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Need-Tested Benefits: Technical Companion to Selected CRS Reports on Need-Tested Benefits Receipt by Families and Individuals

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Introduction

The COVID-19 pandemic has highlighted the financial insecurity faced by some families and individuals. For some, this insecurity reflects the economic impact of the pandemic; for others, the insecurity preceded the pandemic. Congress responded to the economic fallout of the pandemic through providing ad-hoc assistance to families and individuals, making (mostly) temporary changes to existing programs.

To address how need-tested programs will affect families and individuals once the temporary measures expire, the Congressional Research Service (CRS) has developed a series of reports that describe selected need-tested programs under pre-pandemic policies and how they affected families and individuals. Need-tested programs are those that require a family or individual to meet a test of financial need to be eligible for benefits and receive them. The programs include the following:

- programs that finance health care services through the Medicaid and State Children's Health Insurance Program (CHIP);
- nutrition assistance programs such as the Supplemental Nutrition Assistance Program (SNAP), school meals programs, and the Special Supplemental Program for Women, Infants, and Children (WIC);
- housing assistance programs that provide rental assistance vouchers or finance occupants in public housing;
- refundable tax credits targeted toward lower income individuals and families, such as the Earned Income Tax Credit (EITC) and the Additional Child Tax Credit (ACTC);
- cash assistance programs such as Supplemental Security Income (SSI) or Temporary Assistance for Needy Families (TANF); and
- child care subsidies from the Child Care and Development Fund (CCDF).

Some of the reports in this series focus on a subset of these programs.

Reports in this Series

CRS Report R45971, *The Impact of the Federal Income Tax Code on Poverty*

CRS Report R46823, *Need-Tested Benefits: Who Receives Assistance?*

CRS Report R46825, *Need-Tested Benefits: Impact of Assistance on Poverty Experienced by Low-Income Families and Individuals*

The reports in this series use augmented Census Bureau data on income and poverty in 2017. This was done to provide a sense of how need-tested benefits would affect families and individuals after the pandemic ends, should the economy continue to recover, and temporary policy changes expire; however, the experiences in future years are unlikely to match those of 2017 exactly. These reports use 2017 as an example of how a future year might look if the economy and policies revert back to their pre-pandemic states—but is not a prediction of how need-tested benefits would affect individuals and families in the future.

The underlying data used in the reports' analyses are from the 2018 Annual Social and Economic Supplement (ASEC) to the Current Population Survey (CPS). These data are enhanced with additional data from the Transfer Income Model 3 (TRIM3) microsimulation model. TRIM3 is

funded primarily by the U.S. Department of Health and Human Services (HHS) and maintained at the Urban Institute.

This report uses the year 2017 because as of June 2021 it was the latest year for which data were available to CRS that corrected for the under-reporting of benefit receipt in selected need-tested benefit programs using the TRIM3 microsimulation model. Additionally, the Urban Institute, in partnership with CRS, enhanced the analytic capabilities of the 2017 data to address specific policy issues.

The Annual Social and Economic Supplement (ASEC)

The ASEC is a household survey of the noninstitutionalized population of the 50 states and the District of Columbia conducted by the Census Bureau from February through April of each year. Most of the sample is interviewed in March. The ASEC is a supplement to the Census Bureau's CPS, which is conducted monthly and is the source of official labor force statistics. The ASEC includes questions related to household members' demographic characteristics and family living arrangement at the time of the survey, and work experience and income in the prior year.

Individuals living in Puerto Rico and the U.S. territories and institutionalized individuals are excluded from the population covered by the ASEC. The institutionalized population includes those persons residing in institutional group quarters such as adult correctional facilities, juvenile facilities, skilled-nursing facilities, other institutional facilities such as psychiatric hospitals and in-patient hospice facilities, and members of the Armed Forces living on post without a civilian in their household.

The ASEC is used by the Census Bureau to estimate the number and percentage of the population living in poverty, under both the official poverty measure and Supplemental Poverty Measure (SPM[1]), in its reports. The sample of the ASEC is large enough to make reliable estimates for the nation as a whole and, at times, for some of the larger states. However, the sample is not large enough to make state-level estimates for all states.

The 2018 ASEC captured information on the population as of February through April 2018, with a retrospective look at income and work experience in the prior year—2017. The 2018 ASEC included information on approximately 92,000 households.

