The Supplemental Poverty Measure: 2016

Current Population Reports

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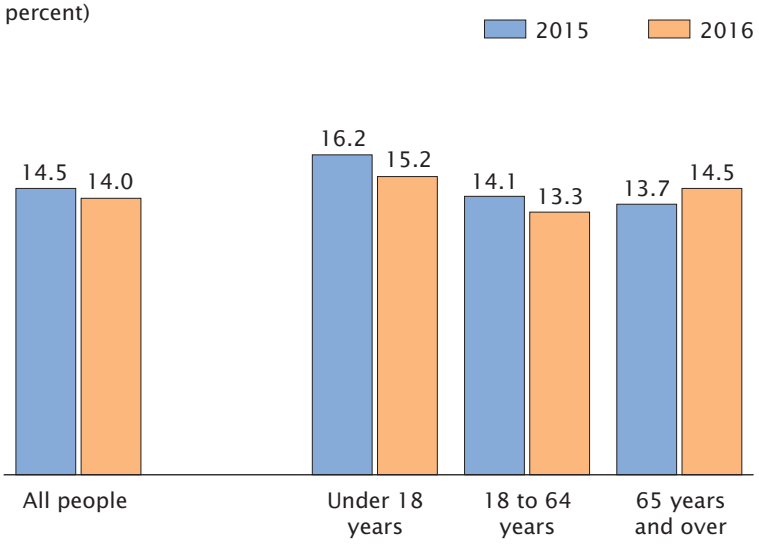
INTRODUCTION

Since the publication of the first official U.S. poverty estimates, researchers and policymakers have continued to discuss the best approach to measure income and poverty in the United States. Beginning in 2011, the U.S. Census Bureau began publishing the Supplemental Poverty Measure (SPM), which extends the official poverty measure by taking account of many of the government programs designed to assist low-income families and individuals that are not included in the official poverty measure. This is the seventh report describing the SPM released by the Census Bureau, with support from the Bureau of Labor Statistics (BLS). This report presents updated estimates of the prevalence of poverty in the United States using the official measure and the SPM based on information collected in 2017 and earlier Current Population Survey Annual Social and Economic Supplements (CPS ASEC).

Figure 1.

SPM Poverty Rates for Total Population and by Age Group: 2015 and 2016

(In percent)



Note: For information on confidentiality protection, sampling error, nonsampling error, and definitions, see <www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf>.
Source: U.S. Census Bureau, Current Population Survey, 2016–2017 Annual Social and Economic Supplements.

HIGHLIGHTS

- In 2016, the overall SPM rate was 14.0 percent. This was 0.5 percentage points lower than the 2015 SPM rate of 14.5 (Figure 1 and Figure 2).
- SPM rates were down for children under age 18 and adults aged 18 to 64. SPM rates for individuals aged 65 and older were up, from 13.7 percent in 2015 to 14.5 percent in 2016 (Figure 1 and Figure 2).
- The SPM rate for 2016 was 1.3 percentage points higher than the official poverty rate of 12.7 percent (Figure 3).
- The percentage of individuals aged 65 and older with SPM resources below half their SPM threshold increased from 4.5 percent in 2015 to 5.2 percent in 2016 (Figure 6 and Appendix Table A-4).
- There were 13 states plus the District of Columbia for which SPM rates were higher than official poverty rates, 20 states with lower rates, and 17 states for

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which the differences were not statistically significant (Figure 7).

- Social Security continued to be the most important anti-poverty program, moving 26.1 million individuals out of poverty. Refundable tax credits moved 8.1 million people out of poverty (Figure 8).

This report presents updated estimates of the prevalence of poverty in the United States, overall and for selected demographic groups, using the official poverty measure and the SPM.[1] The first section provides detailed information about changes in SPM rates from 2015 to 2016. The second section presents differences between the official poverty measure and the SPM, compares the distribution of income-to-poverty threshold ratios between the two, and presents poverty rates by state. These are the same data used for the preparation of official poverty statistics and reported in Semega, Fontenot, and Kollar (2017). In the third section, individual components of the SPM are added and subtracted from resources to assess the marginal impact of taxes, transfers, and necessary expenses on poverty rates.

[1] The estimates in this report (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 <www2.census.gov/library/publications/2015/demo/p60-252sa.pdf>, <www2.census.gov/library/publications/2016/demo/p60-256sa.pdf>, and <www2.census.gov/library/publications/2017/demo/p60-259sa.pdf>.

BACKGROUND

After many years of research, analysis, and debate, an Interagency Technical Working Group on Developing a Supplemental Poverty Measure (ITWG) formed to review methods and data needed for poverty measurement. That group listed suggestions for a new measure that would supplement the current official measure of poverty (ITWG, 2010). The appendix to this report includes detailed descriptions of how these suggestions have been applied to the SPM.[2] The following table summarizes the most important differences between the official and supplemental measures.

The SPM does not replace the official poverty measure and is not designed to be used for program eligibility or funding distribution. The SPM is designed to provide information on aggregate levels of economic need at a national level or within large subpopulations or areas and, as such, the SPM provides an additional macroeconomic statistic for further understanding economic conditions and trends.

[2] Thresholds for the SPM are produced by the BLS Division of Price and Index Number Research and presented for 2015 and 2016 in Appendix Table A-3.

Poverty Measure Concepts: Official and Supplemental

	Official Poverty Measure	Supplemental Poverty Measure
Measurement Units	Families (individuals related by birth, marriage, or adoption) or unrelated individuals	Resource units (official family definition plus any coresident unrelated children, foster children, and unmarried partners and their relatives) or unrelated individuals (who are not otherwise included in the family definition)
Poverty Threshold	Three times the cost of a minimum food diet in 1963	Based on expenditures of food, clothing, shelter, and utilities (FCSU)
Threshold Adjustments	Vary by family size, composition, and age of householder	Vary by family size and composition, as well as geographic adjustments for differences in housing costs by tenure
Updating Thresholds	Consumer Price Index: all items	5-year moving average of expenditures on FCSU
Resource Measure	Gross before-tax cash income	Sum of cash income, plus noncash benefits that resource units can use to meet their FCSU needs, minus taxes (or plus tax credits), minus work expenses, medical expenses, and child support paid to another household

Changes in SPM Rates Between 2015 and 2016

Figure 2 shows SPM rates for 2015 and 2016, calculated in a comparable way for each year.[3, 4] In 2016, the percentage of people in poverty using the SPM was 14.0 percent compared to 14.5 percent in 2015, a statistically significant decrease. The poverty rate declined for many groups (men, children, adults aged 18–64, people living in married or cohabiting partner units, those with less than a high school diploma, all workers, and workers employed less than full-time, year-round). Individuals aged 65 and over and those with a high school degree, but without college education experienced an increase in poverty from 2015 to 2016. The changes in SPM rates across the 2 years were not statistically significant for any other group.

POVERTY ESTIMATES FOR 2016: OFFICIAL AND SPM

Figure 3 shows that 14.0 percent of people were poor using the SPM definition of poverty, higher than the 12.7 percent using the official definition of poverty with the comparable universe.[5, 6] While for most groups, SPM rates were higher than official poverty rates, the SPM shows lower poverty rates for children and individuals living in cohabiting partner units. Official and SPM poverty rates for individuals living in female reference person units, Blacks, and individuals who did not work were not statistically different. Note that poverty rates for those aged 65 and over were higher under the SPM compared with the official measure. This partially reflects that the official thresholds are set lower for units with householders in this age group, while the SPM thresholds do not vary by age.[7]

[3] The 2015 estimates presented in this report do not match the previously published estimates reported in "The Supplemental Poverty Measure: 2015" (Renwick and Fox, 2016) due to several small changes implemented this year. To provide accurate comparisons of poverty rates using consistent methodology, these changes have all been implemented back to 2013 for estimates in this report. The details of the changes can be found in the appendix.

[4] Appendix Table A-1 contains rates for a more extensive list of demographic groups.

[5] Since the CPS ASEC does not ask income questions for individuals under age 15, all unrelated individuals under 15 are excluded from the universe for official poverty calculations in Semega, Fontenot, and Kollar (2017). However, these individuals are included in both the official and SPM poverty universe for this report. Beginning in this SPM report, we assign unrelated individuals under 15 the official poverty status of the householder. See the appendix for details.

[6] Appendix Table A-2 contains rates for a more extensive list of demographic groups.

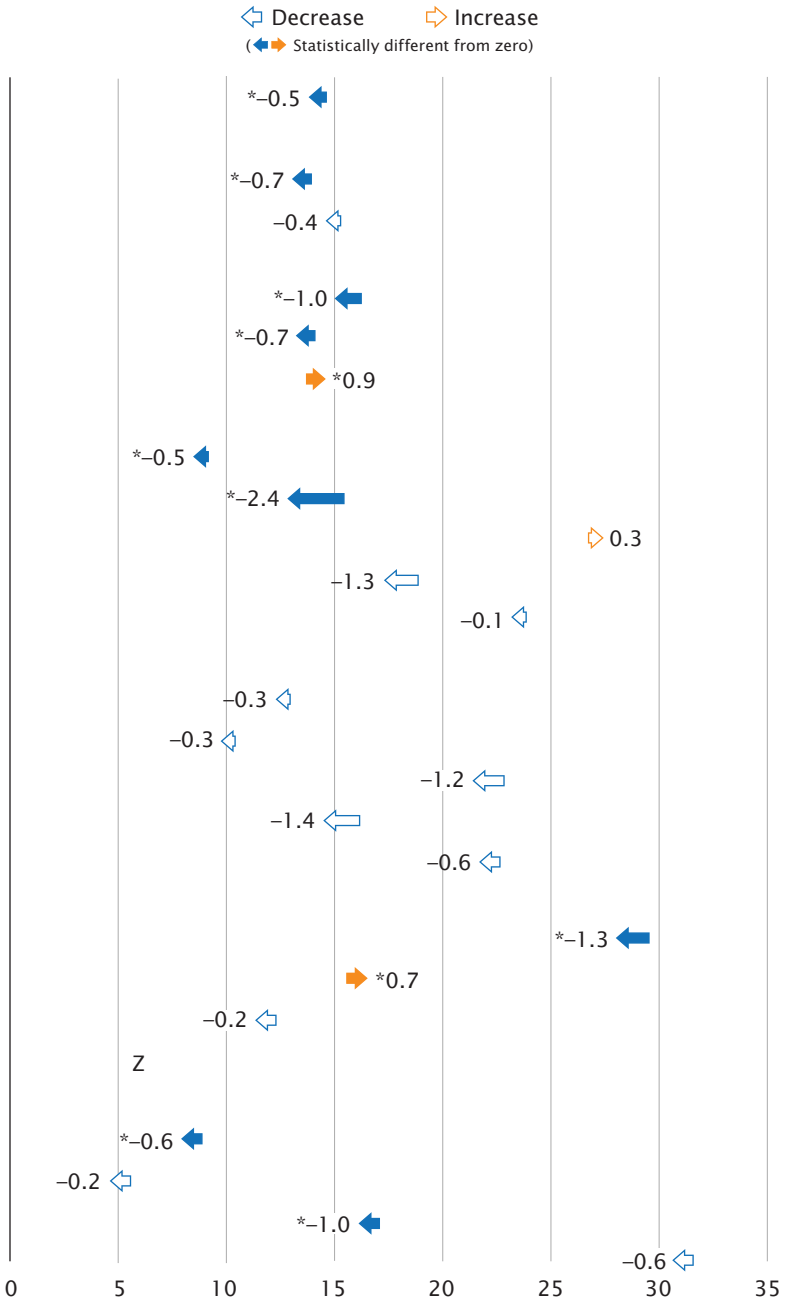
[7] For more information about the SPM and those 65 years and older, see Bridges and Gesumaria (2013).

Figure 2.

