

Precision in Measurement: Using State-Level Supplemental Nutrition Assistance Program and Temporary Assistance for Needy Families Administrative Records and the Transfer Income Model (TRIM3) to Evaluate Poverty Measurement

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Abstract

Policy leaders look to quality data and statistics to help inform and guide programmatic decisions. As a result, assessing the quality and validity of major household surveys in capturing accurate program participation is essential. One method for evaluating survey quality is to compare self-reported program participation in surveys to administrative records from the program itself.

In this paper, we are interested in understanding two issues. First, how closely do self-reported Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF) participation and benefit amounts in the Current Population Survey Annual Social and Economic Supplement (CPS ASEC), as well as SNAP and TANF participation and benefit amounts corrected for underreporting with the Transfer Income Model, version 3 (TRIM3), align with state-level administrative records? We find that 43.0 percent of households who receive SNAP according to administrative records do not report receipt in the CPS ASEC and 62.4 percent of households who receive TANF according to administrative records do not report receipt in the CPS ASEC. Second, how does replacing values from the CPS ASEC with TRIM3 values or administrative records for SNAP and TANF change poverty measurement in the Supplemental Poverty Measure (SPM)? We found that factoring in both SNAP and TANF benefits, the CPS ASEC overestimates SPM rates by 0.4 percent and TRIM3 underestimates SPM rates by 0.4 percent, both compared to administrative records.

INTRODUCTION

Policy leaders today look to quality data and statistics to help inform and guide programmatic decisions. As a result, assessing the quality and validity of major household surveys in capturing accurate program participation is essential.

One method for evaluating survey quality is to compare self-reported program participation in surveys to administrative records from the program itself. Previous research using administrative records to evaluate self-reported Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF) receipt has found evidence of underreporting in the Current Population Survey Annual Social and Economic Supplement (CPS ASEC) for select states where administrative records were available (see the *Prior Research* section).

A possible solution to the issue of underreporting of transfer program benefits in survey data is to use administrative records in place of survey responses. There are a few issues with this solution, including the availability and timing of state administrative records and concerns about the confidentiality of respondents. Another possibility is to use a microsimulation model that corrects for this underreporting, such as the Transfer Income Model, version 3 (TRIM3). TRIM3 produces annual baseline simulations of actual program rules to correct for the underreporting of transfer program participation in the CPS ASEC.¹ There are several reasons to use a microsimulation model instead of administrative records, including coverage and consistency of

¹ TRIM3 is developed and maintained by the Urban Institute under funding from the Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation (HHS/ASPE). For more information on TRIM3, see <http://trim.urban.org>.

the data across states and across programs and restrictions on access to administrative records due to confidentiality.

In this paper, we are interested in understanding two issues. First, how closely do self-reported SNAP and TANF participation and benefit amounts in the CPS ASEC, as well as SNAP and TANF participation and benefit amounts corrected for underreporting with TRIM3, align with state-level administrative records? Second, how does replacing values from the CPS ASEC with TRIM3 values or administrative records for SNAP and TANF change poverty measurement in the Supplemental Poverty Measure (SPM)? We link individual-level data from state administrative SNAP and TANF records and microdata from TRIM3 for seven states (Arizona, Idaho, Maryland, Michigan, North Dakota, Tennessee, and Virginia) to the CPS ASEC for calendar years 2009 to 2015.

Overall, we find that 43.0 percent of households who receive SNAP according to administrative records do not report receipt in the CPS ASEC and 62.4 percent of households who receive TANF according to administrative records do not report receipt in the CPS ASEC. Examining benefit receipt rates, we find that 12.4 percent of our sample receives SNAP according to the CPS ASEC, compared to 21.1 percent in the administrative records and 20.1 percent in TRIM3. Whereas for TANF, 1.7 percent of our sample received TANF according to the CPS ASEC compared to 2.3 percent in the administrative records and 2.6 percent in TRIM3. Finally, we found that factoring in both SNAP and TANF benefits, the CPS ASEC overestimates SPM rates by 0.4 percent and TRIM3 underestimates SPM rates by 0.4 percent, both compared to administrative records.

This study allows us to understand the role of administrative records and microsimulation in the measurement of national statistics. It expands the sample of states for which we have

administrative records to see if the patterns of benefit underreporting are consistent across a larger sample of states and years. It also looks at two different assistance programs for low-income families to see if the patterns of underreporting are consistent across programs and to measure the combined effect on the SPM of these programs. Given current trends in the reliance of administrative records to improve survey measurement and reduce respondent burden, this paper advances our knowledge of the relevance and the role administrative records can play in increasing accuracy and precision in measuring national statistics, such as the SPM. The paper also improves our understanding of how microsimulation models align with administrative records at the household level, rather than just at the aggregate level. We show the results from TRIM3 as an alternate estimate of program receipt and benefit amounts, rather than for assessing the accuracy of the microsimulation model.

BACKGROUND

Supplemental Nutrition Assistance Program (SNAP)

SNAP, formerly referred to as Food Stamps, provides in-kind benefits aimed at reducing hunger for low-income individuals and households. SNAP benefits are available to any individuals and households meeting the program eligibility requirements, which are based largely on income thresholds. Households must meet two income tests to be eligible for SNAP²:

- Gross income test – a household’s total income before any deductions must be below 130 percent of the federal poverty guidelines (FPG),³ and

² Broad-based categorical eligibility (BBCE) confers SNAP eligibility to households who receive non-cash benefits from TANF or a state maintenance of effort (MOE) program. BBCE extends the income eligibility limits in states that use it.

³ Federal poverty guidelines are simplifications of the Census Bureau's official poverty thresholds created by HHS for determining eligibility for certain federal poverty. See <https://aspe.hhs.gov/poverty-guidelines> for more details.

- Net income test – a household’s gross income minus certain allowable deductions must be below 100 percent of FPG (USDA 2017b).

This means that for fiscal year 2018, a non-elderly, non-disabled single mother with two children whose only source of income is earnings and who does not pay for child care can earn up to \$26,556 and still qualify for SNAP. For non-elderly, non-disabled individuals, eligibility is also subject to asset limits and work requirements.

Once a family qualifies for SNAP, the benefit amount they receive is determined by the household’s net income and the number of household members. Households receiving SNAP are expected to spend 30 percent of their income on food. Therefore, the SNAP benefit amount is calculated by subtracting 30 percent of the household’s net income from the maximum benefit amount for the household size. As of fiscal year 2018, the maximum benefit amount for a family size of three was \$504 per month.

Participation rates for the Food Stamp/SNAP program have varied throughout its roughly 40 years of existence in response to changes in the broader economy and program administration, rules, and policies. In recent years, diminished labor market conditions have increased the number of SNAP recipients (Ganong and Liebman 2013). Since the beginning of the most recent recession, SNAP take-up has nearly doubled, and the increase has persisted even after the economic recovery. In 2008, there were about 28.2 million participants; by 2013, that number had increased to 47.6 million (USDA 2017c). As of May 2016, approximately one in seven U.S. residents received SNAP benefits (FRAC 2016). Because SNAP coverage rates are high, inaccurate reporting of SNAP take-up has the potential to influence poverty estimates like the SPM.

Temporary Assistance for Needy Families (TANF)

TANF is a block grant program for low-income families to help achieve self-sufficiency. In 1996, TANF replaced Aid to Families with Dependent Children (AFDC) as a part of welfare reform. State TANF programs provide a variety of benefits to families, including cash assistance, child care subsidies, transportation assistance, and other in-kind benefits. As a block grant program, eligibility requirements, program requirements, benefit amounts, and other program policies vary substantially across states.

In calendar year 2017, there were an average of 2.5 million TANF recipients (in 1.1 million families) each month. This is a decline from an average of 3.8 million recipients (in 1.6 million families) each month in calendar year 2008 and an average of 3.7 million recipients (in 1.6 million families) each month in calendar year 2013 (HHS 2018). TANF caseloads are much lower than SNAP caseloads, however TANF recipients are generally very low income. Therefore, if recipients have income below the poverty line and are not reporting or are underreporting cash assistance, unreported and underreported TANF benefits may change the unit's official poverty status and/or SPM status.

Supplemental Poverty Measure (SPM)

Poverty measurement and our conceptual definitions of poverty are evolving. Every year since 1966, the Census Bureau calculates an official U.S. poverty measure (Fontenot, Semega, and Kollar 2018). The official poverty measure compares household pre-tax cash income (including TANF cash benefits) to a poverty threshold. The SPM, an alternative measure of poverty, incorporates multiple resources entering households (such as benefits from SNAP and

similar programs) in addition to earnings and other cash income.⁴ The SPM also subtracts certain expenses (such as medical expenses and federal and state income taxes) that the household incurs. The SPM uses self-reported values for resources coming into the household from the CPS ASEC. Where those values do not exist, they are modeled or imputed.

Prior Research

Some researchers have criticized the quality of household survey program participation and earnings data (Marquis and Moore 1990; Groves 2006; Meyer, Mok, and Sullivan 2015). Recent research on this topic has shown that survey response to program participation undercounts the participation rates and benefit amounts (Meyer and Goerge 2011; Harris 2014; Meyer and Mittag 2015; Colby et al. 2017; Fox et al. 2017; Stevens et al. 2018).

Meyer and Mittag (2015) find inconsistencies in SNAP reporting in the CPS ASEC in New York State; around 40 percent of surveyed SNAP recipients and 60 percent of surveyed TANF/General Assistance recipients do not report receipt in the CPS ASEC. Stevens et al. (2018) compare SNAP self-reporting in the CPS ASEC to state SNAP administrative records from Arizona, Idaho, Illinois, Maryland, Oregon, Tennessee, and Virginia for calendar years 2009 through 2014. They find that about 46 percent of SNAP recipients do not report receipt in the CPS ASEC. Both studies find that the CPS ASEC understates the resources available to those in poverty due to underreporting of program receipt and benefit amounts. This type of response error cannot be assumed for all surveys, however, as some methods of data collection can prove more fruitful than others in terms of capturing program participation. Colby et al. (2017) identify

⁴ Thresholds for the SPM are produced by the BLS Division of Price and Index Number Research. See Fox (2018) for the 2016 and 2017 thresholds.

some underreporting but found higher rates of agreement between the Survey of Income and Program Participation (SIPP) self-reported SNAP receipt and administrative records. They find that approximately 16 percent of SNAP recipients did not report SNAP participation in the SIPP.

