census Bureau has a long history and experience in collecting and imputing in-kind benefits to add to income (U.S. Bureau of the Census, 1982). However, this is not the case for the BLS and the Consumer Expenditure Survey. The SPM thresholds used here only included the value of food stamps as they are implicitly collected in food expenditures. The value of other in-kind programs of interest to the Interagency Technical Working Group, like school lunch, WIC, rent subsidies, and energy assistance are not available in the CE. Whether a consumer unit lives in subsidized housing or participates in another government program that results in reduced rent is collected in the CE. Values for all but energy assistance imputed in the thresholds are the subject of ongoing research, see Garner and Hokayem (forthcoming).

Equivalence Scales

The ITWG guidelines state that the “three-parameter equivalence scale” is to be used to adjust reference thresholds for the number of adults and children. The three-parameter scale allows for a different adjustment for single parents (Betson, 1996). This scale has been used in several BLS and Census Bureau studies (for example, see: Garner and Short 2010ab; Johnson et al., 1997; Short et al., 1999; Short 2001). The three-parameter scale is calculated in the following way:

One and two adults: $scale = (adults)^{0.5}$

Single parents: $scale = (adults + 0.8*firstchild + 0.5*otherchildren)^{0.7}$

All other families: $scale = (adults + 0.5 * children)^{0.7}$

In the calculation used to produce thresholds for two adults, the scale is set to 1.41. The economy of scales factor is set at 0.70 for other family types. The NAS Panel recommended a range of 0.65 to 0.75.

Geographic Adjustments

The American Community Survey (ACS) is used to adjust the FCSU thresholds for differences in prices across geographic areas. The geographic adjustments are based on five-year ACS estimates of median gross rents for two-bedroom apartments with complete kitchen and plumbing facilities (Renwick, 2009 and 2011.) Separate medians were estimated for each of the 264 metropolitan statistical areas (MSAs) large enough to be identified on the public use version of the CPS ASEC file. This results in 358 adjustment factors. For each state, a median is estimated for all non-metro areas (48), for each MSA with a population above the CPS ASEC limit (264), and for a combination of all other metro areas within a state (46).

Unit of analysis

The ITWG suggested that the “family unit” include all related individuals who live at the same address, any co-resident unrelated children who are cared for by the family (such as foster children¹⁷), and any cohabitators and their children. Similar units were developed and analyzed showing that a broadening of the unit definition generally resulted in lower poverty rates (Short, 2009). Additional information on these units is documented by Kreider 2010 and Provencher 2010. This definition corresponds broadly with the unit of data collection (the consumer unit) that is employed for the CE data that are used to calculate poverty thresholds. These units are used here and will be used for the proposed SPM. They are referred to as *SPM Resource Units*.¹⁸

About 7 percent of units change, including units that added a cohabitor, an unrelated individual under 15, or an unmarried parent of a child in the family. Note that some units change for more than one of these reasons. Further, some of the weighting differs due to forming these units of analysis. For all new family units that have a set of male/female partners, the female person’s weight is used as the SPM family weight. For all other new units there is no change.¹⁹

Noncash benefits

Supplemental Nutrition Assistance Programs (SNAP)

SNAP benefits (formerly known as food stamps) are designed to allow eligible low-income households to afford a nutritionally adequate diet. Households who participate in the SNAP program are assumed to devote 30 percent of their countable monthly cash income to the purchase of food, and SNAP benefits make up the remaining cost of an adequate low-cost diet. This amount is set at the level of the U.S. Department of Agriculture’s Thrifty Food Plan. In the CPS, respondents report if anyone in the

¹⁷ Foster children up to the age of 22 are included in the new unit.

¹⁸ Provencher, 2011.

¹⁹ Appropriate weighting of these new units is an area of additional research at the Census Bureau.

household ever received SNAP benefits in the previous calendar year and if so, the face value of those benefits. The annual household amount is prorated to SPM Resource Units within each household.

School meals

These programs offer 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 federal poverty guidelines, and a subsidized meal for all other children. In the CPS the reference person is asked how many children ‘usually’ ate a complete lunch, and if it was a free or reduce-priced school lunch. Since we have no further information, the value of school meals is based on the assumption that the children received the lunches every day during the last school year. Note that this method may overestimate the benefits received by each family. To value benefits we obtain amounts on the cost per lunch from the Department of Agriculture Food and Nutrition Service that administers the school lunch program. There is no value included for school breakfast.²⁰

Supplementary Nutrition Program for Women Infants and Children (WIC)

This 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 5. Incomes must be at or below 185 percent of the poverty guidelines and participants 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. There are questions on current receipt of WIC in the CPS. Lacking additional information, we assume 12 months of participation and value the benefit using program information obtained from the Department of Agriculture. As with school lunch above, assuming year-long participation overestimates the value of WIC benefits received by a given SPM family.