Change in Percentage of People in Poverty Using the Supplemental Poverty Measure: 2015 to 2016

(In percent)

	2015	2016
All people	14.5	14.0
Sex		
Male	13.9	13.2
Female	15.1	14.7
Age		
Under 18 years	16.2	15.2
18 to 64 years	14.1	13.3
65 years and older	13.7	14.5
Type of Unit		
Married couple	9.1	8.6
Cohabiting partners	15.4	13.0
Female reference person	27.0	27.3
Male reference person	18.8	17.5
Unrelated individuals	23.7	23.6
Race[1] and Hispanic Origin		
White	12.8	12.5
White, not Hispanic	10.3	9.9
Black	22.8	21.6
Asian	16.1	14.7
Hispanic (any race)	22.6	22.0
Educational Attainment		
No high school diploma	29.5	28.2
High school, no college	15.6	16.2
Some college	11.7	11.5
Bachelor's degree or higher	6.5	6.5
Work Experience		
All workers	8.6	8.0
Worked full-time, year-round	5.0	4.7
Less than full-time, year-round	17.3	16.3
Did not work at least 1 week	31.4	30.8



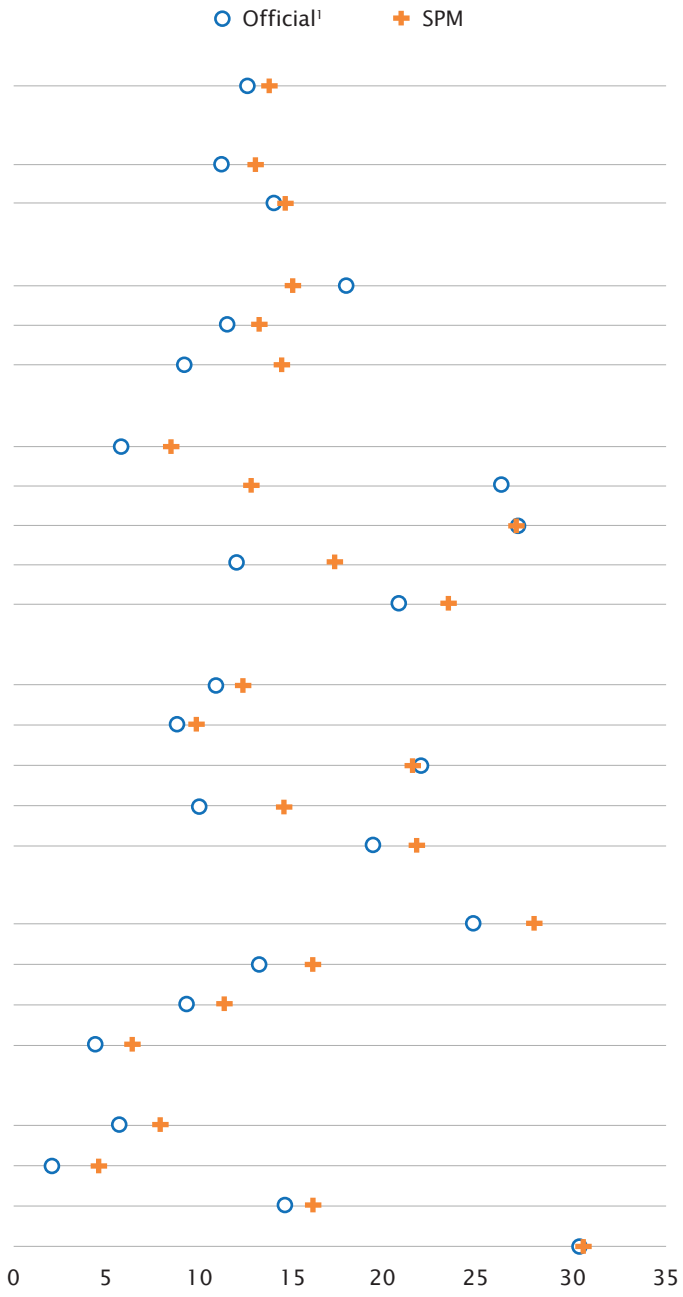
Z Represents or rounds to zero.
* An asterisk preceding an estimate indicates change is statistically different from zero at the 90 percent confidence level.
[1] Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). This table shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing data. The Census Bureau uses a variety of approaches. Information on people who reported more than one race, such as White and American Indian and Alaska Native or Asian and Black or African American, is available from the 2010 Census through American FactFinder. About 2.9 percent of people reported more than one race in the 2010 Census. Data for American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and those reporting two or more races are not shown separately.
Note: Details may not sum to totals due to rounding.
Source: U.S. Census Bureau, Current Population Survey, 2016–2017 Annual Social and Economic Supplements.

Figure 3.

Percentage of People in Poverty by Different Poverty Measures: 2016

(In percent)

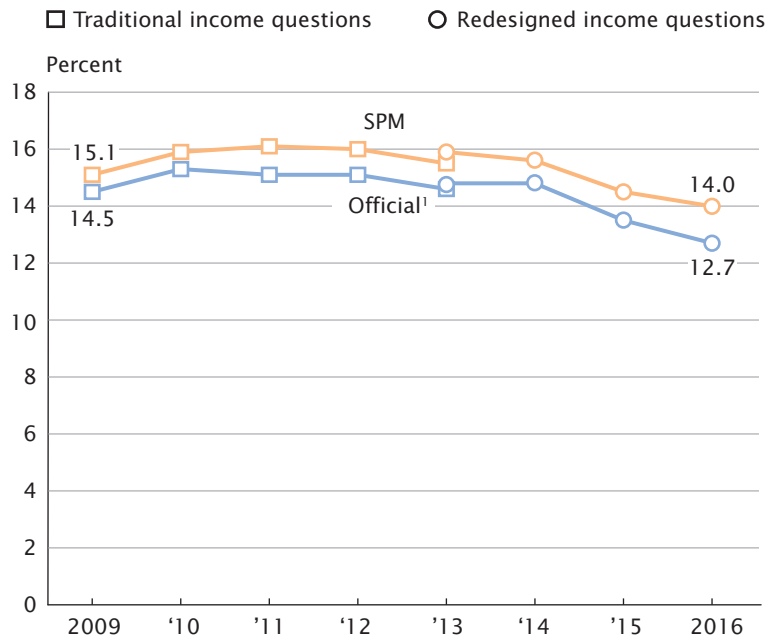
	Official[1]	SPM	Difference
All people	12.7	14.0	*1.3
Sex			
Male	11.3	13.2	*1.9
Female	14.1	14.7	*0.7
Age			
Under 18 years	18.0	15.2	*–2.8
18 to 64 years	11.6	13.3	*1.8
65 years and older	9.3	14.5	*5.3
Type of Unit			
Married couple	5.9	8.6	*2.7
Cohabiting partners	26.3	13.0	*–13.3
Female reference person	27.2	27.3	Z
Male reference person	12.1	17.5	*5.5
Unrelated individuals	20.8	23.6	*2.8
Race[2] and Hispanic Origin			
White	11.0	12.5	*1.4
White, not Hispanic	8.9	9.9	*1.1
Black	22.0	21.6	–0.4
Asian	10.1	14.7	*4.5
Hispanic (any race)	19.4	22.0	*2.6
Educational Attainment			
No high school diploma	24.8	28.2	*3.4
High school, no college	13.3	16.2	*2.9
Some college	9.4	11.5	*2.1
Bachelor's degree or higher	4.5	6.5	*2.1
Work Experience			
All workers	5.8	8.0	*2.2
Worked full-time, year-round	2.2	4.7	*2.5
Less than full-time, year-round	14.7	16.3	*1.6
Did not work at least 1 week	30.5	30.8	0.3



Z Represents or rounds to zero.
* An asterisk preceding an estimate indicates change is statistically different from zero at the 90 percent confidence level.
[1] Includes unrelated individuals under the age of 15.
[2] Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). This table shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing data. The Census Bureau uses a variety of approaches. Information on people who reported more than one race, such as White and American Indian and Alaska Native or Asian and Black or African American, is available from the 2010 Census through American FactFinder. About 2.9 percent of people reported more than one race in the 2010 Census. Data for American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and those reporting two or more races are not shown separately.
Note: Details may not sum to totals due to rounding.
Source: U.S. Census Bureau, Current Population Survey, 2017 Annual Social and Economic Supplement.

Figure 4.

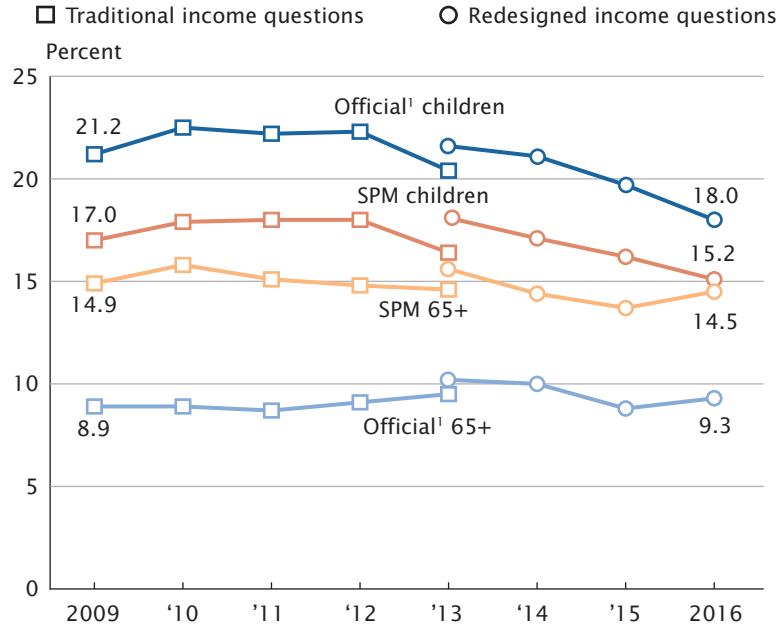
Poverty Rates Using the Official Measure and the SPM: 2009 to 2016



[1] Includes unrelated individuals under the age of 15.
Note: The data for 2013 and beyond reflect the implementation of the redesigned income questions.
Source: U.S. Census Bureau, Current Population Survey, 2010–2017 Annual Social and Economic Supplements.

Figure 5.

Poverty Rates Using the Official Measure and the SPM for Two Age Groups: 2009 to 2016



[1] Includes unrelated individuals under the age of 15.
Note: The data for 2013 and beyond reflect the implementation of the redesigned income questions. Children are defined as individuals under age 18.
Source: U.S. Census Bureau, Current Population Survey, 2010–2017 Annual Social and Economic Supplements.

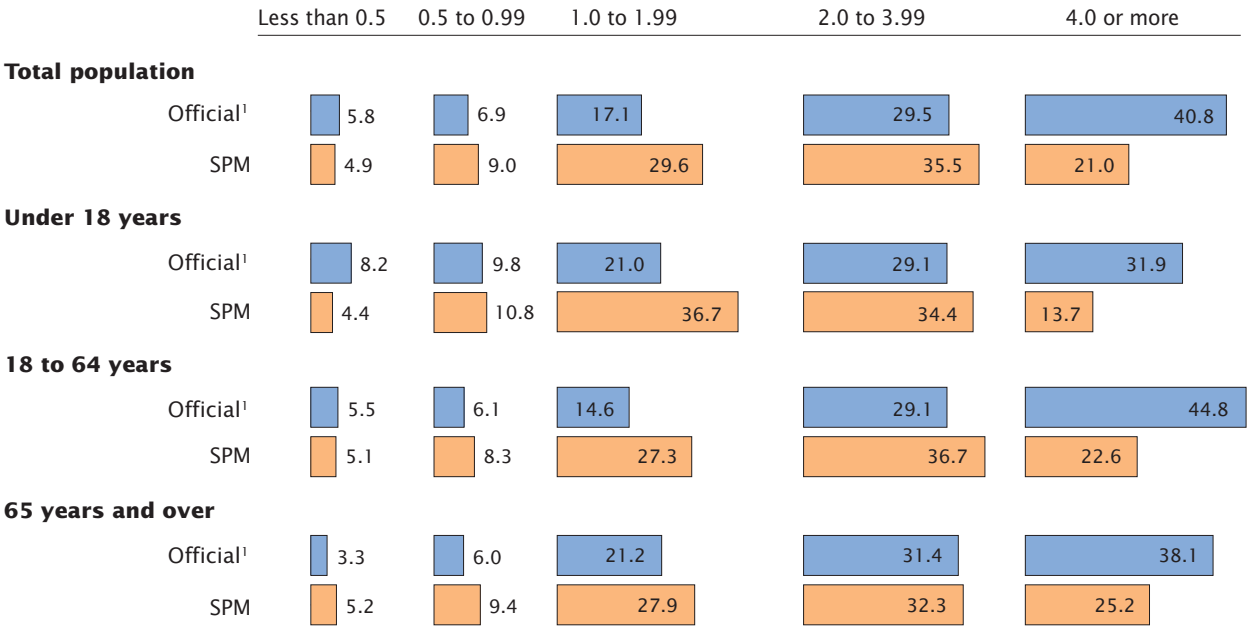
Next, we show the official measure and the SPM over the 8 years for which we have estimates (Figure 4 and Figure 5). The charts show two values for 2013, one using the traditional income questions comparable to SPM estimates from 2009–2012, and the second using the redesigned income questions used for this report and comparable to the 2014–2016 estimates presented here.[8] Figure 4 shows the official measure (with the comparable universe) and the SPM across 8 years.[9] The SPM has ranged from 0.6 to 1.3 percentage points higher than the official measure since 2009.

Figure 5 shows the poverty rate using both measures for children and for those aged 65 and over. For the first time since 2010, in 2016 there was a statistically significant increase in SPM poverty rates for one of the major age categories. This increase in poverty for individuals aged 65 and over can be seen in both the official and SPM rates, although the increase in the rate is not statistically significant in the official measure.

[8] See footnote 2. To maintain consistency in the series, all estimates using the redesigned income questions (2013–2015) have been revised from previously published estimates. See the appendix for a full discussion of changes implemented.

[9] For SPM estimates from 1967 to 2012, see Fox et al. (2015).

Figure 6.
Distribution of People by Income-to-Threshold Ratios: 2016
(In percent)



[1] Includes unrelated individuals under the age of 15.
Note: Details may not sum to totals due to rounding. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see <www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf>.
Source: U.S. Census Bureau, Current Population Survey, 2017 Annual Social and Economic Supplement.

