Understanding Income-to-Threshold Ratios Using the Supplemental Poverty Measure

People with Moderate Income

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Abstract

In November of 2011 the Census Bureau released the first report (Short, 2011) detailing research on a new Supplemental Poverty Measure following suggestions from an interagency technical working group (ITWG, 2010). Notable was the increase in the percent of individuals with income in the lower middle of the SPM resource distribution. This large group represents what we will refer to as people of 'moderate income' whose net resources leave them between 1 and 2 times the SPM threshold. This group is the focus of this paper. Rather than fully analyze this group the main goal is to provide estimates to those who are interested in conducting additional analysis and inspection. Further investigation into the SPM will benefit our understanding of the implications of this new measure for those who are not poor but for whom the SPM concepts might apply, including the moderate income group we focus on here.
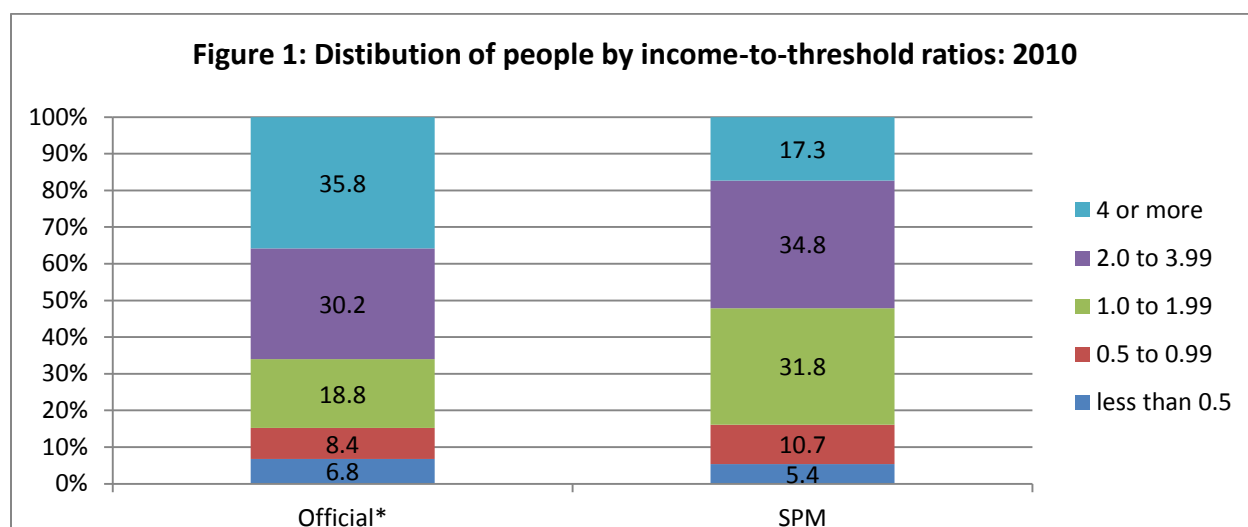
Introduction

In November of 2011 the Census Bureau released the first report (Short, 2011) detailing research on a new Supplemental Poverty Measure (SPM) following suggestions from an interagency technical working group (ITWG, 2010). That report presented differences between the new SPM and the current official poverty measure and showed estimates of poverty rates, distributions of poverty populations by a variety of characteristics, as well as distributions of income-to-poverty threshold ratios using the two measures (Short 2011, Table 4, Page 10, and Figure 4, page 11). [1]

The SPM income and SPM thresholds concepts were designed explicitly for measuring poverty. But they may also be used to explore the income-to-SPM thresholds distribution, assuming the measures of income and SPM thresholds are appropriate to the question one is trying to answer. While others have posited after tax and benefit income distribution measures (e.g. U.N. , 2011, CBO, 2011, 2012) and while most studies of income inequality adjust for differences in unit size to measure adjusted income, the SPM concepts of SPM thresholds and resources can also be employed to measure some aspects of inequality.