Estimates were weighted from the sample information to make the ASEC representative of the population of U.S. households. Because the estimates come from a sample, they are subject to sampling error. Additionally, the information on the ASEC is based on respondents' answers to the survey questions, and nonresponse or incorrect responses can result in nonsampling error.[2] Nonsampling error has been observed in the ASEC in several ways that may impact CRS

[1] For a discussion of the SPM as used in these reports, see the "Annual Estimates of Income and Benefit Receipt" section. For a more detailed discussion of the SPM, see CRS Report R45031, *The Supplemental Poverty Measure: Its Core Concepts, Development, and Use*.

[2] If some respondents to the ASEC answered the questions inaccurately, it would affect the estimates in this report. While ASEC does not ask questions about federal taxes of its respondents, TRIM3 uses respondents' self-reported information on household and family composition to place people within that household into tax filing units. Misreporting of household and family composition information might affect the accuracy of the tax information estimated from TRIM3. Misreporting of income that is used in the tax calculation would also affect the estimates in this report.

analyses. For example, research has found that need-tested benefits are commonly under-reported on the ASEC. Respondents report fewer household members receiving need-tested benefits than are recorded by federal or state administering agencies. In addition, benefit amounts reported by ASEC respondents typically fall below the benefit amounts recorded in agency expenditure data.[3]

The ASEC itself does not ask survey respondents about taxes paid or refundable credits received in the prior year. That information—important for determining a family's or an individual's SPM poverty status—must be estimated. These CRS reports use estimates from the TRIM3 microsimulation model (discussed below) for these estimates. The Census Bureau uses a different microsimulation model in its reports on SPM poverty.[4]

The TRIM3 Microsimulation Model

Microsimulation models of tax and transfer programs are composed of computer code that mimics the rules of the tax code and benefit programs.[5] The models determine whether an individual, family, or other unit is eligible to be subject to a tax or eligible for a benefit and then estimate the amount of the tax or benefit. This report uses TRIM3 to both address under-reporting of need-tested benefits in the survey data and to estimate federal income tax liabilities under the Tax Cuts and Jobs Act (TCJA; P.L. 115-97) policies.

Addressing the Under-Reporting of Benefit Receipt

TRIM3 uses data from the ASEC to estimate the number of people eligible for benefits from certain need-tested programs. It estimates benefit receipt based on a combination of information on the number of people eligible and their characteristics, information from people who reported benefit receipt on the survey, and information from administering agencies on the number of people receiving benefits and their characteristics. In this CRS report series, TRIM3-adjusted data are used for benefit receipt from SNAP, SSI, and TANF. These were the programs for which TRIM3 had estimates available for 2017.

For housing assistance, TRIM3 makes no adjustment for misreporting on the ASEC. While the number of persons in assisted households is not adjusted, this CRS report series uses TRIM3's estimates of the housing subsidy. Data on CCDF benefits are neither collected nor estimated by the Census Bureau in conjunction with the ASEC. TRIM3 models receipt of child care subsidies based on characteristics of the population and of those who receive CCDF subsidies.

The information on SNAP, SSI, TANF, housing assistance, and CCDF subsidies is available from the Urban Institute on its TRIM3 public server. CRS downloaded this information, combined it with the ASEC data, and conducted the analyses presented in this series of reports.

The estimates of Medicaid and State CHIP enrollment are based on assumptions developed by CRS about the size and characteristics of the enrolled population. The size of the caseload was based on reports of enrollment during 2017.[6] At the time the estimates were developed, Medicaid

[3] For a discussion of this, see Bruce D. Meyer, Wallace K.C. Mok, and James X. Sullivan, "Household Surveys in Crisis," *Journal of Economic Perspectives*, vol. 29, no. 4 (Fall 2015), pp. 199-226.

[4] For a discussion of different methods of simulating taxes based on ASEC data, see Laura Wheaton and Kathryn Stevens, *The Effect of Different Tax Calculators on the Supplemental Poverty Measure*, Urban Institute, April 2016.

[5] Documentation from TRIM3 can be found at http://trim3.urban.org/T3Technical.php. For a discussion of microsimulation and its use in policy analysis, see Gordon H. Lewis and Richard C. Michel, ed., *Microsimulation Techniques for Tax and Transfer Analysis* (Washington, DC: Urban Institute Press, 1990).