Distribution of Income-to-Threshold Ratios: Official and SPM

Comparing the distribution of gross cash income with that of SPM resources also allows an examination of the effect of taxes and noncash transfers on SPM rates. Figure 6 shows the percentage distribution of income-to-threshold ratio categories for all people and is broken down by major age category. Dividing income by the respective poverty threshold controls income by unit size and composition. Appendix Table A-4 shows the distribution of income-to-threshold ratios for various groups in 2016 and 2015.

In general, the comparison suggests that a smaller percentage of the population was in the lowest category of the distribution using the SPM compared to the official measure. For most groups, including targeted noncash benefits reduced the percentage of the population in the lowest category—those with income below half their poverty threshold. This is true for the age groups shown in Appendix Table A-4, except for those aged 65 and over. They showed a higher percentage below half of the poverty line with the SPM—5.2 percent compared to 3.3 percent with the official measure.

Many of the noncash benefits included in the SPM are not targeted toward the 65 and over population. Further, many transfers received by this group are in cash, especially Social Security payments, and are captured in the official measure, as well as the SPM. Since 2015, the share of individuals aged 65 and over with income below half of the SPM threshold has increased from 4.5 to 5.2 percent. A similar increase in the share of individuals aged 65 and over with income falling below half of the poverty line can be found in the official measure. Note that the percentage of the 65-and-over age group with income below half their

threshold was lower than that of other age groups using the official measure (3.3 percent), while the percentage for children was higher (8.2 percent). Subtracting necessary expenses and adding noncash benefits in the SPM narrowed the differences across the three age groups.[10]

On the other hand, relative to the official measure, the SPM shows a smaller percentage with income or resources in the highest category—four or more times the thresholds. The SPM resource measure subtracts taxes—compared with the official measure, which does not—bringing down the percentage of people with income in the highest category.

Another notable difference between the distributions using these two measures was the larger number of individuals with income-to-threshold ratios in the middle categories, between 1.0 and 3.99, with the SPM. Since the effect of taxes and transfers is often to move 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 and other expenses, the increase in the size of these middle categories is to be expected.

Appendix Table A-4 shows similar calculations by race and ethnicity. Using the SPM, smaller percentages of Whites, Blacks, and Hispanics had income below half of their poverty thresholds.[11] Larger percentages of Asians had income below half of their poverty thresholds in the SPM than in the official measure.

Poverty Rates by State: Official and SPM

To create state-level estimates using the CPS ASEC, the Census Bureau recommends using 3-year averages for additional statistical reliability.[12] Appendix Table A-5 shows 3-year averages of poverty rates for the two measures for the U.S. total and for each state. The 3-year average poverty rates for the United States for the years 2014, 2015, and 2016 were 13.7 percent with the official measure and 14.7 percent using the SPM.

While the SPM national poverty rate is higher than the official, that difference varies by geographic area. Figure 7 shows the United States divided into three categories by state. States where the SPM rates are higher than official are shaded orange; states where SPM is lower than official are shaded blue; and states where the differences in the rates are not statistically significant are grey.

The 13 states for which the SPM rates were higher than the official poverty rates were California, Colorado, Connecticut, Florida, Hawaii, Illinois, Maryland, Massachusetts, Nevada, New Hampshire, New Jersey, New York, and Virginia. The SPM rate for the District of Columbia was also higher. Higher SPM rates by state may occur for many reasons. Geographic adjustments for housing costs and/or different mixes of housing tenure may result in higher SPM thresholds. Higher nondiscretionary expenses, such as taxes or medical expenses, may also drive higher SPM rates.

The 20 states where SPM rates were lower than the official poverty rates were Alabama, Arkansas, Idaho, Iowa, Kansas, Kentucky, Louisiana, Maine, Michigan, Mississippi, Montana, New Mexico, North Carolina, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Vermont, and West Virginia. Lower SPM rates would occur due to lower thresholds reflecting lower housing costs, a different mix of housing tenure, or more generous noncash benefits.

Those 17 states that were not statistically different under the two measures include Alaska, Arizona, Delaware, Georgia, Indiana, Minnesota, Missouri, Nebraska, North Dakota, Oregon, Pennsylvania, Rhode Island, Texas, Utah, Washington, Wisconsin, and Wyoming. Details are in Appendix Table A-5.

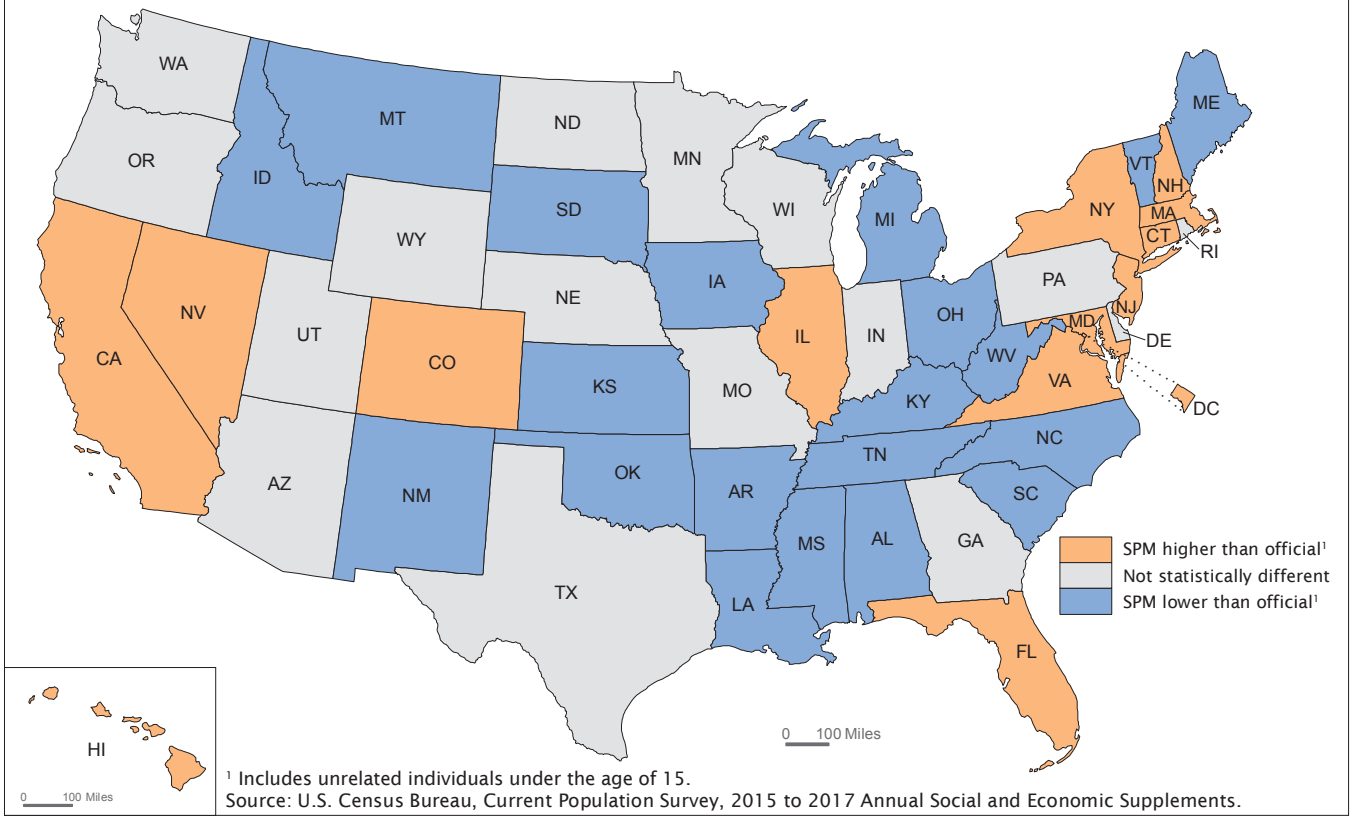
[10] There was a lower percentage of children with SPM resources under half their threshold than the percentage of individuals in the other age groups under half their threshold. The difference between the percentage of individuals aged 18 to 64 and 65 years and older in this range was not statistically significant.

[11] The differences between the percentage of White, not Hispanic individuals below half of their thresholds in the SPM compared to the official measure were not statistically significant.

[12] The Census Bureau recommends using the American Community Survey (ACS) for state-level poverty estimates, however, it is difficult to calculate the SPM with data from that survey. Ongoing research is exploring the use of the ACS for this purpose.

Figure 7.

Difference in Poverty Rates by State Using the Official Measure and the SPM: 3-Year Average 2014 to 2016



[1] Includes unrelated individuals under the age of 15.
Source: U.S. Census Bureau, Current Population Survey, 2015 to 2017 Annual Social and Economic Supplements.

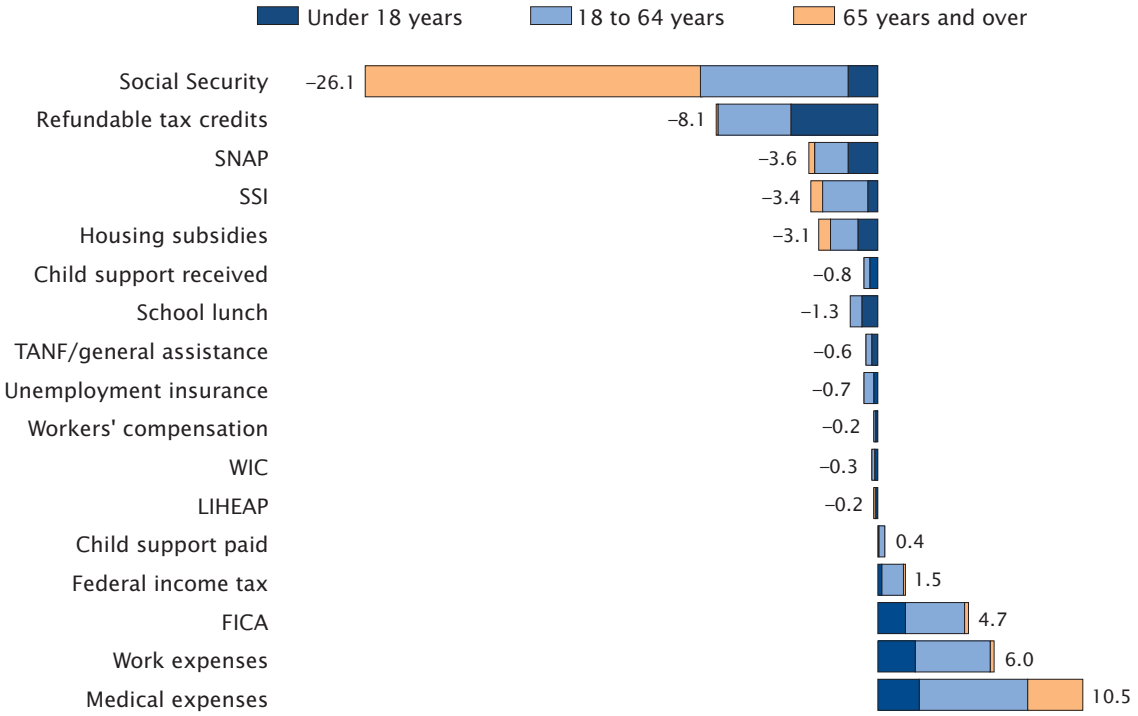
The SPM and the Effect of Cash and Noncash Transfers, Taxes, and Other Nondiscretionary Expenses

This section moves away from comparing the SPM with the official measure and looks only at the SPM. This analysis allows one to gauge the effects of taxes and transfers and other necessary expenses using the SPM as a measure of economic well-being.

The official poverty measure takes account of cash benefits from the government (e.g., Social Security and Unemployment Insurance benefits, Supplemental Security Income [SSI], public assistance benefits, such as Temporary Assistance for Needy Families, and workers' compensation benefits), but does not take account of taxes or noncash benefits aimed at improving the economic situation of the poor. Besides taking account of cash benefits and necessary expenses, such as medical expenses and expenses related to work, the SPM also accounts for taxes and noncash transfers. An important contribution of the SPM is that it allows us to gauge the potential magnitude of the effect of tax credits and transfers in alleviating poverty. We can also examine the effects of nondiscretionary expenses, such as work and medical expenses.

Figure 8 shows the effect that various additions and subtractions had on the number of people who would have been considered poor in 2016, holding all else the

Figure 8.
Change in Number of People in Poverty After Including Each Element: 2016
(In millions)



Note: For information on confidentiality protection, sampling error, nonsampling error, and definitions, see <www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf>.
Source: U.S. Census Bureau, Current Population Survey, 2017 Annual Social and Economic Supplement.

same and assuming no behavioral changes. Additions and subtractions are shown for the total population and by three age groups. Additions shown in the figure include cash benefits, also accounted for in the official measure, as well as noncash benefits, included only in the SPM. This allows us to examine the effects of government transfers on poverty estimates. Since child support paid is subtracted from income, we also examine the effect of child support received on alleviating poverty. Child support payments received are counted as income in both the official measure and the SPM.