The SPM report presented one chart and one table on the distribution of income-to-poverty threshold ratios for various groups. Dividing income by the poverty threshold controls income by unit size and composition. Figure 1, reproduced from that report, shows the percent of all people in each income-to-threshold ratio category. In general the comparison suggests that there is a smaller percentage of the population in the lowest category of the distribution using the SPM. For most groups, including targeted non-cash benefits and refundable tax credits reduces the percent of the population in the lowest category, those with income below half their poverty threshold (Sherman CBPP; Edin and Shaefer, 2012) and in general provide benefits to those near or below the poverty line . On the other hand, the SPM shows a smaller percentage with income or resources in the highest category; four or more times the thresholds. The SPM resource measure compresses the distribution of income-to-SPM thresholds as it subtracts income and payroll taxes, medical out of pocket expenses (MOOP) and work related expenses, bringing down the percent of people with income in the highest category, while the official measure does not. Given the construction of the SPM, we would expect there to be an increase in the middle groups. Including tax and transfers to construct disposable income from a market income concept invariably results in lower inequality (OECD, 2008). Most notable is the increase in the percent of individuals with a ratio between 1.00 and 1.99 times the SPM threshold. This large group represents what we will refer to as people of *moderate income* (compared to SPM thresholds) whose net resources are between 1 and 2 times the poverty threshold. This group is the focus of this paper.

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1 The data in this report are from the "Annual Social and Economic Supplement (ASEC)" to the 2010 and 2011 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_238sa.pdf> and   <www.census.gov/hhes/www/p60_239sa.pdf>, accessed September 2011.

Figure 1: Distibution of people by income-to-threshold ratios: 2010

	Official*	SPM
4 or more	35.8	17.3
2.0 to 3.99	30.2	34.8
1.0 to 1.99	18.8	31.8
0.5 to 0.99	8.4	10.7
less than 0.5	6.8	5.4

Under the official poverty measure 18.8 percent of the population is in this category. Some analysts who refer to this group as 'low income' and have shown that dollar amounts of basic budgets are similar up to approximately 200 percent of the official poverty thresholds (Fisher, forthcoming, Pearce, 2001, Fremsted, 2010). While it is unclear whether this same designation should be used for this category under the new measure, Figure 1 shows a very large increase in the number of people who are in our moderate income group between once and twice the SPM poverty line.

The official thresholds, based on a multiplier of basic food needs, represented about half the median before-tax income and a third of after- tax income in the 1960s when they were designed (Smeeding, 2006) . On the other hand, the SPM thresholds , following recommendations from the National Academy of Sciences report (Citro and Michael, 1995), represent expenditures on food, clothing shelter and utilities plus a "little bit more" to cover non-work-related transportation, personal care items, and other needed expenses. The SPM thresholds were about 10 percent higher than the official thresholds in 2010 before adjustments.

The SPM resource measure is designed to fit with the SPM thresholds and includes both cash and noncash income while subtracting amounts spent on necessities such as work-related expenses, medical out-of-pocket expenditures, taxes, and child support payments to other households. The SPM measure also counts cohabiting partners as one poverty unit who are sharing resources and it has different standards depending on whether you own a home outright, own one with a mortgage or are a renter; and it adjusts for cost of living differences across the United States. The official measure does none of these. So it is clear that the two measures are very different in many dimensions, including the family unit, the thresholds and the measure of resources.

The purpose of this paper is to provide additional information about this larger moderate income group using the SPM. We present information about the characteristics of this group, where individuals are in

the distribution using the official measure, and which elements of the SPM may have shifted these individuals into this category. Because this group comprises 31.8 percent of the population, a much larger group than under the official measure (18.8 percent), there is interest in examining this group in more detail. It is less a goal of this paper to fully analyze these estimates as to provide them to those who are interested in conducting additional analysis and inspection. Further investigation into the SPM will benefit our understanding of the implications of this new measure, not only for those who are poor using the SPM concepts, but for others along the distribution of SPM resources, including the between 1 and 2 group we focus on here.

The distribution of the total population and the population between 1 and 2 times the official and SPM thresholds by selected characteristics: 2010

Under the official poverty measure there were 57.5 million people with income between 1 and 2 times the official poverty thresholds in 2010. Using the SPM there were 97.5 million people in this category. Table 1 compares the composition of the total population with the population in this 'between 1 and 2 group' under both measures. Differences between the groups are shown in the table and shed light on the type of individuals classified here by the different measures. The only groups for which there is no statistically significant difference between the two measures are Blacks, who are about 16 percent of this group under both measures, and those inside principal cities.

The SPM moderate income group has a statistically significant higher percentage of the nonelderly, married couples, White non-Hispanic individuals, Asians, the native born or naturalized citizens, owners with mortgages, those residing in suburbs, in the Northeast or West, those with private health insurance, and working, particularly year-round full-time, than the official measure.