Transfer Income Model, version 3 (TRIM3)

TRIM3 produces annual baseline simulations of actual program rules to correct for the underreporting of transfer program participation in the CPS ASEC. TRIM3 is a microsimulation model that begins with each year's CPS ASEC and respondents' self-report of program participation. The simulation then identifies eligible units under each program using the program rules and selects additional participants to match administrative targets for the number of recipients, available demographic characteristics, and the total benefit amount.

The programs that are simulated by TRIM3 include cash and in-kind transfer programs (SNAP, TANF, child care subsidies, child support, etc.), health insurance programs (Medicare, Medicaid, Children's Health Insurance Program (CHIP), etc.), and taxes (federal and state income taxes and payroll taxes). The simulations of the programs are run in a specified order in order to capture the interactions and relationships between programs. TRIM3 adjusts both CPS ASEC respondents' reported participation in programs as well as their reported value of benefits received.⁵

⁵ For more information on how TRIM3 models SNAP and TANF benefits, see <http://trim3.urban.org/documentation/foodstamps/main.php> and <http://trim3.urban.org/documentation/TANF/Main.php>, respectively.

DATA

This paper links SNAP and TANF administrative records for seven states (Arizona, Idaho, Maryland, Michigan, North Dakota, Tennessee, and Virginia) to individuals in the CPS ASEC⁶ and TRIM3 for calendar years 2009 to 2015.⁷

Current Population Survey (CPS)

The CPS is a household survey primarily used to collect employment data. The CPS is usually fielded over the phone with one household respondent answering the questions for all household members.⁸ The CPS ASEC sample is based on the non-institutionalized population of the United States. The CPS ASEC asks detailed questions categorizing income into over 50 sources, including SNAP and TANF benefits. See Appendix I for more information on how CPS ASEC respondents are asked about SNAP and TANF benefits.

SNAP and TANF Administrative Records

The individual-level SNAP and TANF administrative records used in this paper are collected at the state level.⁹ As such, the structure and information contained in the records differ by state. Each set of state SNAP or TANF administrative records include the full population of

⁶ The data are subject to error arising from a variety of sources, including sampling error and nonsampling error. For more information, please visit <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf>.

⁷ For the 2014 CPS ASEC, we use the full ASEC supplement (the combined 5x8 and 3x8 file) for this analysis. For more information about the redesigned ASEC supplement, please see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar14R.pdf>.

⁸ We might expect that the survey respondent would more accurately report a benefit he or she applied for and received, rather than a benefit received by another member of the household. For example, if the respondent received SNAP, he or she might have a better recollection of the length of benefit receipt and the benefit amount than if his or her spouse or someone else in the household was the “direct” beneficiary of SNAP.

⁹ The TANF administrative records for Arizona are collected and compiled by the state and submitted to the U.S. Department of Health and Human Services (HHS). We extracted just the records for Arizona from the HHS TANF administrative records for this analysis.

SNAP or TANF recipients in that state and year.¹⁰ We cleaned and recoded each state-year of administrative records to create person-year-level data files.¹¹ For purposes of this paper, we organize the SNAP and TANF benefit information in the CPS ASEC, TRIM3, and administrative records to household-calendar year-level files, with variables capturing whether the household or SPM unit received any SNAP or TANF benefits in the calendar year and the household or SPM unit annual benefit amount.¹²

The administrative records do not cover the full period for all seven states – the administrative records for Arizona, Maryland, North Dakota, and Tennessee cover calendar years 2009 through 2015, Idaho and Michigan cover calendar years 2010 through 2015, and Virginia covers calendar years 2009 through 2013.

Merged Data

The CPS ASEC and TRIM3 data are directly linked through the household and person identification number. The TRIM3 data include the monthly and annual adjusted benefit amounts

¹⁰ There is a potential discrepancy between the CPS ASEC and the SNAP administrative records in that the CPS ASEC covers the non-institutionalized population whereas the administrative records cover the full population. However, generally individuals are not eligible for SNAP benefits if they are in an institution that provides meals. The two exceptions to this rule are residents of federally subsidized housing for the elderly and disabled individuals who live in non-profit small group homes with no more than 16 residents, even if these institutions provide meals. For more information on SNAP eligibility rules, please see <https://www.fns.usda.gov/snap/eligibility>. TANF eligibility requirements vary by state.

¹¹ In the administrative records, the SNAP or TANF benefit amounts are provided at the monthly level. We address the differences when we compare monthly and annual benefit amounts in the Methods and Analysis section of the paper.

¹² There are issues assigning individual versus household SNAP or TANF participation and benefit amounts. In the SNAP and TANF administrative records, the benefit amounts given are at the SNAP or TANF unit-level. SNAP units include anyone who lives together and purchases and prepares meals together. TANF units generally include the parent(s) and their children, though how the unit is defined varies a lot by state. Therefore, there may be multiple SNAP or TANF units in a single housing-unit. Also, there may be discrepancies between how SNAP or TANF households are defined and how SPM units, used to group individuals together to measure the SPM poverty rates, are defined. For the purposes of this analysis, we disaggregated the SNAP and TANF benefit amounts from the administrative records to assign an individual benefit amount for each member of the SNAP or TANF unit. Then, for our analysis, we used individual SNAP or TANF receipt and benefit amounts aggregated to the household-level or to the SPM unit-level.

for both programs, the number of months of benefit receipt, and the members of the household receiving each benefit. The TRIM3 data include some households that are replicated (including high-income households and immigrant households) in order to adjust for the under-representation of these households in the CPS sample. In the match with the CPS ASEC, the TRIM3 replicate cases were collapsed and the weights were adjusted to account for the de-replication to ensure that the population weight is preserved.¹³

The combined CPS ASEC and TRIM3 data are then linked to the administrative records through a probabilistic matching technique. This method assigns a unique identification number (called a protected identification key or PIK) to each individual based on a variety of uniquely identifying information.¹⁴ The Census Bureau assigns these identifiers to survey respondents and individuals in the administrative records. Since the identifiers are unique to individuals, they can be used to link the same individual across data sources.

Not all survey respondents or individuals within the administrative records can be assigned a PIK. In total, there are 149,000 individuals in the pooled CPS ASEC/TRIM3 sample for the seven states in their respective years of data coverage. Of those, 133,000 individuals or 89 percent of observations had PIKs.¹⁵ In order to address the potentially non-random exclusion of individuals without a PIK, we use inverse probability weighting (IPW).¹⁶ The inverse probability

¹³ We collapsed all replicate cases and averaged the SNAP and TANF benefit amounts over all iterations of the clone. Therefore, if an immigrant household was cloned once (resulting in two observations) and one household received SNAP and the other household didn't, when we collapsed the replicate cases we count the collapsed household as receiving SNAP but with half the benefit amount of the replicated household receiving SNAP. For more information on this process, see <http://trim3.urban.org/documentation/input/concepts%20and%20procedures/MergeReplicateHHBackToSingleHH.php>.

¹⁴ See Wagner and Layne (2014) for a detailed description of the process used to assign PIKs.

¹⁵ The percent of program recipients with a PIK on the state administrative records varies by state, year, and program, ranging from 93.57 percent to 99.99 percent. A lower PIK rate on the administrative records increases the chance that we identify individuals or households as false positives (i.e., report receiving SNAP or TANF on the CPS ASEC but appear to not receive SNAP or TANF according to administrative records) when in fact they are true positives.

¹⁶ For a detailed description of inverse probability weighting, see Wooldridge (2007).

weights are created by dividing the CPS ASEC sample weight by the predicted probability of the individual having a PIK.¹⁷

We are interested in how self-reported SNAP and TANF receipt differs from administrative records. For our final analytic sample, we exclude households who did not complete the ASEC, who responded to some of the ASEC but not enough for an interview, and who responded to the ASEC but did not respond to enough income questions. We also exclude households whose SNAP or TANF participation or benefit amount was imputed in the CPS ASEC.¹⁸ In addition, we exclude any state mismatches. State mismatches occur when an individual indicates they live in one state in the CPS ASEC and the administrative records identify them living in a different state for program receipt. Less than 0.1 percent of the pooled CPS ASEC/TRIM3 sample with a PIK has a state mismatch.¹⁹

The state administrative records only indicate receipt of SNAP or TANF; they do not identify individuals who did not receive the benefit. We assume an individual does not participate in the program if they have a PIK in the CPS that does not link to any administrative record with a PIK. To the extent that there is differential non-linking (for example, an individual has a PIK in the CPS, but does not have a PIK in the administrative records) or there is incorrect

¹⁷ We used a logit regression model to predict the probability of an individual having a PIK with the following independent variables: sex, age, education, race and Hispanic origin, nativity, marital status, region, residence, and work experience.

¹⁸ For analysis that only examined SNAP receipt and benefit amounts, we did not exclude households with imputed TANF participation or benefits and for analysis that only looked at TANF receipt and benefit amounts, we did not exclude households with imputed SNAP participation or benefits. We excluded about 16 percent of individuals with a PIK because their full supplement, SNAP participation or benefit amount, or TANF participation or benefit amount was imputed.

¹⁹ A state mismatch may indicate an incorrect match based on PIK or that the individual moved to a different state during the calendar year or early the following year, in which case one state's administrative records may not fully capture their SNAP or TANF benefit amount if they received benefits in multiple states. In the CPS ASEC, the state of residence is measured as of the survey date, between February and April. This state of residence is then compared to the state in the matched administrative records for the previous year. The issue of not fully capturing SNAP or TANF benefits applies to those who move into any of the seven states during this period as well. It should not affect participation rates, however.

assignment of PIKs to individuals, processing errors will tend to decrease the estimates of “true” program participation, increase the estimates of false positive rates, and decrease the estimates of false negative rates.

The final pooled sample includes 112,000 individual-year observations – 14,447 in Arizona; 11,500 in Idaho; 22,000 in Maryland; 19,500 in Michigan; 13,000 in North Dakota; 14,500 in Tennessee; and 16,500 in Virginia. While we do provide some descriptive analysis by state, the write-up focuses primarily on the pooled sample.