Figure 8 allows us to compare the effect of transfers, both cash and noncash, and nondiscretionary expenses on numbers of individuals in poverty, all else equal. Social Security transfers and refundable tax credits had the largest impacts, preventing 26.1 million and 8.1 million individuals, respectively, from falling into poverty. Medical expenses were the largest contributor to increasing the number of individuals in poverty.

Appendix Table A-6 shows the effect that various additions and subtractions had on the SPM rate in 2016 and 2015, holding all else the same and assuming no behavioral changes. Appendix Table A-7 shows the same set of additions and subtractions but shows the number of people affected by removing each element from the SPM, rather than the change in the SPM rate.

Removing one item from the calculation of SPM resources and recalculating poverty rates shows, for example, that Social Security benefits decrease the SPM rate by 8.1 percentage points, from 22.1 percent to 14.0 percent. This means that with Social Security benefits, 26.1 million fewer people are living below the poverty line. By including refundable tax credits (the Earned Income Tax Credit [EITC] and the refundable portion of the child tax credit) in resources, 8.1 million fewer people are considered poor, all else constant. On the other hand, when

the SPM subtracts amounts paid for child support, income and payroll taxes, work-related expenses, and medical expenses, the number and percentage in poverty are higher. Subtracting medical expenses from income, the SPM rate is 3.3 percentage points higher. In numbers, 10.5 million more people are classified as poor.

In comparison to 2015, the 2016 impacts on poverty of refundable tax credits, the Supplemental Nutrition Assistance Program (SNAP), child support received, and workers' compensation, each declined in absolute and relative terms. From 2015 to 2016, refundable tax credits lifted 0.8 million fewer individuals out of poverty and SNAP lifted 1 million fewer individuals out of poverty (Appendix Table A-7). Conversely in 2016, including medical expenses and work expenses had a lower impact on poverty. Medical expenses pushed 0.9 million fewer people into poverty in 2016 than 2015, while work expenses pushed 0.6 million fewer people into poverty.

Appendix Tables A-6 and A-7 also show effects for different age groups. In 2016, accounting for refundable tax credits resulted in a 5.9 percentage-point decrease in the child poverty rate, representing 4.4 million children prevented from falling into poverty by the inclusion of these credits. Subtracting medical expenses, such as contributions toward the cost of medical care and health insurance premiums, from the income of families with children resulted in a child poverty rate 2.9 percentage points higher. For the 65-and-over age group, SPM rates increased by about 5.8 percentage points with the subtraction of medical expenses from income.

Adding Social Security benefits lowered poverty rates by 34.8 percentage points for the 65-and-over age group, lifting 17.1 million individuals above the poverty line. In comparison to 2015, the percentage of individuals aged 65 and over kept out of poverty by Social Security declined, from 36.2 percent to 34.8 percent.

SUMMARY

This report provides estimates of the SPM for the United States. The results shown illustrate differences between the official measure of poverty and a poverty measure that takes account of noncash benefits received by families and nondiscretionary expenses that they must pay. The SPM also employs a poverty threshold that is updated by the BLS with information on expenditures for food, clothing, shelter, and utilities. Results showed higher poverty rates using the SPM than the official measure for most groups, with children being an exception with lower poverty rates using the SPM.

The SPM allows us to examine the effect of taxes and noncash transfers on the poor and on important groups within the population in poverty. Because the SPM includes these items in determining resources, there are lower percentages of the SPM poverty populations in the very high and very low resource categories than we find using the official measure. Since noncash benefits help those in extreme poverty, there were lower percentages of individuals with resources below half the SPM threshold for most groups. In addition, the effect of benefits received from each program and taxes and other nondiscretionary expenses on SPM rates were examined.

REFERENCES

Many of the working papers listed below are available at: <www.census.gov/topics/income-poverty/supplemental-poverty-measure/library/working-papers.html> or <https://stats.bls.gov/pir/spmhome.htm>.

Betson, David, "Is Everything Relative? The Role of Equivalence Scales in Poverty Measurement," University of Notre Dame, Poverty Measurement Working Paper, U.S. Census Bureau, 1996.

Bridges, Benjamin and Robert V. Gesumaria, "The Supplemental Poverty Measure and the Aged: How and Why the SPM and Official Poverty Estimates Differ," Social Security Bulletin, Vol. 73, No. 4, 2013.

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APPENDIX

SPM HISTORY

This is the seventh report describing the Supplemental Poverty Measure (SPM) released by the U.S. Census Bureau, with support from the Bureau of Labor Statistics (BLS).

The SPM was developed following decades of research on poverty measurement. Concerns about the adequacy of the official measure culminated in a congressional appropriation in 1990 for an independent scientific study of the concepts, measurement methods, and information needed for a poverty measure. In response, the National Academy of Sciences (NAS) convened a Panel on Poverty and Family Assistance, which released its report, Measuring Poverty: A New Approach in 1995 (Citro and Michael, 1995).

The Interagency Technical Working Group on Developing a Supplemental Poverty Measure (ITWG) was formed in 2009 and charged with developing a set of initial starting points to permit the Census Bureau, in cooperation with BLS, to produce the SPM. In 2010, the ITWG (which included representatives from the BLS, the Census Bureau, the Economics and Statistics Administration, the Council of Economic Advisers, the U.S. Department of Health and Human Services, and the Office of Management and Budget) issued a series of suggestions to the Census Bureau and the BLS on how to develop the SPM.[13] Their suggestions drew on the recommendations of the 1995 NAS report and the subsequent extensive research on poverty measurement. The ITWG suggestions were published in the Federal Register and the Census Bureau and BLS reviewed comments from the public.[14]

In November 2011, the Census Bureau released the first SPM report, providing SPM estimates for 2009 and 2010. This year will be the third year in which the SPM report is released the same day as the official income and poverty report.

Last year, the Office of Management and Budget (OMB) convened a new interagency technical working group to provide advice on challenges and opportunities brought before it by the Census Bureau and BLS concerning data sources, estimation, survey production, and processing activities for development, implementation, publication, and improvement of the SPM. The SPM Working Group is composed of career federal employees representing their respective agencies and chaired by OMB. The agencies currently represented include the Bureau of Economic Analysis, the BLS, the Council of Economic Advisors, the Census Bureau, the Economic Research Service, the Food and Nutrition Service, the Department of Health and Human Services, the Department of Housing and Urban Development, the Internal Revenue Service, the National Center for Education Statistics, the National Center for Health Statistics, the OMB, and the Social Security Administration.

[13] See <www.census.gov/content/dam/Census/topics/income/supplemental-poverty-measure/spm-twgobservations.pdf>.

[14] Federal Register notice (Vol. 75, No. 101, p. 29513) was issued on May 26, 2010, soliciting public comments regarding specific methods and data sources in developing the SPM.

CHANGES IN 2016

The Census Bureau implemented several minor changes in this report. For consistency in our comparisons, we have revised all estimates in this report back to the 2013 redesign sample, resulting in slightly different 2013–2015 estimates than were released in previous reports (Short, 2014, 2015; Renwick and Fox, 2016). Three of these changes affect SPM rate estimates. For 2015, the combination of the changes resulted in a revised SPM rate of 14.5 percent, higher than the previously released rate of 14.3 percent. To allow researchers to disentangle the individual impacts of each change from the overall combination, Appendix Table A-8 shows the marginal impact of each, as well as the cumulative impact of all three. Estimates are shown overall and for selected demographic groups.

Revised Earned Income Tax Credit Estimates

In January 2017, the Census Bureau released revised tax estimates after the release of the 2015 SPM report. The 2015 SPM Research File was replaced with a file that included corrected tax variables.[15] Since these revisions had very small impacts (in most cases, less than 0.1 percentage points—see Appendix Table A-8) on any of the published poverty rates listed in the report, a revised version of the report was not released.

Work Expenses

In 2016, the Census Bureau released Wave 1 of the 2014 Survey of Income and Program Participation (SIPP). With the availability of this new data, we have transitioned to obtaining work

[15] The details of this revision can be found in the SPM Public Use Datatset Readme File, located at <www2.census.gov/programs-surveys/supplemental-poverty-measure/datasets/spm/readme.docx>.

expenses from the 2014 SIPP instead of continuing to adjust estimates using the 2008 SIPP. See Mohanty, Edwards, and Fox (2017) for details on the new panel and methodology. The new panel of SIPP finds higher work expenses, which results in greater deductions from resources and an increase in SPM rates. Appendix Table A-8 shows that the transition to new data has increased SPM rates overall for 2015 by 0.3 percentage points.

Public Housing Adjustments

In previous SPM reports, we have estimated the value of housing subsidies given to individuals in public housing as being less than the value of subsidies given to individuals receiving housing vouchers or rental assistance. Previous research has found that the value of public housing is not unambiguously worth less than the value of rental assistance and that households misreport whether they receive public housing or rental assistance in the CPS ASEC (Renwick, 2017). Given these ambiguities and increasing challenges in the reporting of housing subsidy values across various types of housing assistance, we eliminate the disparity in treatment among recipients of housing assistance. See Appendix Table A-8, for the impact of this change on poverty rates, overall and for selected demographic groups. This change resulted in modest reductions in SPM rates for 2015, reducing the overall poverty rate by 0.15 percentage points.

Official Poverty Treatment of Unrelated Individuals Under Age 15

In previous releases, the official poverty rate in the SPM report differed from the official poverty rate in the Census Bureau's income and poverty report (in 2015 the overall difference was 0.2 percentage points). This is due to our treatment of unrelated children under age 15, who are excluded from the official poverty measure universe but included in the SPM universe. As children under age 15 are not asked any income questions, these individuals were assigned income of $0 and a poverty threshold for a single person unit. As such, they were all considered poor in the official poverty estimates used in previous SPM reports. Beginning in this report, these individuals are assigned an official poverty status to match that of the reference person of the household in which they reside. We do not recalculate the official poverty status of anyone else in the household. See Fox (2017) for a comparison of official poverty estimates. Estimates of official poverty in this report have been revised back to 2013.

Change in Type of Unit Categories

In prior SPM reports, we divided SPM units into four mutually-exclusive categories for reporting breakdowns: married couple, female householder, male householder, and new SPM unit. The fourth category was a category that included all units that added a new member due to the more expansive SPM unit definitions. The vast majority (more than 90 percent) of these units were cohabiting partner units, but it also included units that expanded to include a foster child under age 22, an unrelated individual under age 15, or a parent of a child in the unit. Starting this year, units are divided into five mutually exclusive categories, irrespective of whether the family composition changed in the creation of SPM units from census-defined family units. The new classification is: married couple, cohabiting partners, female reference person, male reference person, and unrelated individuals. This change does not impact poverty estimates, it only represents a divergence in the categorization of our results.

SPM METHODOLOGY

Poverty Thresholds

Consistent with the NAS panel recommendations and the suggestions of the ITWG, the SPM thresholds are based on out-of-pocket spending on a basic set of goods and services that includes food, clothing, shelter, and utilities (FCSU), and a small additional amount to allow for other needs (e.g., household supplies, personal care, nonwork-related transportation). SPM thresholds are produced by the Bureau of Labor Statistics Division of Price and Index Number Research (BLS DPINR) using 5 years of quarterly Consumer Expenditure Survey (CE) Interview data for consumer units with exactly two children.[16] All individuals who share expenses with others in the household are included in the consumer unit.[17] FCSU expenditures are converted to equivalized values using a three-parameter equivalence scale (see below for description). The three-parameter equivalence scale is used to convert the estimation sample FCSU expenditures to those of a reference consumer unit composed of two adults with two children.

SPM thresholds are produced for three housing tenure groups to account for differences in housing costs. The three groups are owners with mortgages, owners without mortgages, and renters. Thresholds reflect average spending within the

[16] See <https://stats.bls.gov/cex/> for information on the CE.

[17] This includes unmarried partners and others making joint expenditure decisions. For full definition, see <https://stats.bls.gov/cex/faq.htm#q3>.

30th to 36th percentile range of FCSU expenditures for the estimation sample, multiplied by 1.2 to account for additional basic needs, with adjustments for shelter and utilities for each housing group. See the BLS DPINR Research Experimental Poverty Measures Web page for specifics regarding the production of the SPM thresholds and related statistics.[18]

The ITWG recommended that adjustments to thresholds should be made over time to reflect real changes in expenditures on the basic bundle of goods and services around the 33rd percentile of the expenditure distribution. The thresholds used here include the value of Supplemental Nutrition Assistance Program benefits in the measure of spending on food. As much as possible given available data, the calculation of the FCSU should include any noncash benefits that are counted on the resource side for FCSU. This is necessary for consistency of the threshold and resource definitions. Current research at the BLS is investigating the feasibility of incorporating additional noncash benefits in the threshold (for example, see Garner, Gudrais, and Short, 2016).