On the other hand, the SPM group has a lower percentage of seniors, individuals living in male householder families or in new SPM units (families that include cohabiting partners and foster children), fewer individuals of Hispanic origin, and the foreign born, fewer homeowners with no mortgages and renters, fewer residing inside principal cities or in non-metropolitan areas, in the Midwest or the South, with public insurance or the uninsured, and working less than full-time year-round, or not working than under the official measure.

Table 1: Distribution of People in Total and Population between 1 and 2 times the official and SPM Thresholds: 2010						
	Total Population		Official**		SPM	
	Est.	90 percent C.I.† (+/-)	Est.	90 percent C.I.† (+/-)	Est.	90 percent C.I.† (+/-)	**Difference Official vs SPM**
All People	306,110	69	57,465	885	97,475	1,034	
	(percent of column total)						
Age							
Under 18 years	24.5	0.0	28.0	0.4	29.6	0.3	1.7 *
18 to 64 years	62.7	0.1	54.6	0.4	57.1	0.3	2.5 *
65 years and older	12.8	0.0	17.5	0.4	13.3	0.3	-4.1 *
Type of Unit							
In married couple unit	60.7	0.4	47.9	0.9	54.1	0.7	6.2 *
In female householder unit	20.2	0.3	29.3	0.7	26.0	0.6	-3.3 *
In male householder unit	10.5	0.2	12.3	0.4	10.5	0.3	-1.7 *
In new SPM unit	8.6	0.2	10.6	0.5	9.4	0.4	-1.2 *
Race and Hispanic Origin							
White	79.5	0.0	76.0	0.6	75.3	0.5	-0.7 *
White, not Hispanic	64.5	0.0	53.4	0.8	54.3	0.5	0.9 *
Black	12.8	0.0	16.2	0.5	16.4	0.4	0.1
Asian	4.7	0.0	4.0	0.3	4.7	0.3	0.6 *
Hispanic (any race)	16.3	0.0	24.4	0.6	22.7	0.4	-1.7 *
Nativity							
Native born	87.5	0.2	84.3	0.5	84.8	0.4	0.5 *
Foreign born	12.5	0.2	15.7	0.5	15.2	0.4	-0.5 *
Naturalized citizen	5.5	0.1	5.6	0.3	6.2	0.2	0.6 *
Not a citizen	7.0	0.2	10.1	0.4	9.0	0.3	-1.1 *
Tenure							
Owner	67.7	0.4	52.8	0.9	56.0	0.8	3.2 *
Owner/Mortgage	45.2	0.4	28.7	0.8	36.9	0.7	8.2 *
Owner/No mortgage/rentfree	23.6	0.3	25.6	0.8	20.3	0.6	-5.3 *
Renter	31.2	0.5	45.6	0.9	42.8	0.8	-2.9 *
Residence							
Inside MSAs	84.4	0.9	81.2	1.2	83.8	1.0	2.6 *
Inside principal cities	32.3	0.6	35.3	1.0	34.8	0.8	-0.5
Outside principal cities	52.1	0.8	45.9	1.3	49.0	1.0	3.1 *
Outside MSAs	15.6	0.9	18.8	1.2	16.2	1.0	-2.6 *
Region							
Northeast	17.9	0.1	15.4	0.6	17.4	0.5	2.0 *
Midwest	21.6	0.1	20.9	0.7	20.1	0.5	-0.7 *
South	37.0	0.1	39.5	0.9	37.4	0.6	-2.0 *
West	23.5	0.1	24.3	0.7	25.0	0.5	0.7 *
Health Insurance coverage							
With private insurance	64.0	0.4	42.2	0.7	50.7	0.6	8.5 *
With public, no private insurance	19.7	0.3	32.3	0.7	28.0	0.5	-4.3 *
Not insured	16.3	0.2	25.6	0.6	21.3	0.4	-4.3 *
Work Experience (Ages 16 to 65)							
All workers	47.4	0.2	36.4	0.5	40.7	0.3	4.3 *
Full-time, year-round	31.2	0.2	18.9	0.3	23.6	0.3	4.7 *
Not full-time, year-round	16.2	0.2	17.5	0.4	17.1	0.3	-0.4 *
Did not work	18.2	0.2	21.3	0.4	19.5	0.3	-1.7 *

Source: U.S. Census Bureau, Current Population Survey, 2011 Annual Social and Economic Supplement.