LIHEAP

This program provides three 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 payments, vendor payments, two-party checks, vouchers/coupons, and payments directly to landlords. The CPS asks if, since October 1 of the previous year, the reference person received help with heating costs and, if yes, the amount received.²¹ Many households receive both a “regular” benefit and one or more crisis or emergency benefits. Additionally, since LIHEAP payments are often made directly to a utility company or fuel oil vendor, many households may have difficulty reporting the precise amount of the LIHEAP payment made on their behalf. The CPS does not capture assistance for

20 In the SIPP respondents report the number of breakfasts eaten by the children per week, similar to the report of school lunches. Calculating a value for this subsidy in the same way as was done for the school lunch program, yielded an amount of approximately \$2.8 billion for all families in the SIPP for the year 2004. For information on confidentiality protection, sampling error, nonsampling error, and definitions, for the 2004 Survey of Income and Program Participation see <http://www.census.gov/apsd/techdoc/sipp/sipp.html>.

21 Beginning in ASEC 2011, the question on energy assistance will ask for information about the entire year.

cooling paid in the summer months nor emergency benefits paid after the February/March/April survey date.

Housing Assistance

Households can receive housing assistance from a plethora of 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 tenant-based (vouchers). The value of housing subsidies is estimated as the difference between the “market rent” for the housing unit and the total tenant payment. 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). For each household, an attempt was made to match on state, CBSA (Core Based Statistical Area), and household size.²² 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.²³ See Johnson et al., (2010) for more details on this method. Initially subsidies are estimated at the household level. If there is more than one SPM family in a household, then the value of the subsidy is prorated based on the number of people in the SPM family relative to the total number of people in the household.

Housing subsidies help families pay their rent and as such are added to income for the SPM. However, there is general agreement that, while the value of a housing subsidy can free up a family’s income to purchase food and other basic items, it will only do so to the extent that it meets the need for shelter. Thus, the values for housing subsidies included as income are limited to the proportion of the threshold that is allocated to housing costs. The subsidy is capped at the housing portion of the appropriate threshold MINUS the total tenant payment.

22 HUD operates two major housing assistance programs: public housing and tenant-based or voucher programs. Since the HUD administrative data only include estimates of gross or contract rent for tenant-based housing assistance programs, the contract rents assigned to CPS ASEC households living in public housing are adjusted by a factor of 767/971. This adjustment factor was derived from data published in the “Picture of Subsidized Households: 2008” which estimates the average tenant payment and the average subsidy by type of assistance. The average contract rent would be the sum of these two estimates, $\$324 + \$647 = \$971$ for tenant-based and $\$255 + \$512 = \$767$ for public housing.

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

23 HUD regulations define “adjusted household income” as cash income excluding income from certain sources minus numerous deductions. Three of the income exclusions can be identified from the CPS ASEC: income from the employment of children, student financial assistance, and earnings in excess of \$480 for each full-time student 18 years or older. Deductions which can be modeled from the CPS ASEC include: \$480 for each dependent, \$400 for any elderly or disabled family, child care and medical expenses.

Necessary expenses subtracted from resources

Taxes

The panel recommended that the calculation of family resources for poverty measurement should subtract necessary expenses that must be paid by the family. The measure subtracts federal, state, and local income taxes, and Social Security payroll taxes (FICA) before assessing the ability of a family to obtain basic necessities such as food, clothing, and shelter. Taking account of taxes allows us to account for receipt of an earned income credit (EITC) and other tax credits. The EITC is a refundable tax credit available to low-income working taxpayers. For 2009, the value of the economic recovery payments is also added to income. The CPS does not collect information on taxes paid but relies on a tax calculator to simulate taxes paid. These simulations include federal and state income taxes, and social security taxes. These simulations also use a statistical match to the Statistics of Income (SOI) microdata file of tax returns. The tax calculations used here differ from previously calculated taxes. These computations use newly reported information in the CPS ASEC. Webster (2011) describes these new methods.

Work related expenses

Going to work and earning a wage often entails incurring expenses, such as travel to work and purchase of uniforms or tools. For work-related expenses (other than child care) the NAS panel recommended subtracting a fixed amount, \$750 for 52-week work-year per earner 18 years of age or older (or about \$14.42 per week worked) in 1992. Their calculation was based on 1987 Survey of Income and Program Participation (SIPP) data that collected information on work expenses in a set of supplementary questions. Then they calculated 85% of median weekly expenses -- \$14.42 per week worked for anyone over 18 in the family in 1992. Total expenses were obtained by multiplying this fixed amount by the number of weeks respondents reported working in the year. The panel argued that, since many families make other sacrifices to minimize work expenses (e.g., move near work, work opposing shifts) and these other costs would not be reflected in reported expenses, it would be better to use a fixed dollar amount. The ITWG suggested that further research on this topic and a refinement of methods would be valuable. Also, the suggestion has been made that commuting costs may vary across geographic areas and should be considered in addition to housing costs when constructing geographic adjustments. Rapino et al. 2010 have addressed new research on this topic.