[6] New York did not report its enrollment for April through December of the year. Therefore, it was assumed that New York Medicaid enrollment remained constant.

was transitioning between data systems, and there were no current data available on the characteristics of those receiving Medicaid in that year. Therefore, the characteristics of the 2013 Medicaid caseload were used, with an adjustment to account for changes to the underlying age distribution of the total population during the period from 2013 to 2017.

The Medicaid and CHIP estimates do not take the following into account:

- transitional Medicaid benefits for those families no longer receiving TANF cash assistance due to increased income, increased employment, time limits, or other reasons;
- eligibility via most waivers;
- eligibility via pathways that provide restricted (i.e., less than *full scope*) benefits;
- eligibility via the optional CHIP coverage of unborn children; and
- the financial benefit of Medicaid and CHIP to family income.

Federal Income Taxes

The Urban Institute, in partnership with CRS, modified TRIM3's federal income tax module to account for the major provisions of the TCJA affecting individual taxpayers. Thus, the information in the model was revised to reflect the following:

- new tax brackets and marginal tax rates that apply;
- the suspension of the personal exemption and the increases in the standard deduction;
- limitations on itemized deductions, including the limitation on the deductibility of state and local taxes (SALT);
- revised rules for the child tax credit; and
- other changes to the federal individual income tax code.

TCJA Changes Not Modeled

A number of changes to federal income tax were not modeled. These include changes to the treatment of alimony, changes to the mortgage interest deduction, and the elimination of the individual mandate for health insurance. The treatment of alimony was not modeled because the changes apply only to new or revised orders and will not affect many cases in the near term.[7] Limits on interest qualifying for the mortgage interest deduction were not modeled because there are no data to inform the impact of these changes.[8] Additionally, certain smaller changes are not present in the simulation, such as the elimination of the deduction for bicycle commuting.[9]

Inflation Adjustment

The post-TCJA tax code parameters were deflated to 2017 dollars to answer the question, "what if the 2018 TCJA parameters were in place in 2017 and 2017 was the first year of their enactment?" The adjustment was done using the chained Consumer Price Index for All Urban Consumers (C-CPI-U), because the TCJA requires the use of that price index rather than the CPI-U for future price adjustments. Specifically, the 2018 amounts were adjusted to 2017 dollars using the chained

[7] Based on email to CRS from senior fellow at the Urban Institute, November 14, 2018.

[8] Ibid.

[9] Ibid.

CPI-U (see **Table 1**). Hence, the estimates in this report reflect the impact of the post-TCJA tax code as if the first year of its enactment were 2017 (it actually went into effect in 2018).

Table 1. Selected Post-TCJA Income Tax Provisions in Both 2018 and 2017 Dollars

	2018 TCJA Parameter in 2018 Dollars	2018 TCJA Parameter in 2017 Dollars
Starting Point (Lower Limit) of Marginal Tax Brackets by Tax Filing Status		
Married Filing Jointly		
10%	$0	$0
12%	19,050	18,632
22%	77,400	75,703
24%	165,000	161,383
32%	315,000	308,096
35%	400,000	391,233
37%	600,000	586,849
Head of Household		
10%	0	0
12%	13,600	13,302
22%	51,800	50,665
24%	82,500	80,692
32%	157,500	154,048
35%	200,000	195,616
37%	500,000	489,041
Single		
10%	0	0
12%	9,525	9,316
22%	38,700	37,852
24%	82,500	80,692
32%	157,500	154,048
35%	200,000	195,616
37%	500,000	489,041
Standard Deduction by Filing Status		
Married Filing Jointly	24,000	23,474
Head of Household	18,000	17,605
Single	12,000	11,737
Other Major Provisions		
Child Credit Amount	2,000	1,956
Maximum ACTC	1,400	1,369

	2018 TCJA Parameter in 2018 Dollars	2018 TCJA Parameter in 2017 Dollars
ACTC Refundability Threshold	2,500	2,445

Source: CRS; U.S. Department of Labor, Bureau of Labor Statistics; and the Internal Revenue Code.