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

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

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

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

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

Comparing categories across two measures: Official income-to-threshold ratios for those with moderate income using the SPM

Table 2 shows the composition of those in the moderate income group using the SPM by official income-to-SPM thresholds ratios. This comparison reveals the characteristics of those who changed categories between the two measures and those who did not and, as such, highlights differences between the two measures.

The first column shows the number of individuals in the moderate income group whose before-tax money income was between 1 and 2 times the official thresholds. The next column contains those who were poor under the official measure but are *moved up* to the moderate income category with the SPM. This group would consist of individuals who were recipients of noncash benefits or who received refundable tax credits in excess of other taxes paid, or whose SPM thresholds were lower than official thresholds. Lower SPM thresholds may occur due to lower housing costs assigned by the geographic cost-of-living adjustment or the housing tenure adjustments (such as owners who have paid off their mortgage).In either case the net effect is to increase the ratio of income to needs under the SPM definition

The last column consists of those who are *moved down* the income-to-poverty threshold ratio distribution under the SPM from a higher category under the official measure. This would occur due to the subtraction of payroll and income taxes in excess of credits , medical out-of-pocket expenses, or work-related expenses from income, from less in targeted noncash benefits or from higher SPM thresholds representing higher housing costs. About half of these individuals are workers (and so have work-related costs, payroll taxes, and employer subsidized health insurance for which they also have to pay some of the premiums) subtracted from income. The next section of the paper examines in more depth the factors behind these differences.

The table shows the number of these individuals in each of these three groups across several characteristics. For example, of the individuals who were in this moderate income category with the SPM but classified as poor under the official measure, 5.3 million were children. Examination of other groups sheds light on what types of individuals comprise these categories.

	In 1-2 category Both measures		Official** poor Moved up		Above 2 x official threshold Moved down	
Table 2: Official income-to-poverty needs ratios for those in 1 and 2 times the SPM threshold category						
	Number (000)	90 percent C.I.† (+/-)	Number (000)	90 percent C.I.† (+/-)	Number (000)	90 percent C.I.† (+/-)
All People	41,846	760	11,154	421	44,476	804
Age						
Under 18 years	13,020	347	5,295	254	10,567	281
18 to 64 years	21,906	428	5,370	210	28,346	538
65 years and older	6,919	253	489	53	5,563	222
Type of Unit						
In married couple unit	20,784	645	3,315	305	28,653	660
In female householder unit	12,729	377	3,831	240	8,750	224
In male householder unit	5,070	212	656	80	4,541	326
In new SPM unit	3,262	227	3,351	210	2,534	196
Race and Hispanic Origin						
White	31,865	665	7,415	340	34,103	693
White, not Hispanic	22,512	586	4,777	279	25,678	627
Black	6,912	299	2,892	214	6,167	314
Asian	1,505	163	248	64	2,780	206
Hispanic (any race)	10,085	368	2,916	227	9,133	373
Nativity						
Native born	35,951	706	9,926	389	36,770	725
Foreign born	5,895	250	1,228	104	7,706	306
Naturalized citizen	2,081	128	310	48	3,628	189
Not a citizen	3,814	212	917	92	4,078	239
Tenure						
Owner	22,019	655	3,481	238	29,069	721
Owner/Mortgage	11,611	433	1,528	176	22,854	607
Owner/No mortgage/rentfree	11,135	449	2,145	203	6,498	336
Renter	19,099	513	7,481	358	15,124	510
Residence						
Inside MSAs	33,248	788	8,275	432	40,164	857
Inside principal cities	14,399	480	4,298	271	15,211	492
Outside principal cities	18,849	686	3,976	314	24,953	717
Outside MSAs	8,597	653	2,879	247	4,312	332
Region						
Northeast	6,168	336	1,675	174	9,132	368
Midwest	9,313	411	2,512	185	7,809	337
South	17,221	554	5,019	289	14,246	554
West	9,143	368	1,948	174	13,290	456
Health Insurance coverage						
With private insurance	17,014	475	1,595	130	30,794	604
With public, no private insurance	14,425	439	6,759	330	6,118	278
Not insured	10,407	317	2,800	170	7,564	332
Work Experience (Ages 16 to 65)						
All workers	14,770	200	2,667	74	22,229	261
Full-time, year-round	7,836	118	778	40	14,428	196
Not full-time, year-round	6,933	143	1,889	66	7,801	140
Did not work	8,536	163	3,092	97	7,422	134

Source: U.S. Census Bureau, Current Population Survey, 2011 Annual Social and Economic Supplement.