METHODS AND ANALYSIS

Errors in Reporting Benefit Receipt

In this section, we examine what percent of SNAP or TANF recipients report receiving the benefit in the CPS ASEC or in TRIM3 and what percent do not (as well as what percent of non-recipients report receipt). The analysis of false negatives and false positives is less relevant for TRIM3 because the microsimulation model aims to assign benefit amounts to individuals and households with similar characteristics to actual benefit recipients, rather than trying to assign the benefits to the exact individuals and households. We include these tables as a benchmark to compare with the CPS ASEC results.

We find that 92.0 percent of households correctly report that they receive or don’t receive SNAP in the CPS ASEC. We find that 43.0 percent of households who receive SNAP according to administrative records do not report receipt in the CPS ASEC (see Table 1A).²⁰ We call this a “false negative.” As shown in Table 1B, the false negative rate for SNAP in TRIM3 is lower, at 32.7 percent, but the false positive rate is higher for TRIM3 (7.8 percent) than the CPS ASEC

²⁰All comparative statements in this report have undergone statistical testing, and, unless otherwise noted, all comparisons are statistically significant at the 10 percent significance level.

(0.6 percent). False positives occur when a household reports receiving a benefit (or TRIM3 estimates this receipt), but this household does not show up in administrative records.

We find that 98.4 percent of households correctly report that they receive or don't receive TANF in the CPS ASEC. We find that 62.4 percent of households who receive TANF according to administrative records do not report receive in the CPS ASEC, although this represents only 1.0 percent of all households in our sample (see Table 2A). The false negative rate for TRIM3 is not statistically different from the CPS ASEC rate at 62.8 percent (this is also only 1.0 percent of all households in our sample) (see Table 2B). The percentage that do not receive TANF according to administrative records but do receive TANF in either the CPS ASEC or TRIM3 are not practically different, but are statistically different (0.6 percent compared to 1.1 percent).

Extensive Margins

Overall, we find that 12.4 percent of our sample receives SNAP according to the CPS ASEC, compared to 21.1 percent in the administrative records and 20.1 percent in TRIM3 (see Table 3).

We find that the CPS ASEC underestimates SNAP receipt rates compared to administrative records among individuals in households with no income and at all of the poverty ranges examined in Table 3.²¹ TRIM3, however, overestimates the SNAP receipt rate among individuals in households with no income and those below 150 percent of their official poverty

²¹ See the Limitations section of this paper for a description of the potential problems with using income from the CPS ASEC for these analyses.

threshold (otherwise known as federal poverty line, or FPL) and underestimates the SNAP receipt rate among individuals in households with income more than twice their FPL.²²

According to the CPS ASEC, 1.7 percent of our sample received TANF compared to 2.3 percent in the administrative records and 2.6 percent in TRIM3 (see Table 5).²³

CPS ASEC respondents with no household income and at all poverty ranges except between 100 and 150 percent of FPL seem to underreport their receipt of TANF compared to administrative records.²⁴ TRIM3 appears to overestimate TANF receipt rates for individuals in households with very low income (below 50 percent of FPL) and underestimate TANF receipt rates for those with household income more than twice the FPL.²⁵ Tables 3 and 5 show receipt rates for SNAP and TANF by other demographic characteristics.

Intensive Margins

In Tables 4 and 6, we present the average annual household SNAP and TANF benefit amounts by data source, conditional on receiving either SNAP or TANF benefits in both data sources being compared. Among individuals in households receiving SNAP in both the CPS ASEC and administrative records, the average annual household SNAP benefit amount was underreported in the CPS ASEC by \$220. Among individuals in households receiving SNAP in

²² The receipt rate for SNAP is not statistically different between TRIM3 and administrative records for those between 150 and 200 percent of FPL.

²³ The receipt rate for TANF is not statistically different between TRIM3 (2.6 percent) and administrative records (2.3 percent).

²⁴ The receipt rate for TANF is not statistically different between CPS ASEC and administrative records for those between 100 and 150 percent of FPL.

²⁵ For all other poverty levels, TANF receipt rates from TRIM3 are not statistically different from administrative records.

both TRIM3 and administrative records, the average annual household SNAP benefit amount was overestimated in TRIM3 by \$415.

The average annual household TANF benefit amount was overreported by \$717 in the CPS ASEC, among individuals in households receiving TANF in both the CPS ASEC and administrative records (see Table 6). The average annual household TANF benefit amount was overestimated by \$380 in TRIM3, among individuals in households receiving TANF in both TRIM3 and administrative records. The small sample size in the TANF analyses should be noted as only 2.3 percent of individuals lived in a household receiving TANF (according to administrative records) and there is a relatively high rate of benefit misreporting, with false positives nearly as likely as false negatives.

We also conducted sensitivity analysis to see how the extensive margins change among households where the SNAP or TANF applicant is responding to the CPS ASEC (not a proxy response) and among households with more than one SNAP or TANF unit. We found that the CPS ASEC reported SNAP or TANF annual benefit amount was not statistically significantly closer or farther from administrative records among benefit applicants responding to the CPS ASEC than among all respondents. Among households with more than one SNAP unit, it appears that CPS ASEC respondents may be answering for only one of the units – overall, the annual benefit is underreported and among these households is underreported by an additional \$950. While the average annual TANF benefit is overreported for all households, among households with more than one TANF unit, the benefit is not statistically different from the administrative records.

We present the results in this paper for annual SNAP and TANF benefit amounts, and include selected results for monthly benefit amounts in the appendix.²⁶ We focus on annual amounts because they are the inputs to the SPM. There are complexities with using either annual or monthly benefit amounts though. In the CPS ASEC, respondents are given the option to report SNAP benefits monthly or yearly and then asked the number of months of benefit receipt, if they report monthly.²⁷ Of respondents who indicated they received SNAP in the CPS ASEC, nearly 95 percent provided a monthly benefit amount.²⁸ Therefore, when we examine the annual difference in amounts between the CPS ASEC and the administrative records, there are two possible sources of inaccuracy (assuming the amounts are reported monthly): the reported monthly benefit amount and the reported months of receipt.

We find that for most individuals, the number of months of SNAP receipt does not align between the CPS ASEC and administrative records. Only 39 percent of individuals accurately report months of SNAP receipt in the CPS ASEC within a month of what is listed in administrative records, conditional on SNAP receipt of at least one month in the administrative records and CPS ASEC as well as reporting SNAP monthly in the CPS ASEC (see Table 7). Of the remainder, four times as many individuals overreport than underreport the number of months of SNAP receipt (49 percent compared to 12 percent, respectively).²⁹ For average monthly

²⁶ Due to small sample sizes, we restrict this additional analysis to SNAP recipients only. Respondents were given the option to report TANF benefits weekly, every other week, twice a month, monthly, or yearly. Of respondents who indicated TANF receipt in the CPS ASEC, about 80 percent provided a monthly benefit amount. Future analyses that include TANF administrative records for more states could look into the relationship between monthly and annual benefit amounts.

²⁷ If a respondent reports benefits yearly, they are not asked how many payments they received in the last year and are assumed to have received the benefit every month of the year.

²⁸ In the administrative records for both SNAP and TANF, the state reports the amount of benefits for each month. For our analysis, we use either the benefit amounts for each month aggregated to an annual amount, or the monthly amounts averaged over the number of months of benefit receipt from the administrative records.

²⁹ There is a discrepancy due to rounding in the percent of individuals who underreport the number of months of SNAP receipt between what is reported in the paper (12 percent) and in the table (12.5 percent).

benefit amount, on the other hand, 10 percent overreport monthly benefits (report a benefit amount in the CPS ASEC that is at least \$100 over administrative records) and 42 percent underreport monthly benefits. The impact of overreporting of the months of receipt as well as underreporting monthly benefit amounts has offsetting impacts on annual SNAP benefits (see Table 8). As a result, 62 percent of individuals are estimated to have an annual SNAP benefit amount in the CPS ASEC that is within \$1,200 to the annual administrative total, while 16 percent of respondents overreport and 22 percent underreport.

Supplemental Poverty Measurement (SPM) Rates

Factoring in both SNAP and TANF benefits, the CPS ASEC overestimates SPM rates by 0.4 percent and TRIM3 underestimates SPM rates by 0.4 percent, both compared to administrative records (see Table 9).

Factoring in only SNAP benefits, we find that the CPS ASEC overestimates by 0.5 percent. We find that TRIM3 underestimates the SPM by 0.5 percent only including SNAP. Whereas factoring in only TANF benefits, the SPM rates are not statistically different between the CPS ASEC and administrative records. We find that TRIM3 overestimates SPM poverty by 0.2 percent including only TANF. Table 10 shows the SPM including both SNAP and TANF benefits using the three different data sources by different demographic characteristics.

Figure 1 and 2 show kernel density plots of the official income-to-poverty ratio (using household income from the CPS ASEC) for SNAP and TANF (respectively) recipients according to each of the three data sources.

LIMITATIONS

Our analysis is conducted on a limited sample of seven states. We chose the states due to the availability of their data across several years between 2009 and 2015. To the extent that the states who provided their administrative data to the Census Bureau are different than other states, this analysis may not be generalizable to other states.

The state TANF administrative records may be missing solely state funded cash benefits or other state or county general assistance programs in some or all states. The CPS ASEC question regarding TANF is very broad and asks about cash assistance from any state or county welfare program (see Appendix I). Therefore, the benefit amount from the CPS ASEC includes other cash assistance programs to the extent that they are reported by CPS respondents. TRIM3 includes both TANF and solely state funded benefits. Whether or not this is included in the administrative records could vary by state since the states have their own data reporting structure.

There are limitations to using income from the CPS ASEC to show the income distribution of program recipients. Households in the CPS ASEC may misreport their earnings and other income, in addition to misreporting SNAP and TANF benefits. Additionally, there is substantial imputation of earnings and other income items due to non-response in the CPS ASEC. In our sample, 22 percent of individuals are in households with imputed earnings and 54 percent of individuals are in households with at least one income item imputed. We have conducted sensitivity analyses on our distributional analyses to examine the effect of excluding households with imputed earnings or any income items imputed. These sensitivity analyses did not change our findings. Future analyses could use alternate sources of income, such as income

from the SNAP or TANF administrative records or from other administrative records sources to look at the income distribution of program recipients.