Notes: These adjustments do not reflect the statutory inflation adjustment of these tax provisions. Instead, they reflect the actual 2018 dollar levels' purchasing power in 2017 dollars. ACTC = Additional Child Tax Credit.

Annual Estimates of Income and Benefit Receipt

The estimates of eligibility, receipt, and benefit amounts in this series of CRS reports are generally based on program rules. Many of the need-tested programs examined here determine eligibility and benefits on a monthly basis. The number of people who received benefits at any point over the course of the year is by definition greater than the number of people receiving benefits in any one month.

The estimates in these reports generally reflect receipt of one or more benefits at any point during 2017. This includes those who received benefits in only 1 month and those who received benefits for all 12 months of the year. Because these estimates are for those who ever received benefits in a year, they tend to be higher than the number of recipients reported by administrative data using monthly or monthly average participation numbers. In addition, benefit amounts are those received during the year. (They are not annualized benefits.)

The information on refundable tax credits from the Earned Income Tax Credit (EITC) and the Additional Child Tax Credit (ACTC) represents the amounts earned during the year, which are paid to families once a year when they receive their tax refunds—generally in the following year. For example, tax credits earned in 2017 would generally be received in 2018 when taxpayers filed their 2017 federal income tax returns (it does not reflect tax credits accrued in 2016 refunds that were actually paid and received by families and individuals in 2017). This comports to the way the refundable tax credits are considered in analyses of family income and the SPM measurement of poverty that is used in this CRS report series.

In examining benefit amounts received by families, all non-medical in-kind benefits were monetized and several assumptions were made in that process. For example, in the case of child care subsidies, TRIM3 estimated benefit levels were based on maximum reimbursement rates in the state.

In the case of housing assistance, the benefits provided by the Section 8 Housing Choice Voucher (HCV) program, the project-based Section 8 rental assistance programs, and the public housing program were all calculated the same way, using an approximation of the method used for calculating the maximum benefit a family could receive under the Section 8 HCV program. This approach is tied to the market cost of housing and is commonly used by researchers and policy analysts. However, the public housing and project-based Section 8 rental assistance programs provide affordable rental units to families rather than the vouchers provided by the Section 8 HCV program for use in the private market. While the dollar value of a voucher is fairly clear, the dollar value of an affordable rental unit is less so; thus, this approach may over- or underestimate the dollar value of the benefit received by a resident of public housing or project-based Section 8 rental assistance housing. For the purpose of measuring the value of housing assistance for poverty status using the SPM, the value of housing is capped.

These CRS reports also place a dollar value on only non-medical, non-cash benefits. Putting a dollar value on medical coverage (e.g., Medicaid) has vexed policy analysts for decades. These

reports will not attempt to choose one valuation method over another, and thus the value of Medicaid and CHIP are excluded.[10]

Underestimates of Refundable Tax Credits

As mentioned above, the ASEC does not ask respondents about their federal income tax liabilities nor receipt of federal income tax benefits such as the refundable tax credits (EITC and ACTC). Thus, federal income tax liabilities and benefits are all estimated by computer (microsimulation) models.

As this series of CRS reports shows, refundable tax credits are among the largest of the need-tested benefit programs in terms of both number of people receiving them and their dollar amounts. Yet, estimates of the refundable tax credits based on ASEC population and income data are underestimated. The underestimating of ASEC-based estimates of refundable tax credits has been documented.[11] Research suggests that one cause of these underestimates may be that families with children where multiple adults file an income tax return have a strategic incentive to choose which adult will claim the children on his or her return.[12] This might not be fully captured by the tax calculators.

Use of Supplemental Poverty Measure Concepts

This series of CRS reports uses the concepts of the research SPM. The measurement of poverty is an ongoing topic of research.[13] The official poverty measure was developed in the 1960s, and it is limited in analyzing the impact of federal need-tested benefits on poverty. Particularly relevant for this analysis, the official measure measures poverty using pre-tax money income to compare

[10] A seminal National Academy of Sciences (NAS) report issued in 1995 examining potential changes in the measurement of family well-being for poverty analysis stated that after two decades of study of how to treat medical care needs and resources up to that point, "there is still no agreement on the best approach to use." (See Constance F. Citro and Robert T. Michael, eds., *Measuring Poverty. A New Approach*, [Washington, DC: National Academy Press, 1995], pp. 223-224.) Two and half decades after that study, this is still the case. The research SPM, the concepts of which these CRS reports use, as of April 2021 does not directly value medical benefits. Rather, the SPM deducts out-of-pocket medical expenses from family resources.

