

Precision in Measurement: Using SNAP Administrative Records to Evaluate Poverty
Measurement

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**This paper was prepared for presentation at the Association for Public Policy Analysis and Management (APPAM) 2017 Fall Research Conference. It was developed to promote research and advancements in our understanding of poverty measurement. In that spirit and to encourage discussion and thoughtful feedback at early stages of our work, this paper has undergone a more limited review than official Census Bureau reports. All views and any errors are solely those of the authors and do not necessarily reflect any official position of the Bureau.*

ABSTRACT

In this paper, we link state Supplemental Nutrition Assistance Program (SNAP) administrative records to the Current Population Survey Annual Social and Economic Supplement (CPS ASEC) to examine two main outcomes related to poverty measurement. The first is the accuracy with which self-reported SNAP participation and associated amounts in the CPS ASEC align with administrative records. The second is the extent to which, when values do not align, replacing values with administrative records affects the Supplemental Poverty Measure (SPM) rate. Analyzing data for Illinois, Maryland, Oregon, and Virginia, we find that using administrative records matters for measuring poverty. Pooling the four states in our analysis, the SPM rate decreases by 0.6 percentage points when SNAP administrative records are used instead of survey self-report. This is mostly driven by the fact that in these four states, at least 40 percent of SNAP recipients do not report any SNAP receipt in the CPS.

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.

In this paper, we use state administrative records from the Supplemental Nutrition Assistance Program (SNAP) as an alternative measure of program participation to examine the consistency between self-reported SNAP receipt and SNAP administrative records and to better understand program participation data quality issues as they relate to poverty measurement. We study the extent to which the Current Population Survey Annual Social and Economic Supplement (CPS ASEC) self-reported SNAP participation and SNAP benefit amounts reflect SNAP administrative records in four states – Illinois, Maryland, Oregon, and Virginia. We report the extent of mismatch between self-report and administrative records and assess dollar amount variation in reporting. We then re-estimate the Supplemental Poverty Measure (SPM) using pooled CPS data for those states from calendar year 2009 to 2015 linked to SNAP administrative records and report differences observed in estimating SPM rates.

Our results inform future CPS data quality improvements and shed light on implications for poverty measurement. Given the expansive nature of the SNAP program within the U.S., it is reasonable to prioritize the examination of the impact that differences in reporting SNAP within household surveys have on poverty measurement (Tiehen, Jooliffe, and Gundersen 2012). This project also establishes a framework for conducting future SPM evaluation with administrative

records and a roadmap for understanding the importance of program participation data quality issues for measuring poverty.

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 SNAP:

- Gross income test – a household’s total income before any deductions must be below 130 percent of the Federal Poverty Guidelines (FPG), and
- 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 2017, 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 \$26,208 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 2017, the maximum benefit amount for a family

size of three is \$511 per month. Figure 1 shows the maximum monthly SNAP benefit by household size for fiscal year 2009 through 2017.

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 bolstered the number of SNAP recipients (Ganong and Liebman 2013). In 2008, there were about 28.2 million participants; by 2013, that number had increased to 47.6 million (USDA 2017c). For fiscal year 2013, it is estimated that 85 percent of eligible households participated, with the participation rates varying significantly across states (Gray and Cunningham 2016). 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.

Supplemental Poverty Measure (SPM)

Every year, the Census Bureau calculates the official U.S. poverty measure (Semega, Fontenot, and Kollar 2017). The SPM, as 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. The SPM also subtracts certain expenses (such as medical expenses) that the households incurs. The U.S. Census Bureau has been reporting SPM rates since 2011 and conducting research on alternative measures of poverty since the 1990s (Short et al. 1999; Short 2011). These reports and continued research generally use self-reported values for resources coming into the household to estimate alternative measures. 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, Debora, and Heggeness 2017). Meyer and Mittag found inconsistencies in SNAP reporting in the CPS in New York State, specifically that around 40 percent of surveyed SNAP recipients do not report receipt in the CPS. 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, Debora, and Heggeness identify underreporting but found higher rates of accuracy and agreement in the Survey of Income and Program Participation (SIPP) between self-reported SNAP receipt and administrative records. Approximately 16 percent of SNAP recipients do not report SNAP participation in the SIPP.

DATA

This paper links SNAP administrative records for Illinois, Maryland, Oregon, and Virginia to individuals in the CPS ASEC¹ for calendar years 2009 to 2015.² 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. The

¹ 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>.

² For the 2014 CPS ASEC, we use the redesigned ASEC supplement (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>.

CPS ASEC sample is based on the noninstitutionalized population of the United States. The CPS ASEC asks detailed questions categorizing income into over 50 sources, including SNAP benefits. Respondents are asked the following questions regarding SNAP:

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]?