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

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

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

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

Changes across two measures in a multivariate framework

As described above the SPM has many parts that affect the SPM poverty status as compared to the official measure. These same parts affect the placement of individuals in the income-to-SPM thresholds distribution. It is useful to examine these outcomes in a multivariate context. Tables 3 and 4 present estimates from two logistic regressions; one that models the probability of being official poor and between 1 and 2 SPM, considered as "moving up", and a second that models the probability of being above twice the official threshold and between 1 and 2 SPM, considered as "moving down'. The two models contain the same explanatory variables that consist of various demographic characteristics, indicators of threshold adjustments for housing tenure and residence and region, indicators of receipt of in-kind benefits and indicators of payment of nondiscretionary expenses. A coefficient greater than one says that the odds that an explanatory variable, like a benefit or a tax, has a higher probability of moving up or down relative to the omitted category.

These estimations are useful because they allow us to assess not only the characteristics of those who change categories, but the effects of the threshold adjustments and changes in the unit of analysis. For example, the presence of a cohabiter in the SPM unit represents a high probability that an individual, classified as poor under the official measure, is in the moderate income category with the SPM.

Other results in Table 3 suggest that those in female householder units, children, and the foreign born have a higher probability of moving up with the SPM relative to omitted groups. Those residing outside MSAs relative to those residing inside principal cities and those owning their home outright are also more likely to be in the higher SPM category. These results reflect lower SPM thresholds for these groups. Receipt of each of the noncash benefits and the EITC increase the probability of moving up, holding demographic characteristics and threshold adjustments constant.

Table 4 shows results, using the same indicators, for moving down; that is above twice the official threshold, but moving to moderate income status between 1 and 2 times the SPM threshold. Those over 65 years of age have a higher probability of moving down compared to adults aged 18 to 64, as do those residing in MSAs but outside principal cities (suburbs), in the Northeast or the Midwest relative to the omitted South category. All payments of nondiscretionary expenses increase the probability of moving down except for paying work expenses (likely highly collinear with payment of payroll taxes). These payments increase the probability even while holding demographic characteristics and adjustments to the thresholds constant in the regression model.

These results represent a preliminary look into the many factors at play that change income-to-threshold ratios between the two measures. Other specifications could shed additional light. For example, interaction terms between the explanatory variables, such as age and housing tenure, or race and residence, could be useful to isolate the various aspects that cause differences across the two measures. These more thorough explorations await future work.

Table 3: Logistic Regression Results Modeled likelihood of official poor and SPM 1-2 "Moved UP" Population: CPS ASEC 2011 Persons			
Effect	**Odds Ratio**	**90% Wald Confidence Limits**	
In female householder unit	**1.301**	1.299	1.304
Cohabitor	**20.156**	20.113	20.198
Under 18 years	**1.082**	1.081	1.084
65 years and older	**0.214**	0.213	0.215
Black	**1.088**	1.086	1.090
Hispanic (any race)	**1.139**	1.137	1.141
Foreign born	**1.360**	1.357	1.363
Full-time, year-round worker	**0.305**	0.304	0.306
Outside MSAs	**1.509**	1.506	1.511
Outside principal cities	**0.853**	0.851	0.854
Northeast	**0.637**	0.636	0.638
Midwest	**0.773**	0.772	0.775
West	**0.580**	0.579	0.581
Owner/No mortgage/rentfree	**1.696**	1.693	1.699
Received EITC	**2.002**	1.997	2.006
Received foodstamps	**4.218**	4.212	4.224
Received housing subsidy	**5.938**	5.926	5.951
Received school lunch	**1.480**	1.477	1.482
Received energy asst	**1.396**	1.393	1.399
Received WIC	**1.566**	1.564	1.569
Paid payroll tax	**0.680**	0.671	0.690
Paid income tax	**0.233**	0.233	0.234
Paid MOOP	**0.478**	0.476	0.479
Paid work expenses	**0.707**	0.697	0.717
Paid childcare	**0.691**	0.689	0.692
Paid child support	**0.564**	0.561	0.567
Wald Pr>χ2	<.0001		
Notes:			
1Bold if Pr < .0001			
Source: 2011 CPS ASEC			