As discussed previously, our analysis is limited to individuals on the CPS ASEC and in administrative records with a PIK. To the extent that SNAP or TANF recipients cannot be assigned a PIK on the CPS ASEC and can be assigned a PIK on the administrative records, the more false negatives we will find. The opposite scenario results in more false positives.

For this analysis, we are interested in how survey responses compare to administrative records and therefore have excluded CPS respondents who did not respond to the ASEC, the SNAP questions, or the TANF questions. Future analyses could look at how the CPS ASEC as a whole (including imputations) compares to administrative records in order to improve the imputation process in the CPS ASEC.

CONCLUSION

CPS ASEC self-reported SNAP and TANF participation is underreported compared to administrative records in our sample. Forty-three percent of SNAP recipients do not report their receipt on the CPS survey, compared to 33 percent in TRIM3. Sixty-two percent of TANF recipients do not report their receipt on the CPS survey, compared to 63 percent in TRIM3.³⁰

Our analysis highlights the need to reduce false negatives in self-reported SNAP and TANF receipt and in modeling efforts. Our results are consistent with prior studies that have also found underreporting of SNAP and TANF participation in household survey data. Where it diverges from prior research is in the finding that SNAP annual benefits seem to be overreported as a result of an overreporting of months of receipt in the CPS ASEC.

³⁰ The false negative rates for TANF are not statistically different between the CPS ASEC and TRIM3.

Using administrative records is a possible method to more accurately identify those individuals who received SNAP or TANF in the prior year and should be seriously considered as a robust alternative and resource for alternative poverty estimation.

As this project moves forward, we will focus on adding administrative records from other program areas (e.g. child care subsidies, Women, Infant, and Children (WIC) Program, Low Income Home Energy Assistance Program (LIHEAP)) into our curated dataset and re-estimating the SPM.

REFERENCES

- Colby, Sandy, Jose Debora, and Misty L. Heggeness. 2017. "How Well Do Individuals Report Supplemental Nutrition Assistance Program (SNAP) Take Up in Household Surveys?" U.S. Census Bureau SEHSD Working Paper No. 2017-03.
- Department of Health and Human Services Office of Family Assistance. 2018. "TANF Data & Reports." Retrieved August 1, 2018 (<https://www.acf.hhs.gov/ofa/programs/tanf/data-reports>).
- Fontenot, Kayla R., Jessica Semega, and Melissa A. Kollar. 2018. "Income and Poverty in the United States: 2017." U.S. Census Bureau Current Population Reports, P60-263.
- Food Research and Action Center (FRAC). 2016. "SNAP/Food Stamp Participation Data." Retrieved August 17, 2016 (<http://frac.org/reports-and-resources/snapfood-stamp-monthly-participation-data>).
- Fox, Liana. 2018. "The Supplemental Poverty Measure: 2017." U.S. Census Bureau Report No. P60-265.
- Fox, Liana, Misty L. Heggeness, Jose Pacas, and Kathryn Stevens. 2017. "Precision in Measurement: Using Supplemental Nutritional Assistance Program (SNAP) Administrative Records to Evaluate Poverty Measurement." Social, Economic, and Housing Statistics Division (SEHSD) Working Paper No. 2017-49. U.S. Census Bureau: Suitland, MD.
- Ganong, Peter and Jeffrey B. Liebman. 2013. "The Decline, Rebound, and Further Rise in SNAP Enrollment: Disentangling Business Cycle Fluctuations and Policy Changes." NBER Working Paper No. 19363.
- Gray, Kelsey Farson and Karen Cunyningham. 2016. "Trends in Supplemental Nutrition Assistance Program Participation Rates: Fiscal Year 2010 to Fiscal Year 2014." USDA Nutrition Assistance Program Report Series (June).
- Groves, Robert M. 2006. "Nonresponse Rates and Nonresponse Bias in Household Surveys." *Public Opinion Quarterly* 70(5): 646-675.
- Harris, Benjamin Cerf. 2014. "Within and Across County Variations in SNAP Misreporting: Evidence from Linked ACS and Administrative Records. U.S. Census Bureau CARRA Working Paper Series Working Paper No. 2014-05.
- Marquis, Kent H. and Jeffrey C. Moore. 1990. "Measurement Errors in SIPP Program Reports." Statistical Research Division Research Report Series (Survey Methodology #2010-01). U.S. Census Bureau.
- Meyer, Bruce D. and Robert Goerge. 2011. "Errors in Survey Reporting and Imputation and Their Effects on Estimates of Food Stamp Program Participation." U.S. Census Bureau Center for Economic Studies Paper No. CES-WP-1114.

- Meyer, Bruce D., Wallace Mok, and James X. Sullivan. 2009. "Household Surveys in Crisis." *The Journal of Economic Perspectives* 29(4): 199-226.
- Meyer, Bruce D. and Nikolas Mittag. 2015. "Using Linked Survey and Administrative Data to Better Measure Income: Implications for Poverty, Program Effectiveness, and Holes in the Safety Net." NBER Working Paper No. 21676 (October).
- Short, Kathleen, Thesia Garner, David Johnson, and Patricia Doyle. 1999. "Experimental Poverty Measures: 1990-1997." U.S. Census Bureau Report No. P60-205.
- Short, Kathleen. 2011. "The Research SUPPLEMENTAL POVERTY MEASURE: 2010." U.S. Census Bureau Report No. P60-241.
- Stevens, Kathryn, Liana Fox, and Misty L. Heggeness. 2018. "Precision in Measurement: Using State-Level SNAP Administrative Records and the Transfer Income Model (TRIM3) to Evaluate Poverty Measurement." Social, Economic, and Housing Statistics Division (SEHSD) Working Paper No. 2018-15. U.S. Census Bureau: Suitland, MD.
- Tiehen, Laura, Dean Jooliffe, and Craig Gundersen. 2012. "Alleviating Poverty in the United States: The Critical Role of SNAP Benefits." United States Department of Agriculture Economic Research Service Economic Research Report No. 132.
- United States Department of Agriculture Food and Nutrition Services. 2017a. "Supplemental Nutrition Assistance Program (SNAP) Cost of Living Adjustment (COLA) Information." Retrieved September 19, 2017 (<https://www.fns.usda.gov/snap/cost-living-adjustment-cola-information>).
- United States Department of Agriculture Food and Nutrition Services. 2017b. "Supplemental Nutrition Assistance Program (SNAP) Eligibility." Retrieved September 19, 2017 (<https://www.fns.usda.gov/snap/eligibility>).
- United States Department of Agriculture Food and Nutrition Services. 2017c. "Supplemental Nutrition Assistance Program National Level Annual Summary: Participation and Costs, 1969-2016." Retrieved September 19, 2017 (<http://www.fns.usda.gov/pd/supplemental-nutrition-assistance-program-snap>).
- Wagner, D. and Mary Layne. 2014. "The Person Identification Validation System (PVS)," Center for Administrative Records Research and Application (CARRA) Working Paper No. #2014-01, U.S. Census Bureau.
- Wooldridge, Jeffrey M. 2007. "Inverse Probability Weighted Estimation for General Missing Data Problems." *Journal of Econometrics*, 141(2): 1281-1301.

Table 1A. Misreporting in Supplemental Nutrition Assistance Program Benefits: CPS ASEC vs. Administrative Records, Pooled Sample 2009-2015

Administrative Records	CPS ASEC Data		Weighted N (in thousands)
	Not Reported	Reported	
Not Received	99.4%	0.6%	36,140
Received	43.0%	57.0%	7,703

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements (CPS ASEC) and state Supplemental Nutrition Assistance Program (SNAP) administrative records. The administrative records for Arizona, Maryland, North Dakota, and Tennessee cover calendar years 2009–2015. The administrative records for Idaho and Michigan cover calendar years 2010–2015 and for Virginia cover calendar years 2009–2013.

Note: Adjusted using IPW, excluding full line imputes, and excluding imputed SNAP receipt and amount. The unit of analysis is the CPS household. All values are rounded to four (or fewer) significant digits. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

Table 1B. Misreporting in Supplemental Nutrition Assistance Program Benefits: TRIM3 vs. Administrative Records, Pooled Sample 2009-2015

Administrative Records	TRIM3 Data		Weighted N (in thousands)
	Not Reported	Reported	
Not Received	92.2%	7.8%	36,140
Received	32.7%	67.3%	7,703

Source: Transfer Income Model version 3 (TRIM3) and state Supplemental Nutrition Assistance Program (SNAP) administrative records. The administrative records for Arizona, Maryland, North Dakota, and Tennessee cover calendar years 2009–2015. The administrative records for Idaho and Michigan cover calendar years 2010–2015 and for Virginia cover calendar years 2009–2013.

Note: Adjusted using IPW, excluding full line imputes, and excluding imputed SNAP receipt and amount. The unit of analysis is the CPS household. All values are rounded to four (or fewer) significant digits. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

Table 2A. Misreporting in Temporary Assistance for Needy Families Benefits: CPS ASEC vs. Administrative Records, Pooled Sample 2009-2015

Administrative Records	CPS ASEC Data		Weighted N (in thousands)
	Not Reported	Reported	
Not Received	99.4%	0.6%	43,640
	97.8%	0.6%	
Received	62.4%	37.6%	696
	1.0%	0.6%	

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements (CPS ASEC) and state Temporary Assistance for Needy Families (TANF) administrative records. The administrative records for Arizona, Maryland, North Dakota, and Tennessee cover calendar years 2009–2015. The administrative records for Idaho and Michigan cover calendar years 2010–2015 and for Virginia cover calendar years 2009–2013.

Note: The first row shows the row percentage and the second row shows the cell percentage. Adjusted using IPW, excluding full line imputes, and excluding imputed TANF receipt and amount. The unit of analysis is the CPS household. All values are rounded to four (or fewer) significant digits. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

Table 2B. Misreporting in Temporary Assistance for Needy Families Benefits: TRIM3 vs. Administrative Records, Pooled Sample 2009-2015

Administrative Records	TRIM3 Data		Weighted N (in thousands)
	Not Reported	Reported	
Not Received	98.9%	1.1%	43,640
	97.4%	1.1%	
Received	62.8%	37.2%	696
	1.0%	0.6%	

Source: Transfer Income Model version 3 (TRIM3) and state Temporary Assistance for Needy Families (TANF) administrative records. The administrative records for Arizona, Maryland, North Dakota, and Tennessee cover calendar years 2009–2015. The administrative records for Idaho and Michigan cover calendar years 2010–2015 and for Virginia cover calendar years 2009–2013.