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:

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 three sets of ranges. Finally, the respondent is asked to confirm the total annual SNAP benefit amount. These questions are asked of all ASEC respondents, though low-income respondents are asked about SNAP earlier in the income section than other respondents.

The individual-level SNAP administrative records used in this paper are collected at the state level. As such, the structure and information contained in the data differs by state. The state SNAP administrative records include the full population of SNAP recipients in that state and

year.³ We cleaned and recoded each state-year administrative dataset to create person-month and person-year-level data files. For purposes of this paper, we organize the SNAP benefit information in both the CPS ASEC and administrative records to receipt year-level files, with variables capturing whether individuals received any SNAP benefits in the receipt year and the individual annual benefit amount.⁴ The administrative records do not cover the full period for all four states – the administrative records for Illinois and Maryland cover calendar years 2009 through 2015, Oregon covers calendar years 2009 through 2014, and Virginia covers calendar years 2009 through 2013.

The CPS data are linked to the administrative data 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.⁵ The Census Bureau assigns these identifiers to survey respondents and individuals in the administrative data. Since the identifiers are unique to individuals, they can be used to link the same individual across data sources. To create our analytic sample of matched records, we merged the CPS data with the SNAP administrative records using these unique identifiers.

³ 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>.

⁴ There are issues assigning individual versus household SNAP participation and benefit amounts. In the SNAP administrative records, the benefit amounts given are at the SNAP household-level. SNAP households include anyone who lives together and purchases and prepares meals together. Therefore, there may be multiple SNAP households in a single housing-unit. Also, there may be discrepancies between how SNAP 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 benefit amounts from the administrative data to assign an individual benefit amount for each member of the SNAP unit. Then, for our analysis, we used either individual SNAP receipt and benefit amounts or individual benefit amounts aggregated to the SPM unit-level. We plan to examine the differences between SNAP households and SPM units, as well as the effect of the difference on our analysis, in future research.

⁵ See Wagner and Lane (2014) for a detailed description of the process used to assign PIKs.

Not all survey respondents or individuals within administrative records can be assigned a PIK. In total, there are 98,962 individuals in the pooled CPS sample for the four states in their respective years of SNAP data coverage. Of those, 86,469 individuals or 87.4 percent of observations had PIKs (see Figure 2). In order to address the potentially non-random exclusion of individuals without a PIK, we use inverse probability weighting (IPW).⁶ The inverse probability weights are created by dividing the CPS ASEC sample weight by the predicted probability of the individual having a PIK.⁷

We are interested in how self-reported SNAP receipt differs from administrative records. For our final analytic sample, we exclude individuals whose SNAP benefit amount was imputed in the CPS ASEC.⁸ We also 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 sample with a linked SNAP record has a state mismatch. 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 data may not fully capture their SNAP benefit amount if they received benefits in multiple states.⁹

The SNAP administrative records only indicate receipt of SNAP; they do not identify individuals who did not receive SNAP. We assume an individual does not participate in the

⁶ For a detailed description of inverse probability weighting, see Wooldridge (2007).

⁷ 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.

⁸ We excluded about 3 percent of individuals because their SNAP benefit amount was imputed. Future research will look into the effect of excluding individuals whose SNAP participation is imputed.

⁹ 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 data for the previous year. The issue of not fully capturing SNAP benefits applies to those who move into any of the four states during this period as well. It should not affect participation rates, however.

SNAP program if they have a PIK in the CPS that does not link to a SNAP 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 SNAP administrative records) or there is incorrect assignment of PIKs to individuals, processing errors will tend to decrease the estimates of “true” SNAP participation, increase the estimates of false positive rates, and decrease the estimates of false negative rates.

The final pooled sample includes 83,922 individual-year observations – 31,708 in Illinois, 23,326 in Maryland, 12,834 in Oregon, and 16,054 in Virginia (see Table 1). While we do provide descriptive analysis by state in this paper, the modeling methodologies and write-up focus primarily on the pooled sample.

METHODS AND ANALYSIS

Once we have our final analytic sample, we examine the magnitude of difference in reporting between survey self-report and administrative records. To do this, we categorize individuals into four categories. Those who are:

- (1) Identified in both household survey data and administrative records as receiving SNAP,
- (2) Not identified in either household survey data or administrative records as receiving SNAP,
- (3) Identified in household survey data as receiving SNAP but do not show up in administrative records - *false positives*, and
- (4) Identified in administrative records as receiving SNAP but not in household survey data - *false negatives*.