Table 4: Logistic Regression Results Modeled likelihood of over 2X official and SPM 1-2 "Moved DOWN" Population: CPS ASEC 2011 Persons			
Effect	**Odds Ratio**	**90% Wald**	
		Confidence Limits	
In female householder unit	**0.587**	0.564	0.611
Cohabitor	**0.239**	0.226	0.252
Under 18 years	**1.113**	1.086	1.140
65 years and older	**3.499**	3.304	3.704
Black	0.989	0.938	1.044
Hispanic (any race)	**0.716**	0.683	0.752
Foreign born	0.979	0.938	1.021
Full-time, year-round worker	**1.517**	1.476	1.559
Outside MSAs	**0.546**	0.518	0.575
Outside principal cities	**1.234**	1.188	1.281
Northeast	**1.841**	1.749	1.937
Midwest	1.028	0.975	1.083
West	**1.853**	1.759	1.952
Owner/No mortgage/rentfree	**0.499**	0.477	0.523
Received EITC	**0.281**	0.269	0.293
Received foodstamps	**0.328**	0.307	0.350
Received housing subsidy	**0.129**	0.112	0.148
Received school lunch	**0.905**	0.868	0.944
Received energy asst	**0.385**	0.350	0.424
Received WIC	**0.548**	0.498	0.602
Paid payroll tax	**5.055**	3.081	8.294
Paid income tax	**9.249**	8.795	9.726
Paid MOOP	**3.114**	2.856	3.394
Paid work expenses	**0.390**	0.236	0.644
Paid childcare	**2.024**	1.897	2.159
Paid child support	**2.136**	1.887	2.418
Wald Pr>χ2	<.0001		
Notes:			
1Bold if Pr < .0001			
Source: 2011 CPS ASEC			

Examining change across the SPM income-to-thresholds distribution with/without selected additions or subtractions

The purpose of Table 5 is to move away from comparing the SPM to the official measure and look only at changes *within* the SPM measure. This exercise allows us to gauge the effects of taxes and transfers and other necessary expenses using the SPM alone as the measure of economic wellbeing. It shows differences from changing the way we construct the SPM by adding to or subtracting from resources (accounting for one element at a time). By removing one addition or subtraction at a time, and holding everything else the same, we may see how the number of individuals in this category is marginally changed by those moving across the SPM poverty threshold, either up or down, and by those moving across 2 times the SPM threshold, either up or down, component by component. This exercise also illustrates the complexity of understanding what items move people into the category as it is highly probable that an element may be moving some families up into the category but other families up out of the category and vice versa for moving down.

As an example, the table shows that the EITC raises the number of individuals in this category by 4.9 million. This result corresponds to similar calculations in the November report that showed that the EITC lowered the poverty rate for all people from 18.0 percent to 16.0 percent, all else constant minus any individuals who would have moved to the higher category due to the EITC. The difference captures net movements into this category from a lower one and out of this category into a higher one.

Table 5 further illustrates that only 12.1 million individuals were added to this category with all the additions of all refundable tax credits and noncash benefits to income. This figure represents those who moved up with the additions minus those who moved above 2 times the threshold with the additions.

Table 5 also shows the effect of *subtracting* nondiscretionary expenses from income. For example, the subtraction of MOOP increases the number of individuals in this category by about 7 million, testifying to the effects of medical out-of-pocket expenses on discretionary income. The difference again captures net movements into this category from a higher one and out of this category into a lower one.

Examining the SPM moderate income group in a multivariate framework

As noted above, there are a variety of factors that determine the placement of individuals in the income-to-SPM thresholds ratio distribution. Table 5 showed that additions and subtractions affect the membership in the group of interest, those with income between 1 and 2 times the SPM thresholds.

Table 5. Effect of Excluding Individual Additions on those between 1 and 2 times SPM threshold: 2010		
	Number (000)	90 percent C.I.† (+/-)
Between 1 and 2	**97,475**	**1,034**
EITC	4,926	361
SNAP	4,157	301
Hsg subsidy	2,664	218
School lunch	633	168
WIC	109	65
LIHEAP	227	67
All additions	12,087	566
Child support	184	122
Federal income tax	7,477	458
FICA	8,277	590
Work expense	3,702	471
MOOP	6,943	623
All subtractions	24,477	958

Source: U.S. Census Bureau, Current Population Survey, 2011 Annual Social and Economic Supplement.