Equivalence Scales

The ITWG guidelines state that the "three-parameter equivalence scale" is to be used to adjust SPM reference thresholds for the number of adults and children.[19] 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 (Short et al., 1999; Short, 2001). The three-parameter scale is calculated in the following way:

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

Single parents: scale = $(\text{adults} + 0.8 * \text{first child} + 0.5 * \text{other children})^{0.7}$

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

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

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 5-year ACS estimates of median gross rents for two-bedroom units with complete kitchen and plumbing facilities. Separate medians were estimated for each of 260 metropolitan statistical areas large enough to be identified on the public-use version of the Current Population Survey Annual Social and Economic Supplement (CPS ASEC) file. For each state, a median is estimated for all nonmetropolitan areas (47) and for a combination of all smaller metropolitan areas within a state (42). This results in 349 adjustment factors. For details, see Renwick (2011).[20]

Unit of Analysis

The ITWG suggested that the resource unit in the SPM include all related individuals who live at the same address, any coresident unrelated children who are cared for by the family (such as foster children), and any cohabiters and their children.[21, 22] 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. They are referred to as SPM Resource Units. For all resource units that contain a set of male/female unmarried partners, the female partner's weight is used as the SPM family weight. For all other units, there is no change.[23]

Noncash Benefits

Supplemental Nutrition Assistance Program (SNAP)

SNAP benefits (formerly known as food stamps) are designed to allow eligible low-income households to afford a nutritionally adequate diet. Households that 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 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.

National School Lunch Program

This program offers children free school lunches if family income

[18] These are referred to as BLS-DPINR Research Experimental Supplemental Poverty Measure (SPM) Thresholds. For further information, see <https://stats.bls.gov/pir/spmhome.htm>.

[19] The official measure adjusts thresholds based on family size, number of children and adults, as well as whether or not the householder is aged 65 or over.

[20] Renwick, Figueroa, and Aten (2017) examined an alternative method of calculation for the geographic indexes using Regional Price Parities from the Bureau of Economic Analysis.

[21] Foster children up to the age of 22 are included in the new unit.

[22] The official measure of poverty uses the census-defined family that includes all individuals residing together who are related by birth, marriage, or adoption and treats all unrelated individuals aged 15 and over independently.

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

is below 130 percent of federal poverty guidelines, reduced-price school meals if family income is between 130 and 185 percent of the federal poverty guidelines, and a subsidized school meal for all other children.[24] In the CPS, the reference person is asked how many children "usually" ate a complete lunch at school, 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, which administers the school lunch program. There is no value included for school breakfast.[25]

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, assuming yearlong participation may overestimate the value of WIC benefits received by a given SPM family. In these estimates, we assume that all children less than 5 years old in a household where someone reports receiving WIC are also assigned receipt of WIC. If the child is aged 0 or 1 year, then we assume that the mother also gets WIC. If there is no child in the family, but the household reference person said "yes" to the WIC question, we assume this is a pregnant woman receiving WIC.

Low-Income Home Energy Assistance Program (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. In the CPS ASEC, the question on energy assistance asks for information about the entire previous year. Many households receive both a "regular" benefit and one or more crisis or emergency benefits. 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.

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 U.S. Department of Housing and Urban Development (HUD). These programs traditionally take the form of rental subsidies and mortgage-interest subsidies targeted to very-low-income renters and are either project-based (public housing) or 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 HUD administrative data from the Public and Indian Housing Information Center and the Tenant Rental Assistance Certification System. For each household identified in the CPS ASEC as receiving help with rent or living in public housing, an attempt was made to match on state, Core-Based Statistical Area,

[24] The poverty guidelines are issued each year by the Department of Health and Human Services. The guidelines are a simplified version of the Census Bureau's poverty thresholds used for administrative purposes—for instance, determining financial eligibility for certain federal programs. For more details and guidelines, see <https://aspe.hhs.gov/poverty-guidelines>.

[25] 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 $4.6 billion for all families in the SIPP for the year 2009 (Short, 2014a). For information on confidentiality protection, sampling error, nonsampling error, and definitions for the 2004 SIPP, see <www.census.gov/sipp/>.

and household size.[26] 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 the greater of one-third of their "adjusted" income or 10 percent of their gross income towards housing costs.[27] 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 do so only 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.

Necessary Expenses Subtracted From Resources

Taxes

The NAS panel and the ITWG 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 FCSU. Taking account of taxes allows us to account for receipt of the federal or state EITC and other tax credits. The CPS ASEC 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 FICA taxes.[28] These simulations also use a statistical match to the IRS Statistics of Income public-use microdata file of tax returns.

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 childcare), the NAS panel recommended subtracting a fixed amount for each earner 18 years or over. Their calculation was based on 1987 SIPP data that collected information on work expenses in a set of supplementary questions. They calculated 85 percent of median weekly expenses—$14.42 per week worked for anyone aged 18 or over 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. Work-related expenses have been collected in SIPP every year since the 1996 panel.[29] Each person in the SIPP reports their own expenditures on work-related items in a given week. The most recent available data are used to calculate median weekly expenses.[30] The number of weeks worked, reported in the CPS ASEC, is multiplied by 85 percent of median weekly work-related expenses for each person to arrive at annual work-related expenses.[31]

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 a single parent) work. To account for child care expenses while parents worked, in the CPS,

[26] HUD operates two major housing assistance programs: public housing and tenant-based or voucher programs. Previous research has found that households misreport whether they receive public housing or rental assistance in the CPS ASEC and that the value of public housing is not unambiguously worth less than the value of rental assistance (Renwick, 2017). Given these ambiguities and increasing challenges in the reporting of housing subsidy values across various types of housing assistance, beginning in the 2016 SPM report, we have eliminated the adjustment factor previously applied to public housing subsidy values.

[27] 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 that can be modeled from the CPS ASEC include $480 for each dependent, $400 for any elderly or disabled family member, child care, and medical expenses.

[28] Wheaton and Stevens (2016) compare the Census Bureau tax calculator to TAXSIM and the Bakija tax model and find consistency in tax estimates across the models.

[29] The 2004 panel, Wave 9 topical modules were not collected due to budget considerations.

[30] Beginning in 2016, work expenses were estimated from the new 2014 SIPP, Wave 1 data. Median weekly work expenses were $45.26 for 2016. For consistency, the 2015 SPM estimates presented in this report have been recalculated using the value of $47.17, also using 2014 SIPP, Wave 1 data.

[31] Edwards et al. (2014) examined an alternative method of valuing work-related expenses using the ACS.

parents are asked whether or not they pay for child care and how much they spent. The amounts paid for any type of child care while parents are at work are summed over all children. The ITWG, following the recommendations of the NAS report, suggested capping the amount subtracted from income, when combined with other work-related expenses, so that these do not exceed total reported earnings of the lowest earning reference person or spouse/partner of the reference person in the family. This capping procedure is applied before determining poverty status.[32]

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 the resources of those households that paid it. Without this subtraction, all child support is double counted in overall income statistics. Questions ascertaining amounts paid in child support are included in the CPS ASEC, and these reported amounts are subtracted in the estimates presented here.

Medical Expenses

The ITWG recommended subtracting medical 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 copayments 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 has available to purchase the basic bundle of goods.

While many individuals and families have health insurance that covers most of the very large expenses, the typical family pays the costs of health insurance premiums and other small fees out-of-pocket. 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 when a respondent reported Social Security Retirement benefits net of Medicare Part B premiums. For these respondents, a Part B premium set at the standard amount per month is automatically added to income. Corrections for these applied amounts are discussed in Caswell and Short (2011) and applied here. To be consistent with what is added to the Social Security income in these cases, the same amount is added to reported premium expenditures.[33] For the remaining respondents that report Medicare status, Medicare Part B premiums are simulated using the rules for income and tax filing status (see <www.medicare.gov/>).[34] 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, Specified Low-Income Medicare Beneficiary, or Qualified Individual or Qualified Disabled and Working Individuals. We do not take into account the possibility of (state-specific) asset requirements. Changes were made to the questions about health insurance coverage and medical expenses in the 2014 CPS ASEC. Details about those changes can be found in Janicki (2014).

[32] 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.

[33] In these cases, it is important to subtract an amount for Medicare Part B premiums that is equal to what is added to the resource side, i.e., Social Security income. Note that the instrument calculation is done irrespective of Medicaid status, and therefore dual-enrollees who report "net" Social Security income receive an estimate for Medicare Part B that is added to reported premiums.

[34] 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 few individuals on Medicare transition out of Medicare.

Appendix Table A-1.

Number and Percentage of People in Poverty Using the Supplemental Poverty Measure: 2016 and 2015

(Numbers in thousands, margin of error in thousands or percentage points as appropriate. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see *www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf*)

Characteristic	SPM 2016				SPM 2015				Difference	
	Number		Percent		Number		Percent			
	Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Number	Percent
All people	**44,752**	**810**	**14.0**	**0.3**	**46,250**	**902**	**14.5**	**0.3**	***–1,497**	***–0.5**
Sex										
Male	20,693	438	13.2	0.3	21,678	489	13.9	0.3	*–984	*–0.7
Female	24,059	476	14.7	0.3	24,572	514	15.1	0.3	–513	–0.4
Age										
Under 18 years	11,281	349	15.2	0.5	12,026	370	16.2	0.5	*–744	*–1.0
18 to 64 years	26,303	571	13.3	0.3	27,719	596	14.1	0.3	*–1,415	*–0.7
65 years and older	7,168	235	14.5	0.5	6,506	239	13.7	0.5	*662	*0.9
Type of Unit										
Married couple	16,516	601	8.6	0.3	17,341	620	9.1	0.3	–825	*–0.5
Cohabiting partners	3,261	284	13.0	1.0	3,970	314	15.4	1.2	*–709	*–2.4
Female reference person	11,655	498	27.3	1.0	11,623	442	27.0	0.9	31	0.3
Male reference person	2,635	258	17.5	1.6	2,683	239	18.8	1.5	–48	–1.3
Unrelated individuals	10,685	343	23.6	0.6	10,632	390	23.7	0.7	53	–0.1
Race[1] and Hispanic Origin										
White	30,717	617	12.5	0.3	31,493	735	12.8	0.3	–776	–0.3
White, not Hispanic	19,446	564	9.9	0.3	20,082	553	10.3	0.3	–636	–0.3
Black	9,086	390	21.6	0.9	9,527	423	22.8	1.0	–442	–1.2
Asian	2,774	204	14.7	1.1	2,929	221	16.1	1.2	–155	–1.4
Hispanic (any race)	12,670	432	22.0	0.7	12,862	487	22.6	0.9	–192	–0.6
Nativity										
Native born	35,515	728	12.8	0.3	36,789	734	13.3	0.3	*–1,273	*–0.5
Foreign born	9,237	325	21.1	0.7	9,461	387	22.0	0.8	–224	–0.9
Naturalized citizen	3,205	171	15.7	0.8	3,355	179	16.7	0.8	–150	–1
Not a citizen	6,032	263	25.7	1.0	6,106	311	26.6	1.1	–75	–0.8
Educational Attainment										
Total aged 25 and older	27,929	503	12.9	0.2	27,951	554	13.0	0.3	–22	–0.1
No high school diploma	6,356	227	28.2	0.8	6,916	257	29.5	0.9	*–560	*–1.3
High school, no college	10,139	317	16.2	0.5	9,647	295	15.6	0.4	*492	*0.7
Some college	6,615	251	11.5	0.4	6,723	231	11.7	0.4	–108	–0.2
Bachelor's degree or higher	4,819	225	6.5	0.3	4,665	202	6.5	0.3	154	Z
Tenure										
Owner	19,149	611	9.1	0.3	19,460	616	9.3	0.3	–311	–0.2
Owner/mortgage	10,122	461	7.4	0.3	10,323	481	7.7	0.4	–201	–0.3
Owner/no mortgage/rent free	9,825	417	12.7	0.5	9,985	414	12.8	0.5	–161	–0.1
Renter	24,806	703	23.3	0.6	25,942	672	24.3	0.6	*–1,136	*–1.0
Residence										
Inside metropolitan statistical areas	39,125	843	14.1	0.3	40,298	934	14.7	0.3	*–1,173	*–0.6
Inside principal cities	18,057	669	17.3	0.5	18,714	715	18.0	0.6	–657	–0.7
Outside principal cities	21,068	656	12.2	0.3	21,585	746	12.6	0.4	–516	–0.4
Outside metropolitan statistical areas[2]	5,627	501	12.9	0.7	5,951	540	13.4	0.7	–324	–0.5
Region										
Northeast	6,874	320	12.4	0.6	8,033	408	14.4	0.7	*–1,159	*–2.0
Midwest	7,424	361	11.1	0.5	7,401	378	11.0	0.6	23	Z
South	17,966	616	14.8	0.5	18,816	607	15.7	0.5	*–850	*–0.9
West	12,489	452	16.3	0.6	12,000	474	15.8	0.6	489	0.5

See footnotes at end of table.

Appendix Table A-1.

Number and Percentage of People in Poverty Using the Supplemental Poverty Measure: 2016 and 2015—Con.