Table 2 shows the breakout of our sample into these four categories. The false positive rate, the percentage of individuals receiving SNAP in the household survey data but not in administrative records, is 0.4 percent for the pooled sample. We found that the false positive rates in the pooled sample and for each state in our sample are all under 1 percent.¹⁰ The false negative rate, the percentage of individuals receiving SNAP according to administrative records not reporting receipt in the household survey is around 51 percent.¹¹ Figure 3 shows the false negatives for the pooled sample as well as by state. The false negative rate for Oregon (42 percent) is significantly lower than the false negative rates for the other three states. The false negative rates for Maryland (58 percent) and Virginia (58 percent) are significant higher than the rates for the other two states, but not significantly different from each other. For the full breakdown of the four categories by state, see Appendix 1.

We then compare individuals who are in a SNAP household receiving SNAP according to administrative records with individuals who are in a household with at least one individual receiving SNAP according to the CPS ASEC. We examine differences in reporting discrepancy by various demographic and socio-economic characteristics such as age, gender, race/ethnicity, nativity, marital status, household composition, work status, and other factors.

Table 3 shows the number reporting receipt of SNAP in the CPS ASEC as well as in the administrative data by demographic and socio-economic characteristics. The overall SNAP rate of receipt in the CPS ASEC is 9 percent, whereas the rate of receipt in the administrative records

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

¹¹ The false negative rate for the pooled sample is statistically different from the false negative rate for Maryland, Oregon, and Virginia. The false negative rate for the pooled sample is not statistically different from the rate for Illinois.

is 18 percent, resulting in 50 percent underreporting of receipt in the survey data. Four percent of those reporting SNAP receipt in the CPS ASEC do not link to an admin SNAP record.

We also examine the magnitude of the difference in benefit amount between administrative records and household survey data, as shown in Table 4. We restrict the sample to individuals with a positive SNAP benefit in both the CPS ASEC and administrative records. The average monthly SNAP benefit in the CPS ASEC is \$291, whereas the average monthly benefit in administrative data is \$325, resulting in an average monthly shortfall of \$34 in the survey data. Figure 4 shows the distribution of the monthly difference between individuals' benefit amounts in administrative and survey data. The distribution of the monthly difference in SNAP benefits for each state can be found in Appendix 2.

As shown in Table 5 Panel A, we find that approximately 63 percent of individuals in our pooled sample have self-reported SNAP benefits within \$100 per month (or \$1,200 per year) of the administrative records. This percentage varies by state, from about 59 percent of individuals in Illinois within this cutoff to 71 percent of individuals in Virginia within the cutoff. Panel B of Table 5 shows the mean and median of the monthly SNAP benefit differences by state.

Table 6 shows the total reported SNAP benefit dollars in the CPS ASEC and administrative records for the pooled sample and by state. Overall, we find that only about 58 percent of total SNAP dollars in the administrative records are captured by the survey data for the pooled sample.

Table 7 reports a linear probability model of having unreported SNAP benefits, as well as an ordinary least squares model of the extent the SNAP benefit is underreported conditional on receiving SNAP in both the CPS ASEC and the administrative records. Both regressions condition on year- and state-level fixed effects. Multiple factors influence the probability of

having unreported SNAP benefits in the CPS ASEC when it is reported in administrative records. The number of children in the household and having a single, female reference person increase the probability of accurately reporting, as does the share of the household at least 25 years old without a high school diploma, living as a renter or owner without a mortgage, living outside principal cities (but within MSA) or outside MSAs, having public health insurance or no health insurance at all, the share of the household between 18 and 64 years old working part-time or not working, having no one in the household between 18 and 64 years old, and having at least one person with a disability in the household. For example, each additional child is associated with a 3 percentage-point increase in the probability of accurately reporting SNAP participation. However, having a Black household reference person and the share of the household at least 25 years old with a bachelor's degree significantly decrease the probability of accurately reporting receipt.

Conditional on reporting positive values of SNAP in the CPS ASEC, few factors are statistically significant in terms of reporting a value that is different than the value in administrative records. The statistically significant factors are the number of kids in the household, living in a cohabiting partner unit or a unit of unrelated individuals, living as a renter, the share of part-time workers in the household, and having at least one person with a disability in the household. All of these characteristics, except living as a renter, are correlated with lower benefit levels in the CPS than in the administrative records. Living as a renter is correlated with higher benefit levels in the CPS than in the administrative records. For example, each additional child in the household is associated with a \$27 increase in the difference between the monthly SNAP benefit amount in the administrative records and CPS.

So far we have only examined the magnitude and statistical significance of measurement differences between administrative records and the CPS ASEC. Next, we focus specifically on poverty measurement using the CPS ASEC and administrative records separately as inputs to estimate the SPM. We replicate the SPM for only the states for which we have administrative records for SNAP. Then, we change one SPM input variable – SNAP receipt. Instead of using the CPS self-reported SNAP benefit amounts, we use administrative records of SNAP benefit amounts. For false positives (observations that report SNAP receipt in the survey data but did not receive SNAP according to administrative records), we change their benefit amount to \$0 based on the administrative records. We calculate the overall SPM using the administrative records and compare this to the SPM estimate calculated using the CPS ASEC self-report for the states mentioned.