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

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

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

Estimates of the probability of being in this category across all individuals by demographic characteristics, threshold adjustments, and taxes and transfers are shown in Table 6. The model used is parallel in design to those described above and used to examine changes between measures. The dependent variable is set to one if an individual is in this category. Coefficients on the explanatory variables estimate the net effect on the probability of being in the category between 1 and 2 times the SPM thresholds.

The estimates suggest that those with a higher probability of being in the moderate income category, holding additions and subtractions constant, include those in female householder units relative to other unit types, children and those over the age of 65 (relative to adults 18 to 64), Blacks, Hispanics, and the foreign born. Threshold adjustments have small effects. Those residing outside MSAs and in the Northeast and West have a slightly greater probability relative to omitted groups, while those in the suburbs and owners with no mortgages are less likely to be in this category and lie somewhere else in the income-to-SPM threshold ratio distribution. Paying income taxes is also correlated with a lower probability of being in this category, representing that income tax liabilities fall on those higher up the income distribution. As mentioned above, payment of payroll taxes and assignments of work expenses are highly correlated with each other, possibly affecting estimated levels of significance. Full-time year-round workers are less likely to be in this category than those with lower work effort.

Table 6: Logistic Regression Results Modeled likelihood of in between 1 and 2 SPM threshold Population: CPS ASEC 2011 Persons			
Effect	**Odds**	**90% Wald**	
		Confidence Limits	
In female householder unit	**1.217**	1.191	1.244
Cohabitor	0.952	0.920	0.985
Under 18 years	1.000	0.988	1.012
65 years and older	**1.457**	1.430	1.484
Black	**1.300**	1.263	1.337
Hispanic (any race)	**1.359**	1.326	1.393
Foreign born	**1.182**	1.157	1.207
Outside MSAs	**1.108**	1.079	1.138
Outside principal cities	0.997	0.977	1.017
Full-time, year-round worker	**0.805**	0.794	0.815
Northeast	**1.059**	1.030	1.089
Midwest	0.977	0.953	1.002
West	**1.077**	1.050	1.105
Owner/No mortgage/rentfree	**0.787**	0.769	0.804
Received EITC	**2.819**	2.742	2.899
Received foodstamps	**1.161**	1.124	1.200
Received housing subsidy	**1.513**	1.435	1.595
Received school lunch	**1.178**	1.155	1.201
Received energy asst	**1.386**	1.320	1.455
Received WIC	0.993	0.948	1.040
Paid payroll tax	1.100	0.895	1.352
Paid income tax	**0.727**	0.709	0.746
Paid MOOP	**1.160**	1.113	1.210
Paid work expenses	0.962	0.779	1.188
Paid childcare	0.990	0.961	1.019
Paid child support	**1.201**	1.131	1.275
Wald Pr>χ2	<.0001		
Notes:			
1Bold if Pr < .0001			
Source: 2011 CPS ASEC			

The effect of selected additions and subtractions on the SPM moderate income group: 2010

While the above section provides information about the characteristics of the group of interest, it also serves to illustrate the difficulty of examining a group in the middleof the income-to-SPM thresholds distribution like those with moderate incomes , a group for which items causing individuals to be in this category may also cause individuals to move out of the category. Tables 7 and 8 try to shed additional light on the effect of additions and subtractions by isolating changes into the between 1 to 2 group in only one direction. So, for example, we show the number of people who were moved into this category by the EITC from below, while ignoring those who may have been moved out of it into a higher category. The table again shows the effect by one item at a time, with all additions and then with all subtractions summarized at the bottom of each table. Since many items may have moved any individual over the threshold, the bottom line of table 4 shows the number of individuals moved up into the category by all the additions taken together. Clearly multiple sources of change are taking place in most households.

For instance, the effect of the largest single component in moving all people up to a new category, the EITC, moved about 6.1 million up to the moderate income range, but all additions together moved more than twice as many, 14.2 million, up the ladder. The table shows the calculations for the total population as well as three age groups, children, adults aged 18 to 64, and 65 years of age and older. For example, of the 28.8 million children in the category, 3.1 million moved out of poverty by adding the EITC and 2.2 million by SNAP (food stamps). Considering the addition of all noncash benefits and the EITC, 6.6 million children moved into this category from below the SPM threshold.