Note: The first row shows the row percentage and the second row shows the cell percentage. Adjusted using IPW, excluding full line imputes, and excluding imputed TANF receipt and amount. The unit of analysis is the CPS household. All values are rounded to four (or fewer) significant digits. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

Table 3. Supplemental Nutrition Assistance Program Receipt Rate by Demographic Characteristics, Pooled Sample 2009-2015

	Weighted N (in thousands)	SNAP Receipt Rate			Difference (CPS ASEC – Administrative Records)	Difference (TRIM3 – Administrative Records)
		CPS ASEC	TRIM3	Admin Records		
All People (Pooled Sample)	207,500	12.4%	20.1%	21.1%	-8.7%***	-1.1%***
With zero income	2,184	33.2%	80.4%	58.4%	-25.2%***	22.0%***
0 – 50% of FPL	9,066	54.9%	85.2%	69.0%	-14.2%***	16.2%***
50 – 100% of FPL	14,780	53.9%	81.9%	71.0%	-17.1%***	10.9%***
100 – 150% of FPL	16,770	31.6%	55.6%	46.7%	-15.1%***	8.9%***
150 – 200% of FPL	18,000	18.0%	31.3%	31.6%	-13.5%***	-0.3%
200% of FPL and over	148,900	2.9%	4.6%	9.1%	-6.2%***	-4.5%***
Under 18 years	48,810	20.2%	29.2%	31.2%	-11.0%***	-1.3%***
18 to 64 years	129,500	11.1%	18.6%	19.8%	-8.7%***	-1.1%***
65 years and older	29,120	5.6%	10.1%	10.4%	-4.8%***	-0.3%
White	162,300	10.4%	17.8%	17.7%	-7.3%***	0.1%
White, not Hispanic	140,500	8.5%	15.0%	14.6%	-6.1%***	0.4%
Black	29,410	21.8%	31.1%	38.8%	-16.9%***	-7.7%***
Asian	7,784	5.4%	10.8%	10.1%	-4.8%***	0.7%
Hispanic (any race)	24,650	22.9%	35.8%	37.7%	-14.8%***	-1.9%**
Total, aged 25 and older	139,600	9.5%	15.9%	16.8%	-7.3%***	-0.9%***
No high school diploma	14,850	26.7%	39.8%	41.0%	-14.3%***	-1.2%
High school, no college	40,500	13.0%	21.3%	23.2%	-10.1%***	-1.9%***
Some college, no degree	38,410	8.4%	14.4%	15.6%	-7.2%***	-1.2%***
Bachelor’s degree or higher	45,820	1.9%	4.7%	4.5%	-2.6%***	0.3%

Table 3. Supplemental Nutrition Assistance Program Receipt Rate by Demographic Characteristics, Pooled Sample 2009-2015 (continued)

	Weighted N (in thousands)	SNAP Receipt Rate			Difference (CPS ASEC – Administrative Records)	Difference (TRIM3 – Administrative Records)
		CPS ASEC	TRIM3	Admin Records		
With private insurance	142,200	3.2%	8.2%	8.9%	-5.7% ***	-0.8% ***
With public, no private insurance	42,730	40.2%	50.3%	52.7%	-12.5% ***	-2.4% ***
Not insured	22,580	18.1%	37.9%	38.3%	-20.2% ***	-0.4%
Total 18 to 64 years	129,500	11.1%	18.6%	19.8%	-8.7% ***	-1.1% ***
All workers	99,660	7.5%	13.5%	15.0%	-7.5% ***	-1.5% ***
Worked full-time, year-round	68,430	4.1%	6.8%	10.7%	-6.6% ***	-3.8% ***
Less than full-time, year-round	31,230	14.9%	28.2%	24.5%	-9.6% ***	3.7% ***
Did not work at least 1 week	29,880	22.9%	35.7%	35.7%	-12.7% ***	0.0%

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements (CPS ASEC), Transfer Income Model version 3 (TRIM3), and state Supplemental Nutrition Assistance Program (SNAP) administrative records. The administrative records for Arizona, Maryland, North Dakota, and Tennessee cover calendar years 2009–2015. The administrative records for Idaho and Michigan cover calendar years 2010–2015 and for Virginia cover calendar years 2009–2013.

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Adjusted using IPW, excluding full line imputes, and excluding imputed SNAP receipt and amount. All values are rounded to four (or fewer) significant digits. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

Table 4. Average Annual Supplemental Nutrition Assistance Program Benefit Amount by Demographic Characteristics, Pooled Sample 2009-2015

	Weighted N (in thousands)	Average Annual SNAP		Difference (CPS ASEC – Administrative Records)	Weighted N (in thousands)	Average Annual SNAP		Difference (TRIM3 – Administrative Records)
		CPS ASEC	Admin Records			TRIM3	Admin Records	
All People (Pooled Sample)	24,910	\$3,579	\$3,799	-\$220***	29,380	\$4,060	\$3,644	\$415***
With zero income	684	\$4,367	\$4,308	\$58	1,163	\$5,250	\$3,617	\$1,633***
0 – 50% of FPL	4,805	\$5,098	\$5,212	-\$114	5,945	\$6,252	\$4,876	\$1,375***
50 – 100% of FPL	7,788	\$3,933	\$4,147	-\$214***	9,666	\$4,659	\$3,948	\$711***
100 – 150% of FPL	5,178	\$3,036	\$3,400	-\$364***	6,295	\$3,063	\$3,247	-\$184*
150 – 200% of FPL	3,041	\$2,793	\$2,890	-\$97	3,494	\$2,442	\$2,768	-\$326***
200% of FPL and up	4,097	\$2,397	\$2,660	-\$263***	3,984	\$2,329	\$2,465	-\$136
Under 18 years	9,575	\$4,450	\$4,743	-\$294***	11,180	\$5,095	\$4,569	\$526***
18 to 64 years	13,770	\$3,183	\$3,362	-\$179***	16,440	\$3,576	\$3,200	\$376***
65 years and older	1,561	\$1,737	\$1,866	-\$129**	1,765	\$2,009	\$1,923	\$86
White	16,280	\$3,450	\$3,616	-\$166***	19,220	\$3,912	\$3,469	\$443***
White, not Hispanic	11,530	\$3,409	\$3,607	-\$198***	13,430	\$3,772	\$3,444	\$328***
Black	6,287	\$3,825	\$4,172	-\$347***	7,506	\$4,279	\$3,997	\$282***
Asian	391	\$2,803	\$3,286	-\$483*	436	\$3,810	\$3,347	\$463
Hispanic (any race)	5,398	\$3,528	\$3,638	-\$111	6,551	\$4,192	\$3,513	\$679***

Table 4. Average Annual Supplemental Nutrition Assistance Program Benefit Amount by Demographic Characteristics, Pooled Sample 2009-2015 (continued)

	Weighted N (in thousands)	Average Annual SNAP		Difference (CPS ASEC – Administrative Records)	Weighted N (in thousands)	Average Annual SNAP		Difference (TRIM3 – Administrative Records)
		CPS ASEC	Admin Records			TRIM3	Admin Records	
Total, aged 25 and older	12,780	\$2,966	\$3,125	-\$159***	14,920	\$3,309	\$3,036	\$274***
No high school diploma	3,827	\$3,003	\$3,126	-\$123*	4,471	\$3,389	\$3,091	\$298***
High school, no college	5,057	\$3,005	\$3,170	-\$165***	5,990	\$3,341	\$3,052	\$289***
Some college, no degree	3,092	\$3,019	\$3,200	-\$181***	3,548	\$3,271	\$3,091	\$180***
Bachelor’s degree or higher	803	\$2,335	\$2,547	-\$212	907	\$2,856	\$2,441	\$415*
With private insurance	4,313	\$2,576	\$2,923	-\$346***	5,593	\$3,116	\$2,748	\$368***
With public, no private insurance	16,710	\$3,964	\$4,157	-\$193***	18,190	\$4,457	\$4,090	\$367***
Not insured	3,892	\$3,038	\$3,233	-\$195***	5,603	\$3,712	\$3,092	\$620***
Total 18 to 65 years	13,770	\$3,183	\$3,362	-\$179***	16,440	\$3,576	\$3,200	\$376***
All workers	7,196	\$3,093	\$3,367	-\$274***	8,521	\$3,434	\$3,184	\$251***
Worked full-time, year-round	2,683	\$2,906	\$3,059	-\$153**	2,999	\$3,170	\$2,984	\$186**
Less than full-time, year-round	4,513	\$3,205	\$3,551	-\$346***	5,522	\$3,578	\$3,292	\$286***
Did not work at least 1 week	6,579	\$3,281	\$3,355	-\$74	7,919	\$3,728	\$3,218	\$511***
Not a proxy response	13,000	\$3,569	\$3,801	-\$231***	n/a	n/a	n/a	n/a
Household with more than one SNAP unit	4,160	\$3,825	\$4,995	-\$1,170***	n/a	n/a	n/a	n/a

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements (CPS ASEC), Transfer Income Model version 3 (TRIM3), and state Supplemental Nutrition Assistance Program (SNAP) administrative records. The administrative records for Arizona, Maryland, North Dakota, and Tennessee cover calendar years 2009–2015. The administrative records for Idaho and Michigan cover calendar years 2010–2015 and for Virginia cover calendar years 2009–2013.

*Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. The first five columns are conditional on receiving SNAP in the CPS ASEC and administrative records and the last five columns are conditional on receiving SNAP in TRIM3 and administrative records. Adjusted using IPW, excluding full line imputes, and excluding imputed SNAP receipt and amount. All values are rounded to four (or fewer) significant digits. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.*

Table 5. Temporary Assistance for Needy Families Receipt Rate by Demographic Characteristics, Pooled Sample 2009-2015

	Weighted N (in thousands)	TANF Receipt Rate			Difference (CPS ASEC – Administrative Records)	Difference (TRIM3 – Administrative Records)
		CPS ASEC	TRIM3	Admin Records		
All People (Pooled Sample)	210,400	1.7%	2.6%	2.3%	-0.7%***	0.2%
With zero income	2,349	0.0%	10.8%	7.2%	-7.2%***	3.7%
0 – 50% of FPL	9,756	10.1%	20.4%	13.4%	-3.3%***	7.0%***
50 – 100% of FPL	15,850	7.2%	9.6%	8.9%	-1.7%***	0.7%
100 – 150% of FPL	17,820	3.2%	3.9%	3.8%	-0.7%	0.0%
150 – 200% of FPL	18,670	1.2%	2.6%	2.3%	-1.1%**	0.2%
200% of FPL and up	148,300	0.4%	0.5%	0.7%	-0.3%***	-0.3%***
Under 18 years	50,000	3.5%	5.6%	4.9%	-1.4%***	0.7%**
18 to 64 years	131,000	1.3%	1.9%	1.8%	-0.5%***	0.0%
65 years and older	29,350	0.3%	0.5%	0.4%	-0.1%	0.1%
White	163,900	1.1%	1.8%	1.5%	-0.4%***	0.3%**
White, not Hispanic	141,600	0.9%	1.3%	1.2%	-0.3%***	0.1%
Black	30,500	4.6%	7.0%	7.1%	-2.5%***	0.0%
Asian	7,791	0.4%	0.7%	0.5%	-0.2%	0.2%
Hispanic (any race)	25,250	2.0%	4.3%	3.0%	-1.0%***	1.3%***
Total, aged 25 and older	140,900	1.0%	1.4%	1.4%	-0.4%***	0.1%
No high school diploma	15,520	2.5%	4.3%	3.4%	-0.9%***	0.9%**
High school, no college	41,110	1.4%	1.9%	2.0%	-0.5%***	-0.1%
Some college, no degree	38,620	0.9%	1.2%	1.2%	-0.3%***	-0.1%
Bachelor’s degree or higher	45,670	0.2%	0.2%	0.2%	0.0%	0.0%

Table 5. Temporary Assistance for Needy Families Receipt Rate by Demographic Characteristics, Pooled Sample 2009-2015 (continued)

	Weighted N (in thousands)	TANF Receipt Rate			Difference (CPS ASEC – Administrative Records)	Difference (TRIM3 – Administrative Records)
		CPS ASEC	TRIM3	Admin Records		
With private insurance	142,300	0.3%	0.6%	0.6%	-0.3% ***	0.0%
With public, no private insurance	44,780	6.3%	8.1%	7.4%	-1.1% ***	0.6%
Not insured	23,280	1.3%	3.8%	3.3%	-2.0% ***	0.6%
Total 18 to 64 years	131,000	1.3%	1.9%	1.8%	-0.5% ***	0.0%
All workers	100,200	0.8%	1.3%	1.3%	-0.5% ***	0.0%
Worked full-time, year-round	68,480	0.4%	0.6%	0.8%	-0.4% ***	-0.2% **
Less than full-time, year-round	31,740	1.8%	2.8%	2.4%	-0.7% ***	0.4% **
Did not work at least 1 week	30,800	2.9%	3.7%	3.5%	-0.7% **	0.2%

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements (CPS ASEC), Transfer Income Model version 3 (TRIM3), and state Temporary Assistance for Needy Families (TANF) administrative records. The administrative records for Arizona, Maryland, North Dakota, and Tennessee cover calendar years 2009–2015. The administrative records for Idaho and Michigan cover calendar years 2010–2015 and for Virginia cover calendar years 2009–2013.

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Adjusted using IPW, excluding full line imputes, and excluding imputed TANF receipt and amount. All values are rounded to four (or fewer) significant digits. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

Table 6. Average Annual Temporary Assistance for Needy Families Benefit Amount by Demographic Characteristics, Pooled Sample 2009-2015

	Weighted N (in thousands)	Average Annual TANF CPS ASEC	Admin Records	Difference (CPS ASEC – Administrative Records)	Weighted N (in thousands)	Average Annual TANF TRIM3	Admin Records	Difference (TRIM3 – Administrative Records)
All People (Pooled Sample)	1,831	\$3,012	\$2,295	\$717***	1,823	\$2,613	\$2,233	\$380***
With zero income	S	S	S	S	63	\$3,771	\$1,124	\$2,647**
0 – 50% of FPL	553	\$3,317	\$2,517	\$799***	742	\$3,168	\$2,499	\$668**
50 – 100% of FPL	675	\$3,177	\$2,497	\$680**	590	\$2,324	\$2,146	\$178
100 – 150% of FPL	289	\$2,320	\$2,242	\$78	216	\$1,756	\$2,201	-\$445
150 – 200% of FPL	53	\$4,946	\$1,397	\$3,548	68	\$2,585	\$1,586	\$999***
200% of FPL and up	261	\$2,313	\$1,542	\$770**	207	\$2,356	\$1,775	\$581
Under 18 years	1,005	\$3,267	\$2,414	\$853***	1,002	\$2,817	\$2,403	\$414**
18 to 64 years	799	\$2,699	\$2,168	\$531***	793	\$2,358	\$2,036	\$322***
65 years and older	26	\$2,813	\$1,631	\$1,181	28	\$2,534	\$1,740	\$794**
White	893	\$2,705	\$2,005	\$701***	767	\$1,944	\$1,660	\$284*
White, not Hispanic	667	\$2,567	\$2,196	\$371**	543	\$2,059	\$1,852	\$207
Black	842	\$3,420	\$2,640	\$780***	990	\$3,165	\$2,703	\$462*
Asian	S	S	S	S	S	S	S	S
Hispanic (any race)	244	\$3,006	\$1,455	\$1,551**	238	\$1,824	\$1,241	\$583*

Table 6. Average Annual Temporary Assistance for Needy Families Benefit Amount by Demographic Characteristics, Pooled Sample 2009-2015 (continued)

	Weighted N (in thousands)	Average Annual TANF		Difference (CPS ASEC – Administrative Records)	Weighted N (in thousands)	Average Annual TANF		Difference (TRIM3 – Administrative Records)
		CPS ASEC	Admin Records			TRIM3	Admin Records	
Total, aged 25 and older	640	\$2,793	\$2,182	\$611***	614	\$2,515	\$2,096	\$420***
No high school diploma	189	\$3,130	\$2,383	\$747**	194	\$2,518	\$2,115	\$403**
High school, no college	264	\$2,672	\$2,043	\$629***	273	\$2,645	\$1,995	\$650***
Some college, no degree	157	\$2,635	\$2,123	\$512**	121	\$2,395	\$2,282	\$113
Bachelor’s degree or higher	30	\$2,561	\$2,449	\$112	27	\$1,725	\$2,134	-\$409
With private insurance	181	\$2,247	\$1,777	\$470	170	\$2,611	\$1,936	\$675***
With public, no private insurance	1,545	\$3,136	\$2,383	\$753***	1,462	\$2,683	\$2,345	\$339**
Not insured	105	\$2,516	\$1,889	\$627	190	\$2,075	\$1,640	\$434*
Total 18 to 65 years	799	\$2,699	\$2,168	\$531***	793	\$2,358	\$2,036	\$322***
All workers	398	\$2,358	\$1,940	\$418***	382	\$1,997	\$1,839	\$157
Worked full-time, year-round	114	\$2,475	\$1,862	\$613	112	\$2,197	\$1,819	\$378*
Less than full-time, year-round	284	\$2,311	\$1,971	\$340***	271	\$1,914	\$1,848	\$66
Did not work at least 1 week	401	\$3,036	\$2,393	\$644***	411	\$2,694	\$2,219	\$476***
Not a proxy response	824	\$2,682	\$2,048	\$634***	n/a	n/a	n/a	n/a
Household with more than one SNAP unit	141	\$2,573	\$2,826	-\$235	n/a	n/a	n/a	n/a

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements (CPS ASEC), Transfer Income Model version 3 (TRIM3), and state Temporary Assistance for Needy Families (TANF) administrative records. The administrative records for Arizona, Maryland, North Dakota, and Tennessee cover calendar years 2009–2015. The administrative records for Idaho and Michigan cover calendar years 2010–2015 and for Virginia cover calendar years 2009–2013.

*Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. S indicates that the values are suppressed due to disclosure avoidance protections. The first five columns are conditional on receiving TANF in the CPS ASEC and administrative records and the last five columns are conditional on receiving TANF in TRIM3 and administrative records. Adjusted using IPW, excluding full line imputes, and excluding imputed TANF receipt and amount. All values are rounded to four (or fewer) significant digits. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.*

Table 7. Supplemental Nutrition Assistance Program Reporting of Months of Receipt and Monthly Benefit Amount, Pooled Sample 2009-2015

Average Monthly Benefit Amount	Months			Total
	Overreported (CPS ASEC at least one month over administrative records)	Values within one month	Underreported (CPS ASEC at least one month less than administrative records)	
Overreported (CPS ASEC at least \$100 over administrative records)	3.9%	4.2%	1.6%	9.7%
Values within \$100	16.8%	24.5%	6.7%	48.0%
Underreported (CPS ASEC at least \$100 less than administrative records)	27.8%	10.4%	4.2%	42.4%
Total	48.5%	39.1%	12.5%	100.0%

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements (CPS ASEC) and state Supplemental Nutrition Assistance Program (SNAP) administrative records. The administrative records for Arizona, Maryland, North Dakota, and Tennessee cover calendar years 2009–2015. The administrative records for Idaho and Michigan cover calendar years 2010–2015 and for Virginia cover calendar years 2009–2013.

Note: Conditional on receiving SNAP in the CPS ASEC and administrative records and among individuals in households who report SNAP monthly. Adjusted using IPW, excluding full line imputes, and excluding imputed SNAP receipt and amount. All values are rounded to four (or fewer) significant digits. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

Table 8. Supplemental Nutrition Assistance Program Reporting of Annual Benefit Amount, Pooled Sample 2009-2015

Average Annual Benefit Amount	Total
Overreported (CPS ASEC at least \$1,200 over administrative records)	15.8%
Values within \$1,200	61.8%
Underreported (CPS ASEC at least \$1,200 less than administrative records)	22.4%
Total	100.0%

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements (CPS ASEC) and state Supplemental Nutrition Assistance Program (SNAP) administrative records. The administrative records for Arizona, Maryland, North Dakota, and Tennessee cover calendar years 2009–2015. The administrative records for Idaho and Michigan cover calendar years 2010–2015 and for Virginia cover calendar years 2009–2013.