Overall, we find in Table 8 that the SPM rate decreases by 0.6 percentage points in the pooled sample when SNAP administrative records are used instead of survey self-reported amounts. In terms of impact on subgroups of the population, we find a statistically significant decrease in the SPM rate when using administrative records instead of survey data for all subgroups.

So who do these reporting discrepancies really affect in terms of SPM poverty rates? Those who do receive SNAP according to state administrative records (e.g. those eligible due to living in and near poverty) have an SPM that is 3.1 percentage points lower when calculating the SPM using SNAP administrative records.

CONCLUSION

CPS ASEC self-reported SNAP participation differs from state administrative records for all four states in our sample. In our pooled sample, 51 percent of SNAP recipients do not report their receipt on the CPS survey. Of those who do, around 63 percent report values within \$100 per month of the administrative records. In total, only about 58 percent of total SNAP dollars in the administrative records are captured by the survey data. The factors that are statistically significant in terms of reporting a value that is different than the value in administrative records, conditional on reporting benefit receipt, are the number of kids in the unit, living in a cohabiting partner unit or a unit of unrelated individuals, the share of part-time workers, and having at least one disabled individual. Underreporting of SNAP participation inflates the SPM rate by 0.6 percentage points (from 11.9 to 11.4 percent in our pooled sample).¹²

Our analysis highlights the need to reduce false negatives in self-reported SNAP receipt. Using administrative records is a possible method to more accurately identify those individuals who received SNAP in the prior year. Our results are consistent with prior studies that have also found underreporting of SNAP participation in household survey data. Additional efforts will focus on adding other program administrative records into our curated dataset and re-estimating the SPM.

¹² Differences exist due to rounding.