 Similar calculations for those who moved into the between 1 and 2 group from a higher category by subtracting non-discretionary expenses from income, ignoring those who moved out of this category and into poverty by the same subtractions are shown in table 8 . For example, the subtraction of payroll taxes from income moved 3.9 million children from a higher category into the focal one. All subtractions taken together pulled 10.8 million children down from categories with income above twice the SPM threshold, again a number less than the sum of its individual parts. Similar calculations are shown for the total population and for three age groups.

Table 7. Effect of Excluding Individual Additions on those between 1 and 2 times SPM threshold: 2010								
	ALL People		Age < 18		Age 18 - 64		Age 65+	
	moved from below		moved from below		moved from below		moved from below	
	Number (000)	90 percent C.I.† (+/-)	Number (000)	90 percent C.I.† (+/-)	Number (000)	90 percent C.I.† (+/-)	Number (000)	90 percent C.I.† (+/-)
Total	306,110	114	74,915	141	192,015	207	39,179	135
1 - 2 times	97,475	1,034	28,882	446	55,621	656	12,971	285
EITC	6,073	332	3,137	183	2,877	166	58	18
SNAP	4,934	286	2,233	169	2,372	153	327	46
Hsg subsidy	2,695	217	962	115	1,276	107	457	67
School lunch	1,027	140	589	81	423	64	-	-
WIC	167	51	85	26	82	26	-	-
LIHEAP	267	64	77	31	151	38	40	15
All additions	**14,180**	**518**	**6,609**	**275**	**6,749**	**270**	**823**	**84**

Table 8. Effect of Excluding Individual Subtractions on those between 1 and 2 times SPM threshold: 2010								
	ALL People		Age < 18		Age 18 - 64		Age 65+	
	moved from above		moved from above		moved from above		moved from above	
	Number (000)	90 percent C.I.† (+/-)	Number (000)	90 percent C.I.† (+/-)	Number (000)	90 percent C.I.† (+/-)	Number (000)	90 percent C.I.† (+/-)
Total	306,110	114	74,915	141	192,015	207	39,179	135
1 - 2 times	97,475	1,034	28,882	446	55,621	656	12,971	285
Child support	619	99	163	46	431	64	25	13
Federal income tax	8,899	429	1,897	148	6,465	313	535	66
FICA	12,736	490	3,872	202	8,443	339	419	53
Work expense	8,262	367	2,509	151	5,443	250	309	51
MOOP	16,739	521	3,822	197	9,045	326	3,871	173
All subtractions	**40,563**	**757**	**10,797**	**299**	**25,071**	**503**	**4,695**	**189**

Source: U.S. Census Bureau, Current Population Survey, 2011 Annual Social and Economic Supplement.

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

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

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

Summary

This paper has presented additional information about the group identified by the first report on the SPM as having resources just above the SPM thresholds, specifically in the category which we term "moderate " income where resources are between 1 and 2 times the SPM thresholds. This is a category that is much larger using the SPM compared to the current official poverty measure. While there is some tradition in referring to individuals in this category under the official measure as low income, it is less clear what it means to have SPM resources at this level. Altogether about half of all people live below 2 times the poverty line using the SPM specifications and almost 98 million are not poor but of moderate income status.

Since the effect of taxes and transfers is often to move family income from the extremes of the distribution to the center of the distribution; that is from the very bottom with targeted transfers or from the very top via taxes, the increase in the size of this category is to be expected. The SPM measure accounts for additional near cash benefits and taxes while also adjusting for costs that are hard to avoid in maintaining earnings and a budget for other living standards. These adjustments capture what it means to be in this category compared to the similar category under the official measure. No account is taken of other types of benefits (like health insurance or education subsidies) or the role of other taxes, wealth or borrowing. The purpose of this paper is to present additional information on the characteristics of the moderate income group and the transfers and non-discretionary expenses that move them here.

The goal of this paper, rather than to fully analyze these estimates, is to provide information to those who are interested in conducting additional analysis and inspection. This is an important group and further investigation into differences between the official poverty measure and the SPM will benefit our understanding of the implications of this new measure.

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