Note: Conditional on receiving SNAP in the CPS ASEC and administrative records and among individuals in households who report SNAP monthly. Adjusted using IPW, excluding full line imputes, and excluding imputed SNAP receipt and amount. All values are rounded to four (or fewer) significant digits. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

Table 9. Percent of People in Poverty by Different Sources of Supplemental Nutrition Assistance Program and Temporary Assistance for Needy Families Values: Pooled Sample 2009-2015

Characteristic	Weighted N (in thousands)	SPM Using CPS Reported Benefits		SPM Using TRIM3 Reported Benefits		SPM Using Admin Benefits		Difference (CPS ASEC – Administrative Records)	Difference (TRIM3 – Administrative Records)
		Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.		
SNAP only	205,200	13.0%	0.0	12.0%	0.0	12.5%	0.0	0.5%***	-0.5%***
TANF only	205,200	13.0%	0.0	13.2%	0.0	13.0%	0.0	0.0%	0.2%***
SNAP and TANF	205,200	13.0%	0.0	12.2%	0.0	12.6%	0.0	0.4%***	-0.4%***

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements (CPS ASEC), Transfer Income Model version 3 (TRIM3), and state Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF) administrative records. The administrative records for Arizona, Maryland, North Dakota, and Tennessee cover calendar years 2009–2015. The administrative records for Idaho and Michigan cover calendar years 2010–2015 and for Virginia cover calendar years 2009–2013.

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Adjusted using IPW, excluding full line imputes, and excluding imputed SNAP and TANF receipt and amount. Standard errors are clustered by PIK. All values are rounded to four (or fewer) significant digits. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

Table 10. Percent of People in Poverty by Demographics: Pooled Sample 2009-2015

Characteristic	Weighted N (in thousands)	SPM Using CPS Reported Benefits		SPM Using TRIM3 Reported Benefits		SPM Using Admin Benefits		Difference (CPS - Admin)	Difference (TRIM3 - Admin)
		Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.		
All SPM Units	205,200	13.0%	0.0	12.2%	0.0	12.6%	0.0	0.4% ***	-0.4% ***
With zero income	2,172	99.2%	0.0	99.2%	0.0	98.6%	0.0	0.6%	0.6%
0 – 50% of FPL	9,004	94.8%	0.0	93.7%	0.0	94.8%	0.0	0.0%	-1.1% **
50 – 100% of FPL	14,720	64.1%	0.0	56.6%	0.0	60.5%	0.0	3.5% ***	-4.0% ***
100 – 150% of FPL	16,700	27.5%	0.0	24.9%	0.0	26.1%	0.0	1.3% ***	-1.2% **
150 – 200% of FPL	17,850	11.3%	0.0	11.1%	0.0	10.8%	0.0	0.6% ***	0.3%
200% of FPL and over	146,900	1.5%	0.0	1.5%	0.0	1.4%	0.0	0.0%	0.0%
Under 18 years	48,360	14.2%	0.0	12.5%	0.0	13.6%	0.0	0.6% ***	-1.1% ***
18 to 64 years	128,100	12.6%	0.0	12.0%	0.0	12.2%	0.0	0.4% ***	-0.2% **
65 years and older	28,710	12.8%	0.0	12.5%	0.0	12.6%	0.0	0.2% ***	-0.1%
White	160,700	11.4%	0.0	10.7%	0.0	11.1%	0.0	0.4% ***	-0.3% ***
White, not Hispanic	139,100	9.4%	0.0	8.9%	0.0	9.2%	0.0	0.2% ***	-0.3% ***
Black	28,960	20.2%	0.0	18.7%	0.0	19.4%	0.0	0.8% ***	-0.7% ***
Asian	7,706	13.4%	0.0	13.1%	0.0	12.9%	0.0	0.5% *	0.2
Hispanic (any race)	24,370	23.3%	0.0	21.7%	0.0	22.3%	0.0	1.0% ***	-0.5% *
Total, aged 25 and older	138,000	11.8%	0.0	11.3%	0.0	11.4%	0.0	0.4% ***	-0.1% *
No high school diploma	14,710	31.4%	0.0	29.9%	0.0	29.9%	0.0	1.5% ***	-0.1%
High school, no college	39,900	14.7%	0.0	14.0%	0.0	14.3%	0.0	0.4% ***	-0.3% **
Some college, no degree	37,970	9.6%	0.0	9.3%	0.0	9.3%	0.0	0.3% ***	0.0%
Bachelor’s degree or higher	45,380	4.7%	0.0	4.6%	0.0	4.6%	0.0	0.0% *	0.0%

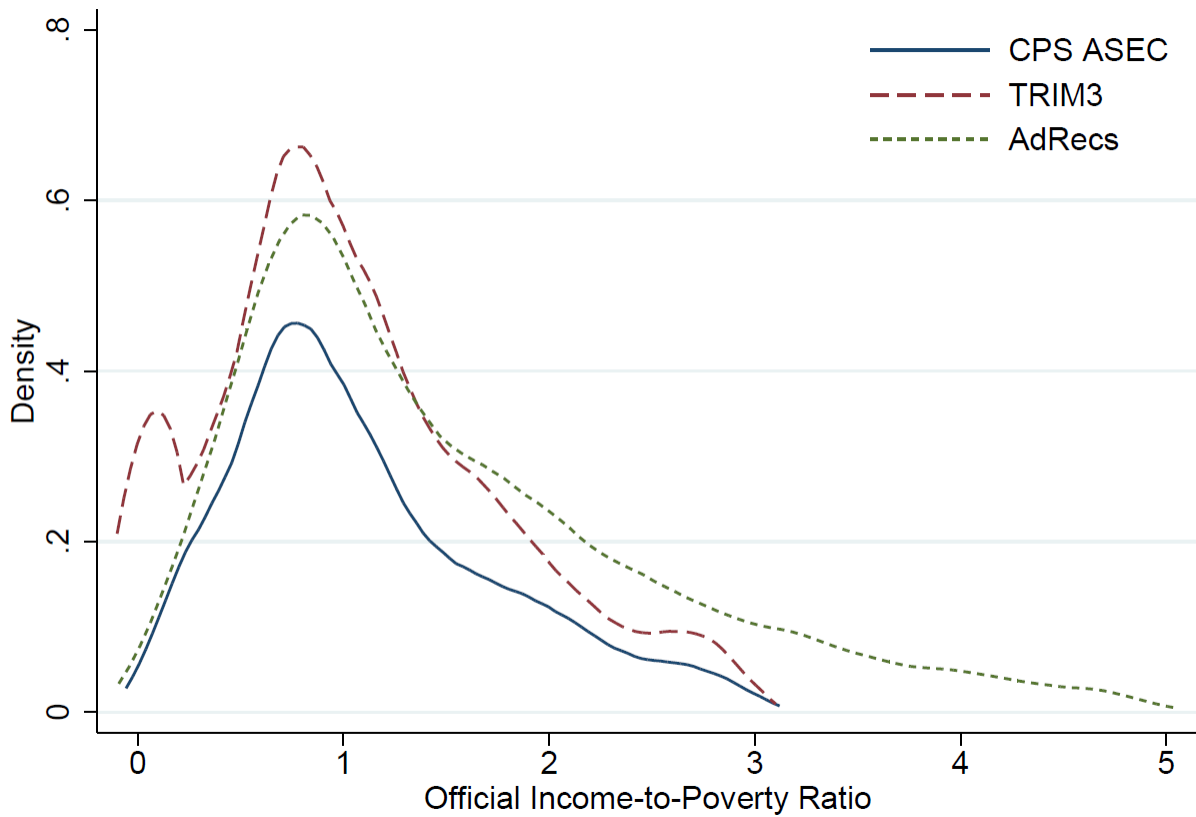
Table 10. Percent of People in Poverty by Demographics: Pooled Sample 2009-2015 (continued)

Characteristic	Weighted N (in thousands)	SPM Using CPS Reported Benefits		SPM Using TRIM3 Reported Benefits		SPM Using Admin Benefits		Difference (CPS - Admin)	Difference (TRIM3 - Admin)
		Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.		
With private insurance	140,800	5.9%	0.0	5.6%	0.0	5.8%	0.0	0.1%***	-0.2%***
With public, no private insurance	42,180	28.6%	0.0	26.6%	0.0	27.7%	0.0	0.9%***	-1.1%***
Not insured	22,250	28.5%	0.0	26.6%	0.0	27.1%	0.0	1.4%***	-0.5%**
Total 18 to 64 years	128,100	12.6%	0.0	12.0%	0.0	12.2%	0.0	0.4%***	-0.2%**
All workers	98,670	7.7%	0.0	7.2%	0.0	7.4%	0.0	0.3%***	-0.2%***
Worked full-time, year-round	67,720	4.1%	0.0	3.8%	0.0	3.8%	0.0	0.2%***	0.0%
Less than full-time, year-round	30,950	15.5%	0.0	14.6%	0.0	15.1%	0.0	0.4%***	-0.5%***
Did not work at least 1 week	29,470	29.2%	0.0	28.2%	0.0	28.3%	0.0	0.8%***	-0.1%

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements (CPS ASEC), Transfer Income Model version 3 (TRIM3), and state Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF) administrative records. The administrative records for Arizona, Maryland, North Dakota, and Tennessee cover calendar years 2009–2015. The administrative records for Idaho and Michigan cover calendar years 2010–2015 and for Virginia cover calendar years 2009–2013.