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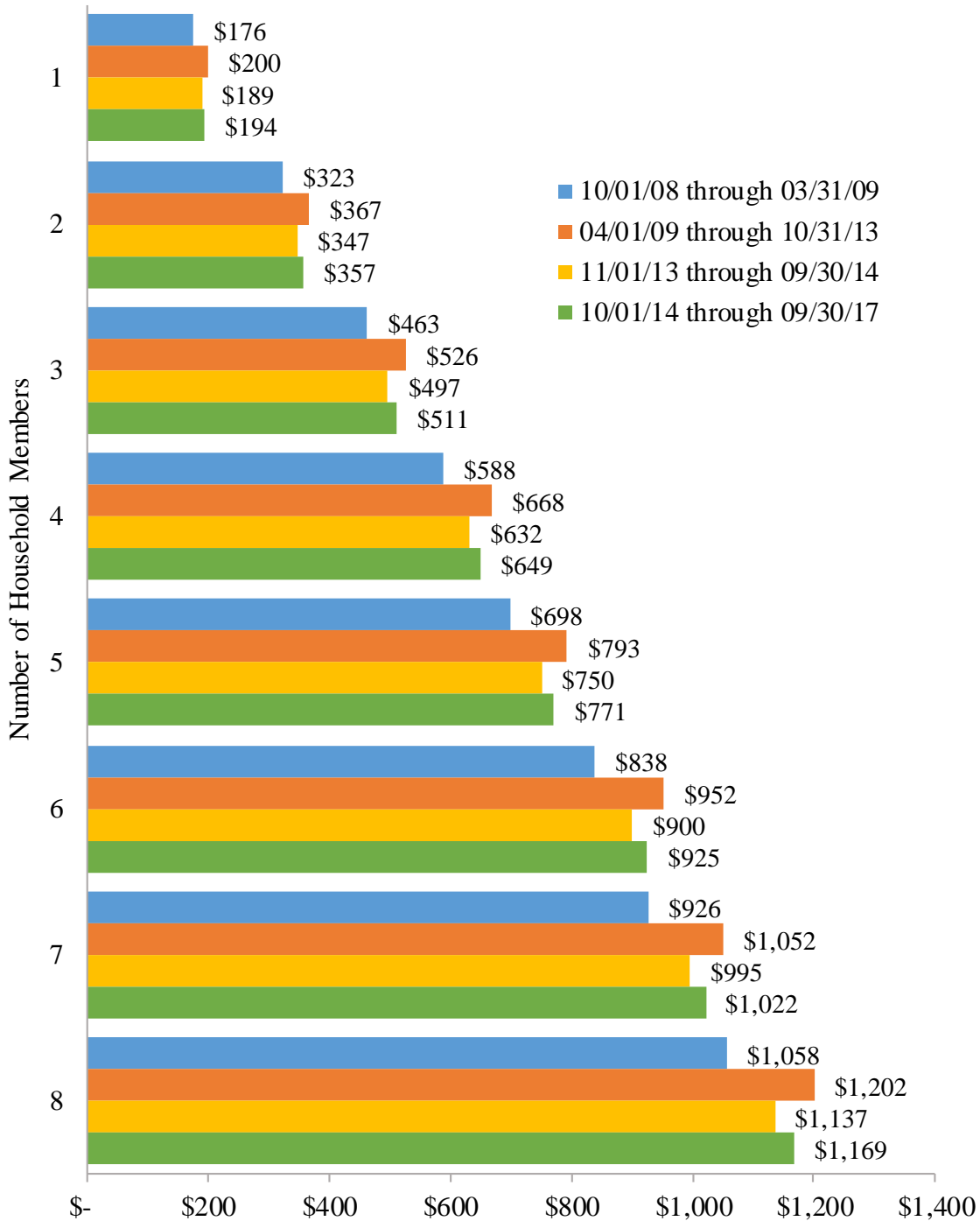
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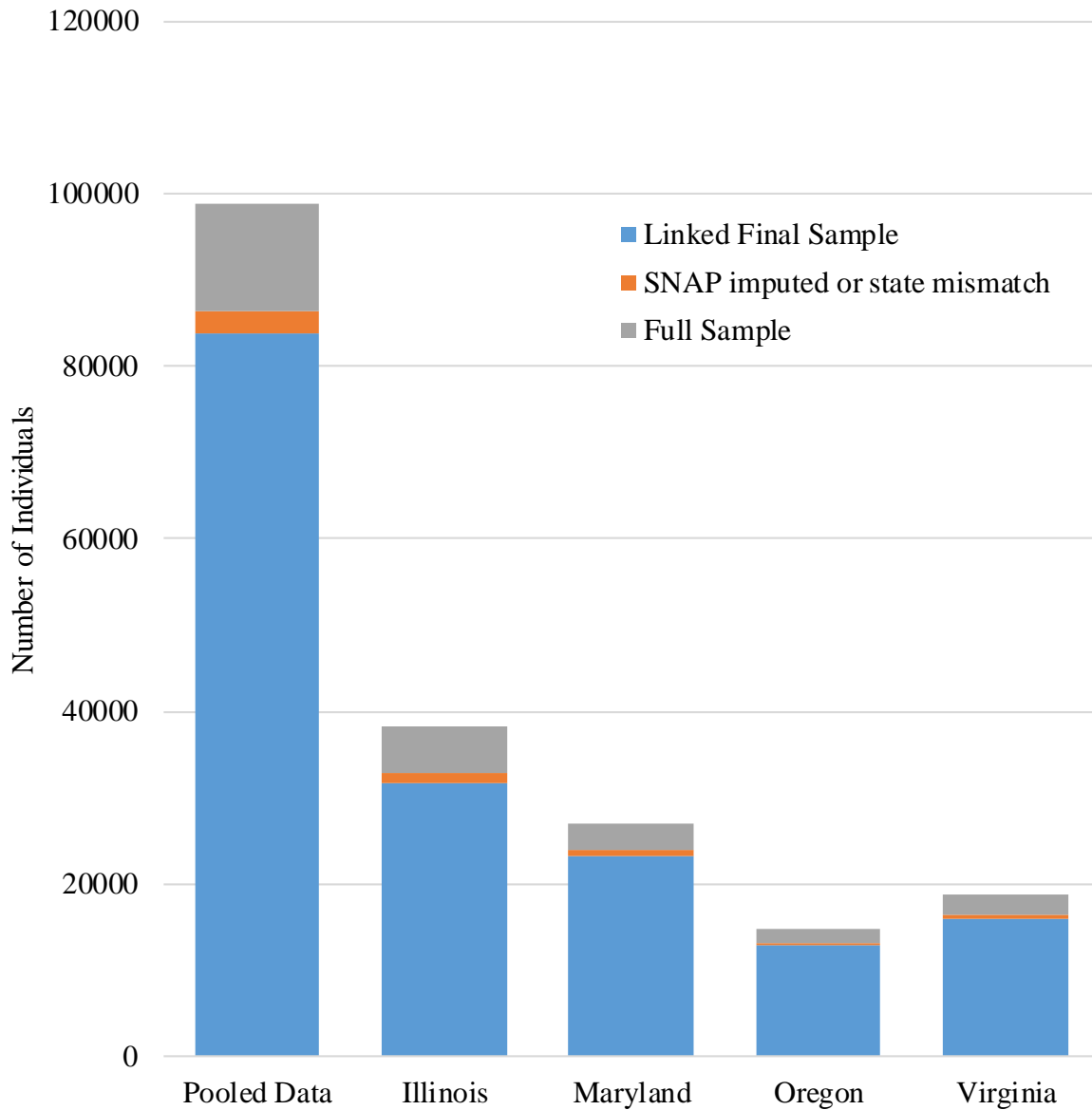
Figure 1. Maximum Monthly SNAP Benefit Amount for FFY 2009 through 2017



Source: USDA 2017a.