Since the study, several approaches have been discussed. In fall 2010, HHS asked NAS to convene a panel to examine "the state of the science in the development and implementation of a new measure of medical care risk as a companion measure to the new Supplemental Poverty Measure." (See Michael J. O'Grady and Gooloo S. Wunderlich, eds., *Medical Care Economic Risk: Measuring Financial Vulnerability from Spending on Medical Care* [Washington, DC: National Academies Press, 2012]). A subsequent National Academy study on reducing child poverty proposed an approach that would value medical insurance at a value at least that of the basic health insurance plan offered under the Affordable Care Act. (See Sanders Korenman, Dahlia K. Remler, and Rosemary T. Hyson, *Accounting for the Impact of Medicaid on Child Poverty*, background paper for the Committee on Building an Agenda to Reduce the Number of Children in Poverty by Half in 10 Years, Board of Children, Youth and Families of the National Academy of Sciences, revised December 1, 2017).

[11] For example, see Laura Wheaton and Kathryn Stevens, *The Effect of Different Tax Calculators on the Supplemental Poverty Measure*, Urban Institute, April 2016,

[12] For a discussion of this effect, see David Splinter, Jeff Larrimore, and Jacob Mortenson, *Whose Child Is This? Shifting Of Dependents Among EITC Claimants Within The Same Household*, National Tax Journal 2017, 70:4, pp. 737-758, at https://doi.org/10.17310/ntj.2017.4.02. See also Maggie R. Jones and Amy B. O'Hara, *Do Doubled-Up Families Minimize Household-Level Tax Burden?* National Tax Journal 2016, 69:3, pp. 613-640, at http://dx.doi.org/10.17310/ntj.2016.3.05.

[13] For example, a federal interagency working group released in January 2021 a report including recommendations for further modifying the measurement of poverty. See Interagency Technical Working Group on Evaluating Alternative Measures of Poverty, *Final Report*, January 2021, at https://www.census.gov/content/dam/Census/library/publications/2021/demo/EvaluatingAlternativeMeasuresofPoverty_08Jan2021.pdf.

to the poverty thresholds. Thus, the only two programs that affect poverty status using the official measure are SSI and TANF. These two programs accounted for $53 billion and $6 billion, respectively, of the income received by families from non-medical need-tested benefits programs in 2017. The official poverty measure does not take into account taxes (and tax benefits, like the refundable credits) and their impact on disposable income. It also does not take into account certain noncash government benefits, such as food benefits from SNAP or the value of housing benefits.

There are numerous other differences between the official and SPM measures of poverty. (For more information, see Table 1 in CRS Report R45031, *The Supplemental Poverty Measure: Its Core Concepts, Development, and Use.*) Thus, the definitions used in this series of CRS reports differ from other usages. For example, see the following:

- **Family.** This CRS report series uses the term *family* to describe what technically the Census Bureau calls the *SPM unit*. This differs from the way the Census Bureau officially defines *family* in its other reports, including the definition used in the official poverty measure. The Census Bureau's usual definition of *family* is individuals living together and related by birth, marriage, or adoption. The SPM unit—and *family* as used in this CRS report series—also includes unmarried partners and their relatives, co-resident unrelated children, and foster children. This updated definition is used because it better represents the economic unit in which individuals share resources to meet their needs.
- **Income.** This CRS report series uses the term *income* in the same way that the Census Bureau uses *resources* in its SPM reports. It is a measure of disposable income that includes cash money income *plus* non-medical noncash benefits (i.e., food and housing assistance). It also subtracts federal and state tax liabilities accrued during the year, but adds to income the value of refundable tax credits (EITC and ACTC). The SPM income concept also subtracts from income imputed work expenses, reported out-of-pocket medical expenses, and net child care expenses (after accounting for subsidies from the CCDF).

In addition, this CRS report series uses the SPM poverty thresholds—rather than the ones used in the official measure or the federal poverty level (FPL) that is used for determining program eligibility[14]—when determining an individual or family poverty status. For a family with two adults and one child, the official poverty threshold that the Census Bureau used to count the number of people living in poverty was $19,730. The FPL used by some programs to determine eligibility for such a family was $20,420.