(Numbers in thousands, margin of error in thousands or percentage points as appropriate. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see *www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf*)

Characteristic	SPM 2016				SPM 2015				Difference	
	Number		Percent		Number		Percent			
	Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Number	Percent
Health Insurance Coverage										
With private insurance	17,898	545	8.3	0.3	18,814	558	8.8	0.3	*–916	*–0.5
With public, no private insurance	19,646	510	25.8	0.6	19,658	553	26.0	0.6	–12	–0.2
Not insured	7,208	268	25.7	0.9	7,777	323	26.8	1.0	*–569	–1.2
Work Experience										
Total 18 to 64 years	26,303	571	13.3	0.3	27,719	596	14.1	0.3	*–1,415	*–0.7
All workers	12,111	361	8.0	0.2	12,949	343	8.6	0.2	*–838	*–0.6
Worked full-time, year-round	5,099	207	4.7	0.2	5,251	188	5.0	0.2	–152	–0.2
Less than full-time, year-round	7,012	258	16.3	0.6	7,699	274	17.3	0.6	*–686	*–1.0
Did not work at least 1 week	14,193	395	30.8	0.7	14,770	406	31.4	0.7	*–577	–0.6
Disability Status[3]										
Total 18 to 64 years	26,303	571	13.3	0.3	27,719	596	14.1	0.3	*–1,415	*–0.7
With a disability	3,905	182	25.4	1.0	4,054	185	26.5	1.0	–149	–1.2
With no disability	22,350	533	12.4	0.3	23,589	542	13.0	0.3	*–1,240	*–0.7

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

† The margin of error (MOE) is a measure of an estimate's variability. The larger the MOE in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. The MOEs shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at <www2.census.gov/library/publications/2017/demo/p60-259sa.pdf>.

Z Represents or rounds to zero.

[1] Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). This table shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing data. The Census Bureau uses a variety of approaches. Information on people who reported more than one race, such as White and American Indian and Alaska Native or Asian and Black or African American, is available from the 2010 Census through American FactFinder. About 2.9 percent of people reported more than one race in the 2010 Census. Data for American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and those reporting two or more races are not shown separately.

[2] The "Outside metropolitan statistical areas" category includes both micropolitan statistical areas and territory outside of metropolitan and micropolitan statistical areas. For more information, see "About Metropolitan and Micropolitan Statistical Areas" at <www.census.gov/population/metro>.

[3] The sum of those with and without a disability does not equal the total because disability status is not defined for individuals in the U.S. Armed Forces.

Note: Details may not sum to totals due to rounding.

Source: U.S. Census Bureau, Current Population Survey, 2016–2017 Annual Social and Economic Supplements.

Appendix Table A-2.

Number and Percentage of People in Poverty by Different Poverty Measures: 2016

(Numbers in thousands, margin of error in thousands or percentage points as appropriate. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see *www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf*)

Characteristic	Number** (in thousands)	Official**				SPM				Difference	
		Number		Percent		Number		Percent			
		Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Number	Percent
All people	**320,372**	**40,706**	**735**	**12.7**	**0.2**	**44,752**	**810**	**14.0**	**0.3**	***4,046**	***1.3**
Sex											
Male	156,939	17,739	396	11.3	0.3	20,693	438	13.2	0.3	*2,954	*1.9
Female	163,433	22,967	458	14.1	0.3	24,059	476	14.7	0.3	*1,092	*0.7
Age											
Under 18 years	74,047	13,344	366	18.0	0.5	11,281	349	15.2	0.5	*–2,062	*–2.8
18 to 64 years	197,051	22,795	473	11.6	0.2	26,303	571	13.3	0.3	*3,508	*1.8
65 years and older	49,274	4,568	198	9.3	0.4	7,168	235	14.5	0.5	*2,600	*5.3
Type of Unit											
Married couple	192,344	11,257	501	5.9	0.3	16,516	601	8.6	0.3	*5,260	*2.7
Cohabiting partners	24,994	6,576	345	26.3	1.0	3,261	284	13.0	1.0	*–3,314	*–13.3
Female reference person	42,758	11,647	510	27.2	1.0	11,655	498	27.3	1.0	7	Z
Male reference person	15,030	1,814	196	12.1	1.2	2,635	258	17.5	1.6	*821	*5.5
Unrelated individuals	45,246	9,413	324	20.8	0.6	10,685	343	23.6	0.6	*1,272	*2.8
Race[1] and Hispanic Origin											
White	246,310	27,174	546	11.0	0.2	30,717	617	12.5	0.3	*3,543	*1.4
White, not Hispanic	195,453	17,304	494	8.9	0.3	19,446	564	9.9	0.3	*2,142	*1.1
Black	42,040	9,248	388	22.0	0.9	9,086	390	21.6	0.9	–162	–0.4
Asian	18,897	1,917	176	10.1	0.9	2,774	204	14.7	1.1	*857	*4.5
Hispanic (any race)	57,670	11,160	399	19.4	0.7	12,670	432	22.0	0.7	*1,511	*2.6
Nativity											
Native born	276,518	34,079	666	12.3	0.2	35,515	728	12.8	0.3	*1,437	*0.5
Foreign born	43,854	6,627	269	15.1	0.6	9,237	325	21.1	0.7	*2,609	*6.0
Naturalized citizen	20,409	2,045	143	10.0	0.7	3,205	171	15.7	0.8	*1,160	*5.7
Not a citizen	23,445	4,582	223	19.5	0.9	6,032	263	25.7	1.0	*1,449	*6.2
Educational Attainment											
Total aged 25 and older	216,921	22,636	425	10.4	0.2	27,929	503	12.9	0.2	*5,293	*2.4
No high school diploma	22,541	5,599	214	24.8	0.8	6,356	227	28.2	0.8	*757	*3.4
High school, no college	62,512	8,309	250	13.3	0.4	10,139	317	16.2	0.5	*1,830	*2.9
Some college	57,765	5,430	202	9.4	0.3	6,615	251	11.5	0.4	*1,184	*2.1
Bachelor's degree or higher	74,103	3,299	167	4.5	0.2	4,819	225	6.5	0.3	*1,521	*2.1
Tenure											
Owner	210,698	14,761	496	7.0	0.2	19,149	611	9.1	0.3	*4,388	*2.1
Owner/mortgage	136,731	6,739	350	4.9	0.2	10,122	461	7.4	0.3	*3,383	*2.5
Owner/no mortgage/rent free	77,320	8,891	399	11.5	0.5	9,825	417	12.7	0.5	*934	*1.2
Renter	106,321	25,077	695	23.6	0.6	24,806	703	23.3	0.6	–271	–0.3
Residence											
Inside metropolitan statistical areas	276,816	33,808	832	12.2	0.3	39,125	843	14.1	0.3	*5,317	*1.9
Inside principal cities	104,295	16,598	646	15.9	0.5	18,057	669	17.3	0.5	*1,459	*1.4
Outside principal cities	172,521	17,211	575	10.0	0.3	21,068	656	12.2	0.3	*3,858	*2.2
Outside metropolitan statistical areas[2]	43,556	6,898	604	15.8	0.9	5,627	501	12.9	0.7	*–1,271	*–2.9
Region											
Northeast	55,558	5,982	352	10.8	0.6	6,874	320	12.4	0.6	*892	*1.6
Midwest	67,016	7,829	358	11.7	0.5	7,424	361	11.1	0.5	*–406	*–0.6
South	121,325	17,056	523	14.1	0.4	17,966	616	14.8	0.5	*909	*0.7
West	76,473	9,838	375	12.9	0.5	12,489	452	16.3	0.6	*2,650	*3.5

See footnotes at end of table.

Appendix Table A-2.

Number and Percentage of People in Poverty by Different Poverty Measures: 2016—Con.

(Numbers in thousands, margin of error in thousands or percentage points as appropriate. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see *www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf*)

Characteristic	Number** (in thousands)	Official**				SPM				Difference	
		Number		Percent		Number		Percent			
		Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Number	Percent
Health Insurance Coverage											
With private insurance	216,203	11,635	421	5.4	0.2	17,898	545	8.3	0.3	*6,264	*2.9
With public, no private insurance	76,117	22,446	553	29.5	0.6	19,646	510	25.8	0.6	*–2,799	*–3.7
Not insured	28,052	6,626	261	23.6	0.9	7,208	268	25.7	0.9	*582	*2.1
Work Experience											
Total 18 to 64 years	197,051	22,795	473	11.6	0.2	26,303	571	13.3	0.3	*3,508	*1.8
All workers	150,904	8,743	254	5.8	0.2	12,111	361	8.0	0.2	*3,368	*2.2
Worked full-time, year-round	107,781	2,416	131	2.2	0.1	5,099	207	4.7	0.2	*2,683	*2.5
Less than full-time, year-round	43,123	6,327	223	14.7	0.5	7,012	258	16.3	0.6	*685	*1.6
Did not work at least 1 week	46,148	14,052	381	30.5	0.7	14,193	395	30.8	0.7	141	0.3
Disability Status[3]											
Total 18 to 64 years	197,051	22,795	473	11.6	0.2	26,303	571	13.3	0.3	*3,508	*1.8
With a disability	15,405	4,123	191	26.8	1.1	3,905	182	25.4	1.0	*–218	*–1.4
With no disability	180,783	18,629	409	10.3	0.2	22,350	533	12.4	0.3	*3,720	*2.1

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

** Includes unrelated individuals under the age of 15.

† The margin of error (MOE) is a measure of an estimate's variability. The larger the MOE in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. The MOEs shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at <www2.census.gov/library/publications/2017/demo/p60-259sa.pdf>.

Z Represents or rounds to zero.

[1] Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). This table shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing data. The Census Bureau uses a variety of approaches. Information on people who reported more than one race, such as White and American Indian and Alaska Native or Asian and Black or African American, is available from the 2010 Census through American FactFinder. About 2.9 percent of people reported more than one race in the 2010 Census. Data for American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and those reporting two or more races are not shown separately.

[2] The "Outside metropolitan statistical areas" category includes both micropolitan statistical areas and territory outside of metropolitan and micropolitan statistical areas. For more information, see "About Metropolitan and Micropolitan Statistical Areas" at <www.census.gov/population/metro>.

[3] The sum of those with and without a disability does not equal the total because disability status is not defined for individuals in the U.S. Armed Forces.

Note: Details may not sum to totals due to rounding.

Source: U.S. Census Bureau, Current Population Survey, 2017 Annual Social and Economic Supplement.

Appendix Table A-3.

Two-Adult-Two-Child Poverty Thresholds: 2015 and 2016

(In dollars)

Measure	2015	Standard error	2016	Standard error
Official poverty measure	**24,036**	**N**	**24,339**	**N**
Research supplemental poverty measure				
Owners with mortgages	25,930	297	26,336	280
Owners without mortgages	21,806	417	22,298	390
Renters	25,583	282	26,104	302

N Not available

Source: The thresholds, shares, and means were produced by Marisa Gudrais with assistance from Juan D. Munoz, and under the guidance of Thesia I. Garner. Gudrais, Munoz, and Garner work in the Division of Price and Index Number Research, Bureau of Labor Statistics (BLS). These thresholds and statistics are produced for research purposes only using the U.S. Consumer Expenditure Interview Survey. The thresholds are not BLS production quality. This work is solely that of the authors and does not necessarily reflect the official positions or policies of the BLS, or the views of other staff members within this agency. For methodological details and related research regarding the SPM thresholds, see <https://stats.bls.gov/pir/spmhome.htm>.

Appendix Table A-4.

Percentage of People by Ratio of Income/Resources to Poverty Threshold: 2016 and 2015

(Margin of error in percentage points. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see *www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf*)