Note: This figure shows the maximum monthly SNAP benefit amounts for the 48 contiguous states and the District of Columbia. For the maximum monthly SNAP benefit amounts for Alaska, Hawaii, Guam, or the U.S. Virgin Islands, see <https://www.fns.usda.gov/snap/cost-living-adjustment-cola-information>.

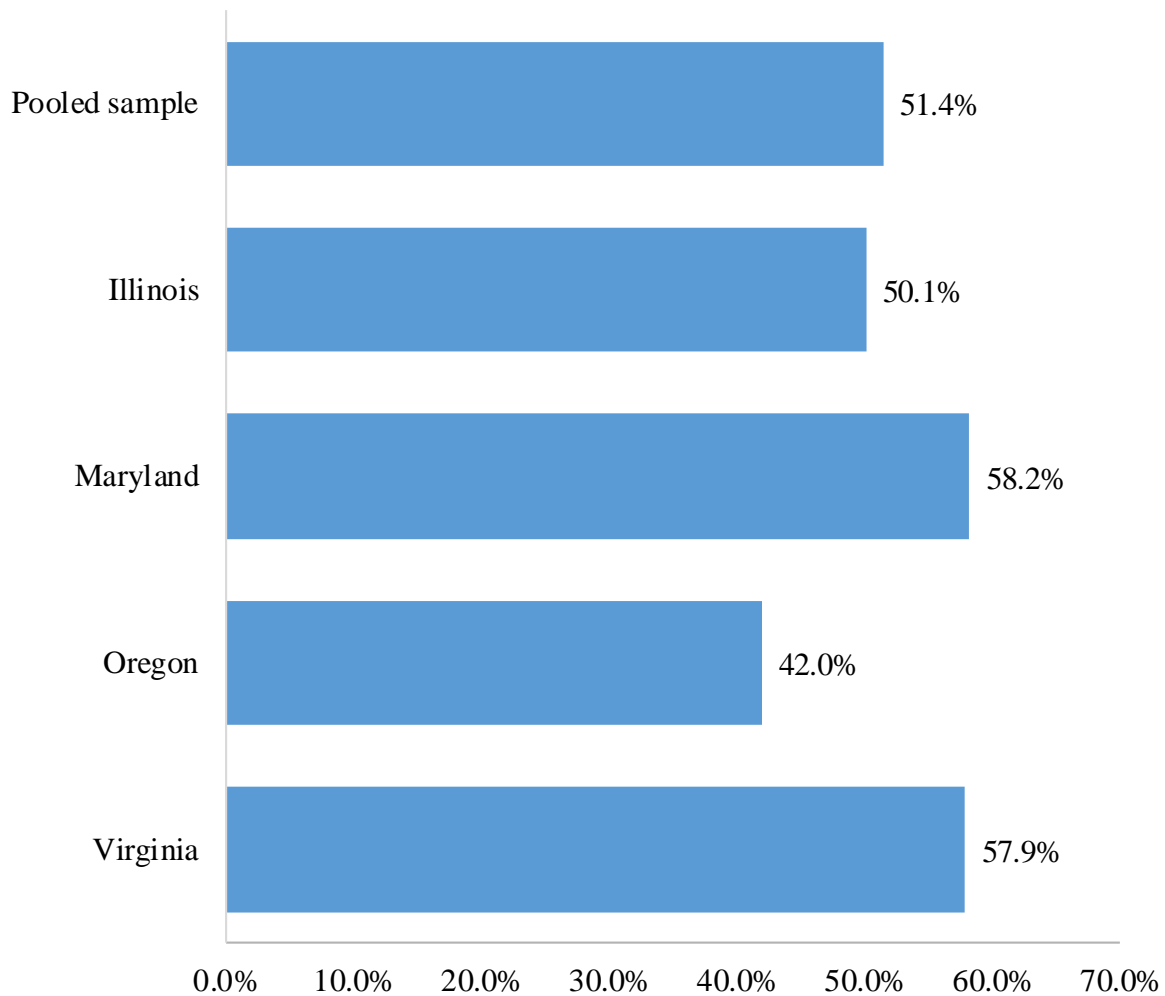
Figure 2. CPS / SNAP Administrative Record Linkage Process



Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements and state SNAP administrative records. The administrative records for Illinois and Maryland cover calendar years 2009–2015, Oregon covers calendar years 2009–2014, and Virginia covers calendar years 2009–2013.