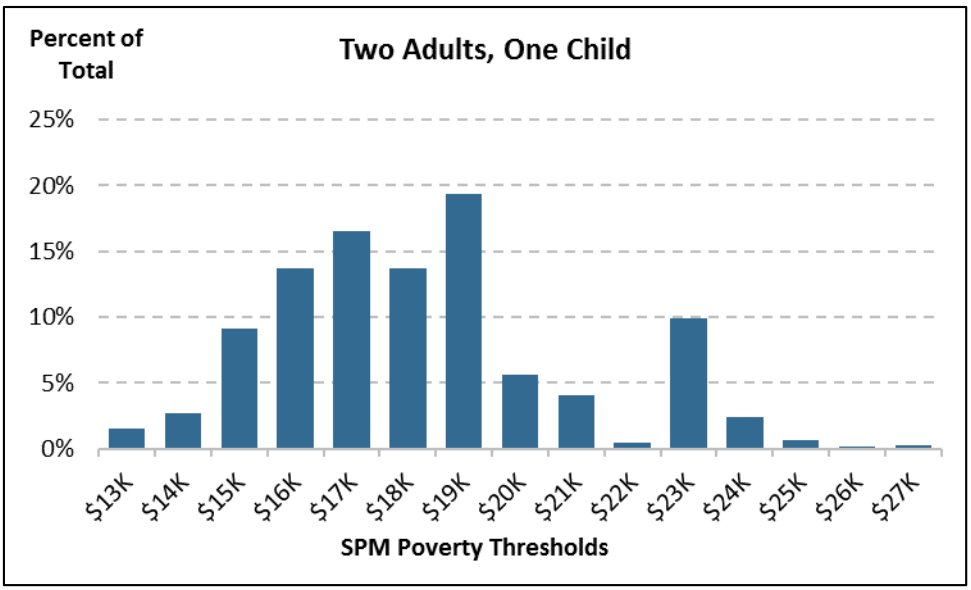
The construction of the poverty thresholds is more complex under the SPM than under the official measure. The official measure's poverty thresholds vary by family size and age of family members. The SPM poverty thresholds vary by number of adults, number of children, and a large set of additional factors, including the housing status of a family (i.e., owner, owner with a mortgage, renter) and geographic adjustments for differences in housing costs. Under the SPM, the poverty thresholds for a family with two adults and one child varied in 2017, from a low of $13,695 to a high of $27,800. The median threshold was $18,499.

Figure 1 shows the distribution of the SPM poverty thresholds for two adults and one child for 2017. It shows that 19% of all SPM units of this type had an SPM poverty threshold between

[14] For a discussion of the differences in the official poverty measure used for counting individuals and families living in poverty and the FPL used for program eligibility purposes, see CRS Report R44780, *An Introduction to Poverty Measurement*.

$19,000 and $19,999. However, it also shows a second peak of this distribution at a higher dollar level: about 10% of SPM units had thresholds between $23,000 and $23,999. Of the SPM units with thresholds in that range, 45% were in New York and 27% were in California, states where a large share of the population lives in areas with high housing costs. All SPM units with two adults and one child and SPM poverty thresholds over $26,000 lived in California. Conversely, of all SPM units with two adults and one child and SPM poverty thresholds from $13,000 to $13,999, 24% were in Kentucky, 17% were in Mississippi, and 9% were in Tennessee.

Figure 1. Distribution of the SPM Poverty Thresholds 2017



Source: CRS, based on data from the U.S. Census Bureau.

The estimates in this CRS report series of the number of individuals living in poverty using the SPM will differ from those published in Census Bureau reports. The CRS estimates use TRIM3-adjusted data for SNAP, housing assistance, SSI, TANF, and net child care expenditures (after CCDF subsidies), and the refundable tax credits rather than those used by the Census Bureau for 2017. The Census Bureau data do not take into account adjustments for under-reporting of benefit receipt from major need-tested programs. For programs where TRIM3-adjusted data were unavailable—the Low Income Home Energy Assistance Program (LIHEAP), WIC, and school meal programs—the Census Bureau data were used in the determination of SPM poverty status.

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