Characteristic	Less than 0.5	Margin of error† (±)	0.5 to 0.99	Margin of error† (±)	1.0 to 1.49	Margin of error† (±)	1.5 to 1.99	Margin of error† (±)	2.0 to 3.99	Margin of error† (±)	4.0 or more	Margin of error† (±)
2016												
OFFICIAL*												
All people	**5.8**	**0.2**	**6.9**	**0.2**	**8.5**	**0.2**	**8.6**	**0.2**	**29.5**	**0.3**	**40.8**	**0.4**
Age												
Under 18 years	8.2	0.4	9.8	0.4	10.9	0.4	10.1	0.4	29.1	0.6	31.9	0.6
18 to 64 years	5.5	0.2	6.1	0.2	7.0	0.2	7.6	0.2	29.1	0.4	44.8	0.4
65 years and older	3.3	0.3	6.0	0.3	10.8	0.4	10.4	0.4	31.4	0.7	38.1	0.8
Race[1] and Hispanic Origin												
White	4.9	0.2	6.2	0.2	8.0	0.2	8.2	0.2	29.7	0.4	43.0	0.5
White, not Hispanic	4.1	0.2	4.7	0.2	6.5	0.2	7.2	0.2	29.0	0.5	48.3	0.6
Black	10.8	0.8	11.2	0.6	11.8	0.7	10.8	0.7	29.7	0.9	25.6	1.0
Asian	5.3	0.7	4.9	0.6	5.6	0.7	7.3	0.8	25.6	1.4	51.4	1.5
Hispanic (any race)	7.6	0.4	11.7	0.6	13.7	0.6	11.8	0.6	32.5	0.8	22.7	0.8
SPM												
All people	**4.9**	**0.2**	**9.0**	**0.2**	**15.4**	**0.3**	**14.1**	**0.3**	**35.5**	**0.4**	**21.0**	**0.3**
Age												
Under 18 years	4.4	0.3	10.8	0.4	19.8	0.5	16.9	0.5	34.4	0.6	13.7	0.4
18 to 64 years	5.1	0.2	8.3	0.2	13.8	0.3	13.5	0.3	36.7	0.4	22.6	0.4
65 years and older	5.2	0.3	9.4	0.4	15.1	0.5	12.8	0.5	32.3	0.6	25.2	0.7
Race[1] and Hispanic Origin												
White	4.4	0.2	8.1	0.2	14.1	0.3	13.7	0.3	36.6	0.4	23.1	0.4
White, not Hispanic	4.0	0.2	6.0	0.2	11.3	0.3	12.6	0.3	39.2	0.5	27.0	0.4
Black	7.4	0.6	14.2	0.8	22.9	1.0	15.8	0.8	29.5	1.0	10.2	0.6
Asian	5.9	0.7	8.7	0.9	13.2	1.1	13.3	1.1	36.9	1.5	21.9	1.3
Hispanic (any race)	5.9	0.5	16.0	0.7	24.9	0.9	18.3	0.7	26.5	0.8	8.2	0.4
2015												
OFFICIAL*												
All people	**6.1**	**0.2**	**7.4**	**0.2**	**9.0**	**0.2**	**9.2**	**0.2**	**28.7**	**0.4**	**39.6**	**0.4**
Age												
Under 18 years	8.9	0.4	10.8	0.4	11.7	0.4	10.3	0.4	27.7	0.6	30.6	0.5
18 to 64 years	5.9	0.2	6.5	0.2	7.5	0.2	8.2	0.2	28.4	0.4	43.5	0.4
65 years and older	2.8	0.3	6.0	0.3	10.8	0.4	11.5	0.5	31.4	0.8	37.5	0.9
Race[1] and Hispanic Origin												
White	5.1	0.2	6.5	0.2	8.4	0.2	8.9	0.2	29.0	0.4	42.1	0.4
White, not Hispanic	4.3	0.2	4.8	0.2	6.9	0.2	7.8	0.3	28.8	0.4	47.5	0.5
Black	10.9	0.7	13.2	0.7	12.4	0.7	11.2	0.7	27.7	0.9	24.7	0.9
Asian	6.2	0.8	5.2	0.6	6.6	0.8	6.5	0.9	26.9	1.4	48.6	1.6
Hispanic (any race)	8.5	0.5	12.8	0.6	14.3	0.7	13.4	0.7	29.7	0.8	21.2	0.7

See footnotes at end of table.

Appendix Table A-4.

Percentage of People by Ratio of Income/Resources to Poverty Threshold: 2016 and 2015—Con.

(Margin of error in percentage points. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see *www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf*)

Characteristic	Less than 0.5	Margin of error† (±)	0.5 to 0.99	Margin of error† (±)	1.0 to 1.49	Margin of error† (±)	1.5 to 1.99	Margin of error† (±)	2.0 to 3.99	Margin of error† (±)	4.0 or more	Margin of error† (±)
2015—Con.												
SPM												
All people	**5.0**	**0.2**	**9.5**	**0.2**	**16.6**	**0.3**	**15.1**	**0.3**	**34.3**	**0.4**	**19.5**	**0.3**
Age												
Under 18 years	4.9	0.3	11.4	0.5	21.9	0.5	18.7	0.5	31.6	0.6	11.6	0.4
18 to 64 years	5.1	0.2	9.0	0.2	14.8	0.3	14.2	0.3	35.7	0.5	21.2	0.4
65 years and older	4.5	0.3	9.1	0.4	16.0	0.5	13.2	0.5	32.5	0.7	24.7	0.7
Race[1] and Hispanic Origin												
White	4.3	0.2	8.5	0.3	15.3	0.3	14.8	0.3	35.6	0.5	21.5	0.4
White, not Hispanic	3.8	0.2	6.4	0.2	12.1	0.3	13.8	0.3	38.7	0.5	25.1	0.5
Black	7.5	0.5	15.4	0.9	23.5	0.9	16.6	0.8	27.7	0.9	9.4	0.6
Asian	6.7	0.8	9.3	0.9	15.6	1.5	13.7	1.1	33.8	1.7	20.9	1.2
Hispanic (any race)	6.3	0.4	16.3	0.7	27.7	0.7	18.5	0.7	23.6	0.8	7.6	0.4

* Includes unrelated individuals under the age of 15.

† The margin of error (MOE) is a measure of an estimate's variability. The larger the MOE in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. The MOEs shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at <www2.census.gov/library/publications/2017/demo/p60-259sa.pdf>.

[1] Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). This table shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing data. The Census Bureau uses a variety of approaches. Information on people who reported more than one race, such as White and American Indian and Alaska Native or Asian and Black or African American, is available from the 2010 Census through American FactFinder. About 2.9 percent of people reported more than one race in the 2010 Census. Data for American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and those reporting two or more races are not shown separately.

Note: Details may not sum to totals due to rounding.

Source: U.S. Census Bureau, Current Population Survey, 2016–2017 Annual Social and Economic Supplements.

Appendix Table A-5.

Number and Percentage of People in Poverty by State Using 3-Year Average Over: 2014, 2015, and 2016

(Numbers in thousands, margin of error in thousands or percentage points as appropriate. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see *www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf*)

State	Official**				SPM				Difference	
	Number		Percent		Number		Percent			
	Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Number	Percent
United States	**43,533**	**537**	**13.7**	**0.2**	**46,748**	**531**	**14.7**	**0.2**	***3,215**	***1.0**
Alabama	807	73	16.8	1.6	696	63	14.5	1.4	*–110	*–2.3
Alaska	79	9	11.2	1.2	82	7	11.7	1.0	3	0.5
Arizona	1,226	71	18.1	1.1	1,205	74	17.8	1.1	–21	–0.3
Arkansas	493	32	16.8	1.1	430	36	14.7	1.3	*–63	*–2.1
California	5,671	220	14.5	0.6	7,955	226	20.4	0.6	*2,284	*5.9
Colorado	557	67	10.2	1.3	611	62	11.2	1.2	*54	*1.0
Connecticut	328	42	9.2	1.2	428	45	12.0	1.3	*101	*2.8
Delaware	106	10	11.2	1.1	110	10	11.6	1.1	3	0.4
District of Columbia	117	7	17.3	1.0	141	8	21.0	1.2	*25	*3.7
Florida	3,068	150	15.2	0.7	3,779	173	18.8	0.9	*711	*3.5
Georgia	1,697	104	16.8	1.0	1,629	104	16.1	1.0	–68	–0.7
Hawaii	143	16	10.3	1.2	204	16	14.8	1.2	*61	*4.4
Idaho	197	19	11.9	1.2	165	21	10.0	1.2	*–32	*–1.9
Illinois	1,554	106	12.2	0.8	1,701	111	13.4	0.9	*147	*1.2
Indiana	867	73	13.3	1.2	823	73	12.7	1.1	–44	–0.7
Iowa	314	30	10.1	1.0	273	25	8.8	0.8	*–40	*–1.3
Kansas	357	34	12.5	1.2	286	30	10.0	1.0	*–71	*–2.5
Kentucky	794	63	18.2	1.5	653	48	15.0	1.1	*–142	*–3.2
Louisiana	943	51	20.6	1.1	843	64	18.4	1.4	*–100	*–2.2
Maine	175	20	13.2	1.5	153	18	11.6	1.4	*–22	*–1.7
Maryland	525	57	8.9	1.0	798	74	13.5	1.3	*273	*4.6
Massachusetts	779	62	11.6	0.9	925	76	13.7	1.1	*146	*2.2
Michigan	1,271	85	12.9	0.9	1,168	79	11.8	0.8	*–104	*–1.1
Minnesota	449	57	8.2	1.0	434	58	8.0	1.1	–15	–0.3
Mississippi	614	42	20.8	1.4	499	33	16.9	1.1	*–114	*–3.9
Missouri	657	71	11.1	1.2	670	70	11.3	1.2	14	0.2
Montana	122	14	11.9	1.4	113	13	11.1	1.3	*–9	*–0.8
Nebraska	198	20	10.6	1.1	184	19	9.8	1.0	–14	–0.8
Nevada	383	38	13.3	1.3	427	40	14.8	1.4	*44	*1.5
New Hampshire	91	12	6.9	0.9	115	13	8.8	1.0	*25	*1.9
New Jersey	949	96	10.7	1.1	1,365	102	15.3	1.1	*416	*4.7
New Mexico	391	35	19.2	1.7	320	23	15.7	1.1	*–71	*–3.5
New York	2,625	135	13.4	0.7	3,143	140	16.0	0.7	*517	*2.6
North Carolina	1,517	99	15.3	1.0	1,376	89	13.8	0.9	*–141	*–1.4
North Dakota	78	10	10.5	1.4	79	6	10.5	0.9	Z	Z
Ohio	1,644	105	14.3	0.9	1,350	98	11.8	0.8	*–294	*–2.6
Oklahoma	590	60	15.3	1.6	492	58	12.8	1.5	*–97	*–2.5
Oregon	513	62	12.7	1.5	522	53	12.9	1.3	10	0.2
Pennsylvania	1,511	106	12.0	0.8	1,442	106	11.5	0.9	–69	–0.5
Rhode Island	120	14	11.5	1.3	111	13	10.6	1.3	–9	–0.9
South Carolina	720	55	14.9	1.1	660	50	13.7	1.0	*–60	*–1.3
South Dakota	117	15	13.7	1.9	97	11	11.4	1.3	*–20	*–2.3
Tennessee	1,033	79	15.7	1.2	952	75	14.4	1.1	*–80	*–1.2
Texas	4,074	190	14.9	0.7	4,017	205	14.7	0.8	–57	–0.2
Utah	281	38	9.4	1.3	283	36	9.4	1.2	2	0.1

See footnotes at end of table.

Appendix Table A-5.

Number and Percentage of People in Poverty by State Using 3-Year Average Over: 2014, 2015, and 2016—Con.

(Numbers in thousands, margin of error in thousands or percentage points as appropriate. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see *www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf*)

State	Official**				SPM				Difference	
	Number		Percent		Number		Percent			
	Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Estimate	Margin of error† (±)	Number	Percent
Vermont	61	7	9.9	1.1	53	6	8.6	1.0	*–8	*–1.3
Virginia	891	89	10.8	1.1	1,230	97	15.0	1.2	*339	*4.1
Washington	825	65	11.5	0.9	843	78	11.7	1.1	18	0.2
West Virginia	321	48	17.7	2.7	255	23	14.1	1.3	*–66	*–3.7
Wisconsin	635	54	11.0	0.9	600	60	10.4	1.1	–35	–0.6
Wyoming	58	8	10.1	1.3	57	7	9.9	1.3	–1	–0.1

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

** Includes unrelated individuals under the age of 15.

† The margin of error (MOE) is a measure of an estimate's variability. The larger the MOE in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. The MOEs shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at <www2.census.gov/library/publications/2017/demo/p60-259sa.pdf>.

Z Represents or rounds to zero.

Note: Details may not sum to totals due to rounding.

Source: U.S. Census Bureau, Current Population Survey, 2015–2017 Annual Social and Economic Supplements.

Appendix Table A-6.

Effect of Individual Elements on SPM Rates: 2016 and 2015

(Margin of error in percentage points. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see *www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf*)