Note: For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

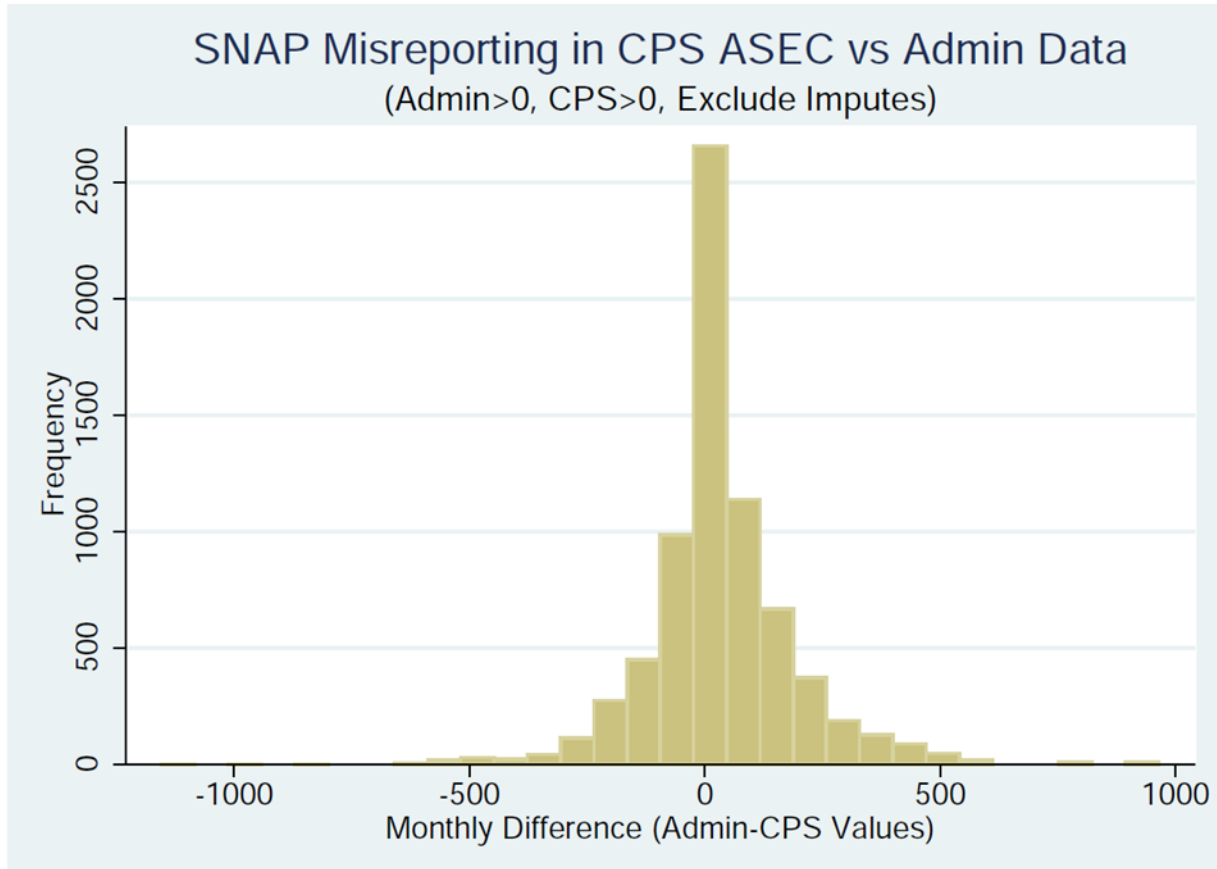
Figure 3. Percent of False Negatives by State, 2009-2015



Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements and state SNAP administrative records. The administrative records for Illinois and Maryland cover calendar years 2009–2015, Oregon covers calendar years 2009–2014, and Virginia covers calendar years 2009–2013.

Note: Adjusted using inverse probability weighting (IPW) and excluding imputed SNAP values. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

Figure 4. Monthly difference in SNAP benefits in CPS ASEC and Administrative Records for True Positives, Pooled Sample 2009-2015



Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements and state SNAP administrative records. The administrative records for Illinois and Maryland cover calendar years 2009–2015, Oregon covers calendar years 2009–2014, and Virginia covers calendar years 2009–2013.

Note: Unweighted and excluding imputed SNAP values. Values are conditional on positive SNAP benefit in both CPS ASEC and administrative records. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

Table 1. Number of Individual Persons in Sample by Year and State

	Pooled sample	Illinois	Maryland	Oregon	Virginia
2009	16,027	5,420	4,273	2,526	3,808
2010	15,597	5,183	4,231	2,501	3,682
2011	15,819	5,412	4,329	2,323	3,755
2012	15,248	4,964	4,216	2,327	3,741
2013 ¹	4,677	1,479	1,328	802	1,068
2014	10,136	4,829	2,952	2,355	n/a
2015	6,418	4,421	1,997	n/a	n/a
Total	83,922	31,708	23,326	12,834	16,054

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements and state SNAP administrative records. The administrative records for Illinois and Maryland cover calendar years 2009–2015, Oregon covers calendar years 2009–2014, and Virginia covers calendar years 2009–2013.