Since the 1996 panel of SIPP, the work-related expenses topical module has been repeated every year.²⁴ Each person in the SIPP reports their own expenditures on work-related items in a given week. For each person we then sum the number of hours reported worked by the number of weeks worked in each month. The number of weeks worked is multiplied by the weekly work-related expenses, and these are summed over the calendar year for each person. These amounts are then summed across family members as of December of a given year.

Child Care Expenses

Another important part of work-related expenses is paying someone to care for children while parents work. These expenses have become important for families with young children in which both parents (or

²⁴ The 2004 panel wave 9 topical modules were not collected due to budget considerations.

single parent) work. To account for child care expenses while parents worked in the CPS, parents are asked whether or not they pay for childcare and, starting in 2010, how much they spent. The amount paid for any type of child care, while parents are at work or attending school, are summed over all children. The NAS report recommended capping the amount subtracted from income, when combined with other work related expenses, so that these do not exceed reported earnings of the lowest earner in the family. The ITWG also made this recommendation. This capping procedure is applied before determining poverty status.²⁵ (See MacCartney and Laughlin, 2010, for an evaluation of these data in the 2010 ASEC.)

Medical out-of-pocket expenses (MOOP)

The ITWG recommended subtracting medical out-of-pocket expenses from income, following the NAS panel. The NAS panel was aware that expenditures for health care are a significant portion of a family budget and have become an increasingly larger budget item since the 1960s. These expenses include the payment of health insurance premiums plus other medically necessary items such as prescription drugs and doctor co-payments that are not paid for by insurance. Subtracting these “actual” amounts from income, like taxes and work expenses, leaves the amount of income that the family had available to purchase the basic bundle of goods (food, clothing, shelter, and utilities (FCSU) and a “little bit more”).

While many individuals and families have health insurance that covers most of the very large expenses, there are the costs of health insurance premiums and other small fees that the typical family pays out of pocket. Further, there are some who are not covered by medical insurance. Expenditures on health care have increased and become a more significant portion of a family’s budgets and spending for health care should be accounted for as an important expense. Questions ascertaining medical out-of-pocket expenditures have also been included in the 2010 CPS ASEC (see Caswell and O’Hara, 2010, for information on the quality of these data). In these questions respondents report expenditures on health insurance premiums that do not include Medicare Part B premiums. Medicare part B premiums pose a particular problem for these estimates. The CPS ASEC instrument identifies that a respondent reported Social security Retirement Benefit Net of Medicare Part B premiums. For the respondents, a Part B premium set at a fixed amount of \$96.40 per month is automatically added to income.

Corrections for these errors are discussed in Caswell and Short, (forthcoming) and applied here. To be consistent with what is added to the SSR income in these cases, the same amount is added to reported premium expenditures.²⁶ For the remaining respondents that report Medicare status, Medicare Part B

25 Some analysts have suggested that this cap may be inappropriate in certain cases, such as if the parent is in school, looking for work, or receiving types of compensation other than earnings.

26 In these cases it is important to assign an amount for Medicare Part B premiums that is equal to what is added to the resource side, i.e., SSR income, of the poverty calculation. Note that the instrument calculation is done irrespective of Medicaid status, and therefore dual-enrollees who report “net” SSR income receive an estimate for Medicare Part B that is added to reported premiums.

premiums are simulated using the rules for income and tax filing status in 2009 (Medicare.gov, 2009).²⁷ The simplifying assumption is made that married respondents with 'spouse present' file married joint returns. For these cases the combined reported income of both spouses is used to determine the appropriate Part B premium. Finally, it is assumed that the following two groups pay zero Part B premiums: 1) dual-eligible respondents (i.e., Medicare and Medicaid), and 2) those with a family income less than 135 percent of the Federal Poverty Level. The latter assumption is based on a rough estimate of eligibility and participation in at least one of the following programs: Qualified Medicare Beneficiary (QMB), Specified Low-Income Medicare Beneficiary (SLMB), or Qualified Individual - 1 (QI-1).²⁸

Child Support Paid

The NAS panel recommended that, since child support received from other households is counted as income, child support paid out to those households should be deducted from those households who paid. Without this, all child support is double counted in overall income statistics. New questions ascertaining amounts paid in child support have been included in the 2010 CPS ASEC, and these reported amounts are subtracted in the estimates presented here. Grall (2010) discusses the quality of these data.

27 The CPS ASEC does not collect the number of months that a person was on Medicare; therefore we make the simplifying assumption that respondents were insured for the entire year. Given this data limitation, this assumption is appropriate as most all individuals on Medicare do not transition out of Medicare.

28 We abstract from the possibility of (state-specific) asset requirements.