Element	All people		Under 18 years		18 to 64 years		65 years and over	
	Estimate	Margin of error[†] (±)	Estimate	Margin of error[†] (±)	Estimate	Margin of error[†] (±)	Estimate	Margin of error[†] (±)
2016								
All people	**13.97**	**0.25**	**15.24**	**0.47**	**13.35**	**0.29**	**14.55**	**0.47**
ADDITIONS								
Social Security	–8.15	0.17	–2.03	0.18	–3.79	0.15	–34.77	0.73
Refundable tax credits	–2.54	0.13	–5.92	0.33	–1.86	0.10	–0.20	0.05
SNAP	–1.12	0.09	–2.04	0.21	–0.89	0.07	–0.64	0.10
SSI	–1.05	0.08	–0.67	0.10	–1.15	0.09	–1.23	0.13
Housing subsidies	–0.98	0.07	–1.41	0.17	–0.74	0.06	–1.27	0.15
Child support received	–0.24	0.04	–0.57	0.11	–0.16	0.03	–0.02	0.01
School lunch	–0.41	0.06	–1.03	0.16	–0.27	0.04	–0.02	0.02
TANF/general assistance	–0.19	0.04	–0.41	0.10	–0.15	0.03	–0.04	0.02
Unemployment insurance	–0.21	0.04	–0.28	0.07	–0.23	0.04	–0.04	0.02
LIHEAP	–0.05	0.01	–0.07	0.04	–0.04	0.01	–0.07	0.03
Workers' compensation	–0.08	0.02	–0.08	0.03	–0.08	0.03	–0.05	0.03
WIC	–0.09	0.03	–0.20	0.07	–0.07	0.02	–0.01	0.01
SUBTRACTIONS								
Child support paid	0.11	0.02	0.11	0.04	0.13	0.03	0.01	0.02
Federal income tax	0.46	0.05	0.31	0.08	0.59	0.07	0.14	0.05
FICA	1.48	0.10	1.99	0.18	1.57	0.11	0.34	0.07
Work expenses	1.86	0.12	2.61	0.21	1.94	0.12	0.42	0.08
Medical expenses	3.29	0.15	2.91	0.24	2.81	0.15	5.76	0.35
2015								
All people	**14.50**	**0.28**	**16.24**	**0.50**	**14.05**	**0.30**	**13.68**	**0.50**
ADDITIONS								
Social Security	–8.39	0.19	–2.16	0.18	–4.03	0.16	–36.17	0.79
Refundable tax credits	–2.82	0.13	–6.44	0.34	–2.09	0.10	–0.19	0.05
SNAP	–1.44	0.09	–2.72	0.21	–1.12	0.08	–0.77	0.12
SSI	–1.07	0.08	–0.81	0.12	–1.10	0.09	–1.33	0.17
Housing subsidies	–0.93	0.07	–1.42	0.15	–0.71	0.06	–1.07	0.15
Child support received	–0.42	0.05	–1.01	0.14	–0.29	0.04	–0.03	0.02
School lunch	–0.39	0.05	–0.98	0.13	–0.26	0.03	–0.04	0.03
TANF/general assistance	–0.21	0.04	–0.47	0.10	–0.15	0.03	–0.02	0.02
Unemployment insurance	–0.21	0.04	–0.27	0.07	–0.23	0.04	–0.03	0.02
LIHEAP	–0.06	0.02	–0.08	0.04	–0.05	0.02	–0.09	0.04
Workers' compensation	–0.12	0.03	–0.15	0.07	–0.13	0.03	–0.03	0.02
WIC	–0.11	0.03	–0.26	0.08	–0.07	0.02	–0.01	0.01
SUBTRACTIONS								
Child support paid	0.09	0.02	0.08	0.03	0.10	0.03	0.02	0.02
Federal income tax	0.47	0.05	0.35	0.07	0.59	0.06	0.16	0.06
FICA	1.56	0.10	2.15	0.18	1.62	0.10	0.38	0.08
Work expenses	2.06	0.11	2.77	0.22	2.17	0.11	0.53	0.10
Medical expenses	3.58	0.15	3.43	0.22	3.14	0.16	5.66	0.31

[†] The margin of error (MOE) is a measure of an estimate's variability. The larger the MOE in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. The MOEs shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at <www2.census.gov/library/publications/2017/demo/p60-259sa.pdf>.

Source: U.S. Census Bureau, Current Population Survey, 2016–2017 Annual Social and Economic Supplements.

Appendix Table A-7.

Effect of Individual Elements on the Number of Individuals in Poverty: 2016 and 2015

(Numbers and margin of error in thousands. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see *www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf*)

Element	All people		Under 18 years		18 to 64 years		65 years and over	
	Number	Margin of error† (±)	Number	Margin of error† (±)	Number	Margin of error† (±)	Number	Margin of error† (±)
2016								
All people	**44,752**	**810**	**11,281**	**349**	**26,303**	**571**	**7,168**	**235**
ADDITIONS								
Social Security	–26,110	549	–1,500	136	–7,476	301	–17,133	374
Refundable tax credits	–8,148	430	–4,384	245	–3,667	206	–97	26
SNAP	–3,585	281	–1,514	153	–1,753	138	–318	49
SSI	–3,356	254	–494	75	–2,257	182	–605	67
Housing subsidies	–3,125	239	–1,046	125	–1,454	126	–626	73
Child support received	–757	131	–426	81	–322	57	–9	6
School lunch	–1,311	190	–762	117	–538	82	–12	8
TANF/general assistance	–617	120	–305	73	–293	57	–19	9
Unemployment insurance	–680	119	–208	53	–454	76	–18	10
LIHEAP	–157	44	–48	26	–72	24	–36	15
Workers' compensation	–242	70	–58	24	–158	50	–26	17
WIC	–284	94	–148	52	–133	46	–3	4
SUBTRACTIONS								
Child support paid	350	80	80	33	263	57	7	9
Federal income tax	1,469	167	233	56	1,166	131	70	22
FICA	4,726	314	1,473	133	3,087	213	167	36
Work expenses	5,971	369	1,929	159	3,832	243	209	38
Medical expenses	10,542	483	2,157	175	5,546	301	2,839	176
2015								
All people	**46,250**	**902**	**12,026**	**370**	**27,719**	**596**	**6,506**	**239**
ADDITIONS								
Social Security	–26,740	598	–1,596	131	–7,945	315	–17,199	376
Refundable tax credits	–8,987	429	–4,769	250	–4,129	207	–89	24
SNAP	–4,601	298	–2,017	157	–2,218	157	–367	55
SSI	–3,412	256	–603	88	–2,176	175	–633	81
Housing subsidies	–2,970	209	–1,053	114	–1,409	118	–509	70
Child support received	–1,329	162	–750	100	–564	74	–16	10
School lunch	–1,256	161	–723	99	–514	69	–20	13
TANF/general assistance	–657	114	–351	71	–297	59	–9	9
Unemployment insurance	–665	115	–197	51	–452	76	–16	9
LIHEAP	–205	57	–57	29	–105	33	–42	18
Workers' compensation	–377	105	–114	52	–250	68	–14	11
WIC	–339	91	–196	59	–139	38	–4	4
SUBTRACTIONS								
Child support paid	275	72	59	25	206	53	10	10
Federal income tax	1,500	161	261	50	1,162	120	77	27
FICA	4,965	312	1,591	133	3,192	206	181	39
Work expenses	6,572	341	2,050	161	4,271	214	251	46
Medical expenses	11,425	472	2,542	161	6,190	320	2,693	145

† The margin of error (MOE) is a measure of an estimate's variability. The larger the MOE in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. The MOEs shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at <www2.census.gov/library/publications/2017/demo/p60-259sa.pdf>.

Note: Details may not sum to totals due to rounding.

Source: U.S. Census Bureau, Current Population Survey, 2016–2017 Annual Social and Economic Supplements.

Appendix Table A-8.

Individual and Combined Impact of Changes to the SPM: 2015

(Numbers and margin of error in percentage points as appropriate. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see *www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf*)

Characteristic	2015 SPM rate (as published September 2016)		Percentage-point impact of individual changes			2015 SPM rate (revised)		Combined percentage-point difference††
	Estimate	Margin of error† (±)	EITC fix	Work expenses	Housing adjustment	Estimate	Margin of error† (±)	
All people	**14.32**	**0.28**	***0.02**	***0.31**	***–0.15**	**14.50**	**0.28**	***0.19**
Sex								
Male	13.69	0.31	*0.02	*0.29	*–0.13	13.88	0.31	*0.19
Female	14.92	0.32	*0.02	*0.33	*–0.17	15.11	0.32	*0.19
Age								
Under 18 years	16.11	0.50	0.01	*0.39	*–0.27	16.24	0.50	*0.13
18 to 64 years	13.80	0.30	*0.02	*0.34	*–0.12	14.05	0.30	*0.25
65 years and older	13.67	0.50	*0.02	*0.07	*–0.08	13.68	0.50	0.01
Type of Unit								
Married couple	8.96	0.31	Z	*0.21	*–0.07	9.08	0.32	*0.13
Cohabiting partners	15.08	1.16	0.04	*0.38	*–0.21	15.42	1.18	*0.34
Female reference person	26.71	0.91	0.03	*0.66	*–0.51	26.96	0.89	*0.25
Male reference person	18.29	1.47	0.08	*0.70	–0.18	18.82	1.48	*0.53
Unrelated individuals	23.51	0.68	*0.03	*0.26	*–0.10	23.70	0.68	*0.19
Race[1] and Hispanic Origin								
White	12.55	0.29	*0.02	*0.31	*–0.08	12.81	0.30	*0.26
White, not Hispanic	10.04	0.28	*0.02	*0.25	–0.04	10.26	0.28	*0.23
Black	22.96	1.01	0.01	*0.36	*–0.48	22.85	1.01	–0.11
Asian	16.01	1.23	Z	*0.14	–0.10	16.05	1.20	0.04
Hispanic (any race)	22.36	0.84	*0.03	*0.53	*–0.33	22.62	0.86	*0.25
Nativity								
Native born	13.17	0.27	*0.02	*0.28	*–0.14	13.34	0.27	*0.17
Foreign born	21.65	0.75	*0.03	*0.50	*–0.23	21.97	0.75	*0.32
Naturalized citizen	16.66	0.87	0.02	*0.23	*–0.22	16.70	0.85	0.04
Not a citizen	26.00	1.04	0.03	*0.74	*–0.24	26.57	1.07	*0.57
Educational Attainment								
Total aged 25 and older	12.84	0.26	0.01	*0.25	*–0.10	13.00	0.26	*0.16
No high school diploma	29.29	0.93	*0.02	*0.42	*–0.27	29.49	0.91	*0.20
High school, no college	15.38	0.45	0.02	*0.30	*–0.14	15.56	0.45	*0.18
Some college	11.46	0.39	0.01	*0.30	*–0.10	11.66	0.40	*0.20
Bachelor's degree or higher	6.39	0.26	Z	*0.12	–0.02	6.49	0.26	*0.10
Tenure								
Owner	9.11	0.28	0.01	*0.21	Z	9.32	0.28	*0.21
Owner/mortgage	7.45	0.34	*0.02	*0.22	Z	7.69	0.35	*0.23
Owner/no mortgage/rent free	12.66	0.51	Z	*0.17	Z	12.83	0.51	*0.17
Renter	24.16	0.59	*0.03	*0.53	*–0.45	24.30	0.58	*0.14
Residence								
Inside metropolitan statistical areas	14.50	0.31	*0.02	*0.31	*–0.15	14.69	0.32	*0.18
Inside principal cities	17.87	0.63	0.02	*0.41	*–0.29	18.04	0.64	*0.17
Outside principal cities	12.46	0.39	*0.02	*0.25	*–0.07	12.65	0.40	*0.19
Outside metropolitan statistical areas[2]	13.16	0.67	0.02	*0.33	*–0.13	13.38	0.68	*0.22

See footnotes at end of table.

Appendix Table A-8.

Individual and Combined Impact of Changes to the SPM: 2015—Con.

(Numbers and margin of error in percentage points as appropriate. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see *www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf*)

Characteristic	2015 SPM rate (as published September 2016)		Percentage-point impact of individual changes			2015 SPM rate (revised)		Combined percentage-point difference[††]
	Estimate	Margin of error[†] (±)	EITC fix	Work expenses	Housing adjustment	Estimate	Margin of error[†] (±)	
Region								
Northeast	14.32	0.71	*0.03	*0.25	*–0.23	14.38	0.73	0.05
Midwest	10.74	0.56	0.02	*0.31	–0.03	11.03	0.57	*0.28
South	15.45	0.51	0.02	*0.32	*–0.10	15.66	0.51	*0.22
West	15.69	0.62	0.01	*0.34	*–0.28	15.84	0.62	*0.15
Health Insurance Coverage								
With private insurance	8.57	0.26	*0.02	*0.23	–0.03	8.78	0.26	*0.22
With public, no private insurance	26.02	0.64	*0.01	*0.39	*–0.48	25.98	0.63	–0.04
Not insured	26.29	0.98	*0.04	*0.69	–0.17	26.85	0.95	*0.56
Work Experience								
Total 18 to 64 years	13.80	0.30	*0.02	*0.34	*–0.12	14.05	0.30	*0.25
All workers	8.31	0.22	*0.02	*0.35	*–0.07	8.62	0.23	*0.31
Worked full-time, year-round	4.73	0.18	0.01	*0.27	–0.03	4.97	0.18	*0.24
Less than full-time, year-round	16.79	0.57	*0.07	*0.55	*–0.17	17.29	0.56	*0.49
Did not work at least 1 week	31.35	0.72	0.01	*0.31	*–0.28	31.40	0.72	0.05
Disability Status[3]								
Total 18 to 64 years	13.80	0.30	*0.02	*0.34	*–0.12	14.05	0.30	*0.25
With a disability	26.46	1.04	*0.02	*0.31	*–0.28	26.54	1.05	0.08
With no disability	12.76	0.29	*0.02	*0.35	*–0.11	13.03	0.30	*0.27

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

† The margin of error (MOE) is a measure of an estimate's variability. The larger the MOE in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. The MOEs shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at <www2.census.gov/library/publications/2016/demo/p60-256sa.pdf>.

†† Calculated estimate may be different due to rounded components.

Z Represents or rounds to zero.

[1] Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). This table shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing data. The Census Bureau uses a variety of approaches. Information on people who reported more than one race, such as White and American Indian and Alaska Native or Asian and Black or African American, is available from the 2010 Census through American FactFinder. About 2.9 percent of people reported more than one race in the 2010 Census. Data for American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and those reporting two or more races are not shown separately.

[2] The "Outside metropolitan statistical areas" category includes both micropolitan statistical areas and territory outside of metropolitan and micropolitan statistical areas. For more information, see "About Metropolitan and Micropolitan Statistical Areas" at <www.census.gov/population/metro>.

[3] The sum of those with and without a disability does not equal the total because disability status is not defined for individuals in the U.S. Armed Forces.

Source: U.S. Census Bureau, Current Population Survey, 2016 Annual Social and Economic Supplement.