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Adjusted using IPW, excluding full line imputes, and excluding imputed SNAP and TANF receipt and amount. Standard errors are clustered by PIK. All values are rounded to four (or fewer) significant digits. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

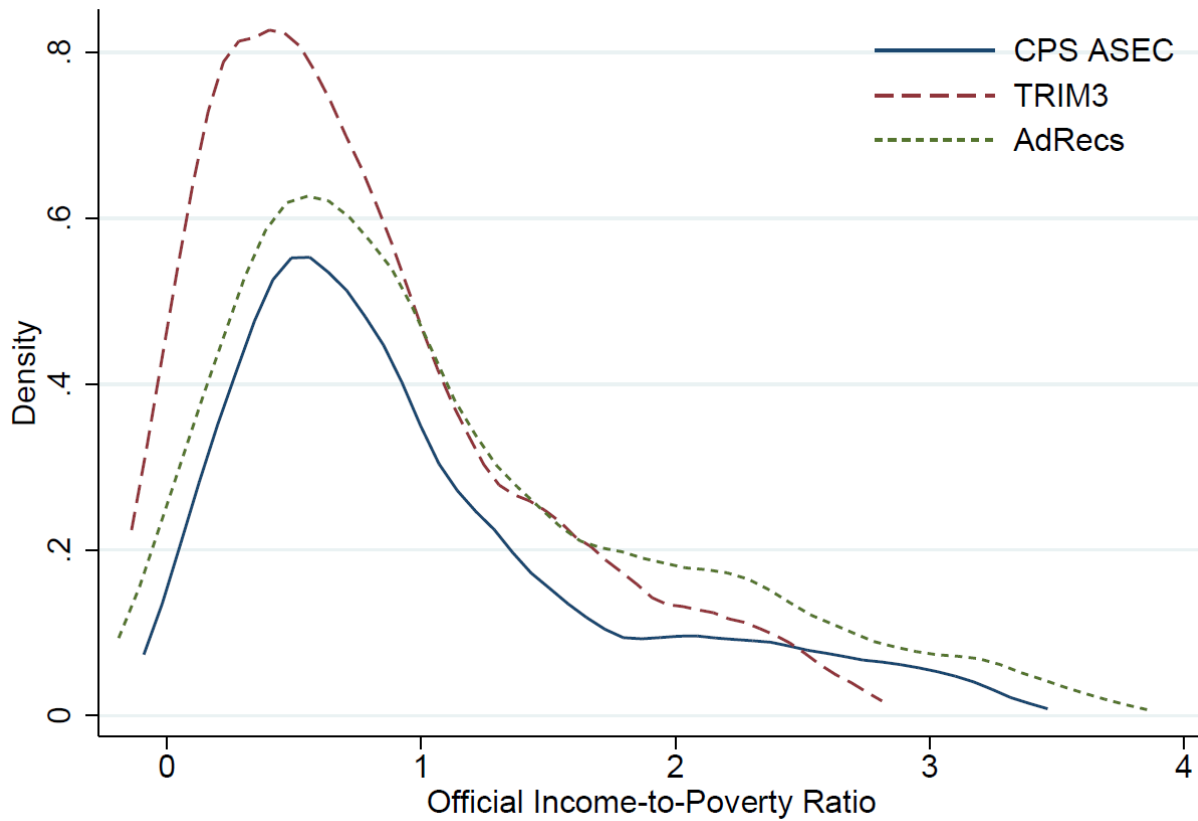
Figure 1. Kernel Density Plot of Poverty Ratio for Supplemental Nutrition Assistance Program Recipients by Data Source, Pooled Sample 2009-2015



Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements (CPS ASEC), Transfer Income Model version 3 (TRIM3), and state Supplemental Nutrition Assistance Program (SNAP) administrative records (AdRecs). The administrative records for Arizona, Maryland, North Dakota, and Tennessee cover calendar years 2009–2015. The administrative records for Idaho and Michigan cover calendar years 2010–2015 and for Virginia cover calendar years 2009–2013.

Note: Adjusted using IPW, excluding full line imputes, excluding imputed SNAP receipt and amount, and excluding the top and bottom five percent of observations. The densities have been scaled based on the rates of SNAP receipt. The density for the administrative records curve is one. The unit of analysis is the CPS household. Values are conditional on positive SNAP benefits in each data source. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

Figure 2. Kernel Density Plot of Poverty Ratio for Temporary Assistance for Needy Families Recipients by Data Source, Pooled Sample 2009-2015



Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements (CPS ASEC), Transfer Income Model version 3 (TRIM3), and state Temporary Assistance for Needy Families (TANF) administrative records (AdRecs). The administrative records for Arizona, Maryland, North Dakota, and Tennessee cover calendar years 2009–2015. The administrative records for Idaho and Michigan cover calendar years 2010–2015 and for Virginia cover calendar years 2009–2013.

Note: Adjusted using IPW, excluding full line imputes, excluding imputed TANF receipt and amount, and excluding the top and bottom five percent of observations. The densities have been scaled based on the rates of TANF receipt. The density for the administrative records curve is one. The unit of analysis is the CPS household. Values are conditional on positive TANF benefits in each data source. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

Appendix I. Question Wording from the CPS ASEC

Through the 2014 CPS ASEC (for calendar year 2013), respondents are asked the following questions regarding SNAP receipt:

1. Did (you/anyone in this household) get SNAP (Supplemental Nutrition Assistance Program), food stamps or a food stamp benefit card at any time during [year]?³¹
2. At any time during [year], even for one month, did (you/anyone in this household) receive any food assistance from (State Program name) or a food assistance benefit card (such as State EBT card name)?³²
3. Which of the people now living here were covered by that food assistance during [year]?

Starting in the redesigned 2014 CPS ASEC, respondents are asked the following questions regarding SNAP receipt:

1. Did (you/anyone in this household) get food stamps or use a food stamp benefit card at any time during [year]?
2. At any time during [year], even for one month, did (you/anyone in this household) receive any food assistance from (State Program name)?
3. Which of the people now living here were covered by that food assistance during [year]?

³¹ This question was not asked in the 2011 CPS ASEC (for calendar year 2010).

³² Only those who respond “No” to the first question are asked the second question. For most states, the State Program name in the second question is filled in as “SNAP”. For the 2018 CPS ASEC, the question changed to “At any time during [year] did (you/anyone in this household) receive benefits from SNAP (the Supplemental Nutritional Assistance Program) or the Food Stamp Program or use a SNAP or food stamp benefit card?”

After asking about all of the different sources of income, the questionnaire asks the following questions about the amount of SNAP benefits received if anyone in the household received SNAP benefits:³³

4. What is the easiest way for you to tell us the value of the food assistance: monthly or yearly?
5. What is the (monthly) value of the food assistance received in [year]?
6. How many months was food assistance received in [year]?

Beginning in the 2014 CPS ASEC, if a respondent doesn't know or refuses to provide an exact benefit amount, they are given follow-up questions that ask whether the benefits received were within one of five sets of ranges. Finally, the respondent is asked to confirm the total annual SNAP benefit amount. Since 2014 these questions are asked of all ASEC respondents, but low-income respondents are asked about SNAP earlier in the income section than other respondents. Prior to 2014, the SNAP questions were only asked of respondents with total family income less than \$75,000 or who refused to answer the question about total family income.

Through the 2014 CPS ASEC (for calendar year 2013), respondents are asked the following questions regarding TANF receipt:

1. At any time during [year], even for one month, did (you/anyone in this household) receive any CASH assistance from a state or county welfare program such as [State Program Name]

³³ Prior to the redesigned 2014 CPS ASEC (for calendar year 2013), the questions about the amount of SNAP received were asked immediately following the questions about SNAP receipt (rather than after asking about receipt of all sources of income).

2. Just to be sure, in [year], did anyone receive CASH assistance from a state or county welfare program, on behalf of CHILDREN in the household?³⁴
3. Who received this CASH assistance?
4. From what type of program did (name/you) receive the CASH assistance? Was it a welfare or welfare-to-work program such as [State Program Name], General Assistance, Emergency Assistance, or some other program?

Starting in the redesigned 2014 CPS ASEC, respondents are given an addition option for the type of cash assistance program, diversion payments. The question wording becomes:

4. From what type of program did (name/you) receive the CASH assistance? Was it a welfare or welfare-to-work program such as [State Program Name], General Assistance, Emergency Assistance, Diversion payments or some other program?

After asking about all of the different sources of income, the questionnaire asks the following questions about the amount of TANF benefits received if anyone in the household received TANF benefits.³⁵

5. What is the easiest way for you to tell us (name's/your) CASH assistance payments from [program]: weekly, every other week, twice a month, monthly, or yearly?
6. During [year], how much CASH assistance did (name/you) receive (per week/every other week/twice a month/monthly)?

³⁴ Only those who respond “No” to the first question are asked the second question. For most states, the State Program name in the second question is filled in as “SNAP”. For the 2018 CPS ASEC, the question changed to “At any time during [year] did (you/anyone in this household) receive benefits from SNAP (the Supplemental Nutritional Assistance Program) or the Food Stamp Program or use a SNAP or food stamp benefit card?”

³⁵ Prior to the redesigned 2014 CPS ASEC (for calendar year 2013), the questions about the amount of TANF received were asked immediately following the questions about TANF receipt (rather than after asking about receipt of all sources of income).

7. How many (weekly/every other week/twice a month/monthly) cash assistance payments did (name/you) received in [year]?

Appendix II. Tables

Appendix Table 1. Average Monthly Supplemental Nutrition Assistance Program and Temporary Assistance for Needy Families Benefit Amount, Pooled Sample 2009-2015

	Weighted N (in thousands)	Average Monthly Benefit in CPS ASEC	Average Monthly Benefit in Admin Records	Difference (CPS ASEC – Administrative Records)	Weighted N (in thousands)	Average Monthly Benefit in TRIM3	Average Monthly Benefit in Admin Records	Difference (TRIM3 – Administrative Records)
All People (Pooled Sample)								
SNAP	24,910	\$337	\$448	\$111***	29,380	\$426	\$451	\$25***
TANF	1,785	\$327	\$430	\$103***	1,823	\$372	\$436	\$64***

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements (CPS ASEC), Transfer Income Model version 3 (TRIM3), and state Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF) administrative records. The administrative records for Arizona, Maryland, North Dakota, and Tennessee cover calendar years 2009–2015. The administrative records for Idaho and Michigan cover calendar years 2010–2015 and for Virginia cover calendar years 2009–2013.

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. The first five columns are conditional on receiving benefit in the CPS ASEC and administrative records and the last five columns are conditional on receiving benefit in TRIM3 and administrative records. Adjusted using IPW, excluding full line imputes, and excluding imputed SNAP or TANF receipt and amount. All values are rounded to four (or fewer) significant digits. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.