Note: This final sample of individual persons excludes imputed SNAP values and linkages with mismatched states. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

¹ For the 2014 CPS ASEC, we use the redesigned ASEC supplement (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>.

Table 2. Misreporting in SNAP Benefits: CPS ASEC vs. Administrative Records, Pooled Sample 2009-2015

Administrative Records	CPS ASEC Data		Unweighted Observations
	Not Received	Received	
Not Received	99.6%	0.4%	68,794
Received	51.4%	48.6%	15,128

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements and state SNAP administrative records. The administrative records for Illinois and Maryland cover calendar years 2009–2015, Oregon covers calendar years 2009–2014, and Virginia covers calendar years 2009–2013.

Note: Adjusted using IPW and excluding imputed SNAP values. 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. Demographics of Underreporting Rates, Pooled Sample 2009-2015

	Unweighted Observations	Recipiency Rate in CPS ASEC	Recipiency Rate in Admin Records	Percent Under- Reporting
All People (Pooled Sample)	83,922	9%	18%	50%
Illinois	31,708	10%	20%	48%
Maryland	23,326	7%	16%	55%
Oregon	12,834	15%	24%	40%
Virginia	16,054	6%	13%	57%
Male	40,898	9%	17%	51%
Female	43,024	10%	19%	48%
Under 18 years	22,326	15%	28%	45%
18 to 64 years	51,860	8%	16%	52%
65 years and older	9,736	4%	9%	52%
Married couple	55,351	5%	12%	55%
Cohabiting partners	6,092	18%	37%	51%
Female reference person	10,147	26%	44%	41%
Male reference person	3,247	13%	31%	59%
Unrelated individuals	9,085	6%	11%	42%
White	62,012	7%	14%	46%
White, not Hispanic	52,418	6%	11%	45%
Black	14,465	17%	38%	55%
Asian	4,843	5%	10%	48%
Hispanic (any race)	10,378	16%	32%	51%

Table 3. Demographics of Underreporting Rates, Pooled Sample 2009-2015 (con't)

	Unweighted Observations	Reciency Rate in CPS ASEC	Reciency Rate in Admin Records	Percent Under- Reporting
Native born	73,353	9%	18%	49%
Foreign born	10,569	9%	18%	51%
Naturalized citizen	5,254	6%	14%	53%
Not a citizen	5,315	11%	21%	49%
Total, aged 25 and older	54,740	7%	14%	51%
No high school diploma	5,020	19%	33%	42%
High school, no college	14,780	9%	20%	52%
Some college, no degree	14,323	8%	15%	51%
Bachelor's degree or higher	20,617	2%	4%	64%
Owner	60,499	4%	10%	61%
Owner, mortgage	45,482	3%	9%	64%
Owner, no mortgage, rent free	15,734	6%	14%	53%
Renter	22,706	22%	37%	42%
Inside MSAs	74,779	8%	17%	52%
Inside principal cities	22,177	12%	24%	51%
Outside principal cities	52,602	7%	14%	52%
Outside MSAs	9,143	16%	25%	37%
With private insurance	60,848	2%	9%	73%
With public, no private insurance	14,199	34%	47%	28%
Not insured	8,875	14%	32%	57%

Table 3. Demographics of Underreporting Rates, Pooled Sample 2009-2015 (con't)

	Unweighted Observations	Reciency Rate in CPS ASEC	Reciency Rate in Admin Records	Percent Under- Reporting
Total 18 to 64 years	51,860	8%	16%	52%
All workers	41,397	6%	13%	57%
Worked full-time, year-round	28,662	3%	10%	69%
Less than full-time, year-round	12,735	12%	21%	44%
Did not work at least 1 week	10,463	17%	29%	44%
Total 18 to 64 years	51,860	8%	16%	52%
With a disability	3,275	25%	36%	31%
With no disability	48,269	7%	15%	55%
Positive SNAP benefit amount in CPS	7,570	100%	96%	-4%
Positive SNAP benefit amount in Admin Data	15,444	49%	100%	51%

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements and state SNAP administrative records. The administrative records for Illinois and Maryland cover calendar years 2009–2015, Oregon covers calendar years 2009–2014, and Virginia covers calendar years 2009–2013.

Note: Adjusted using IPW and excluding imputed SNAP values. 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. Demographics of Underreporting Conditional on Receipt in Both Sources, Pooled Sample 2009-2015

	Unweighted Observations	Mean Monthly SNAP Benefit in CPS ASEC	Mean Monthly SNAP Benefit in Admin	Mean Difference	Percent Under- Reporting
All People (Pooled Sample)	7,302	\$291	\$325	-\$34	-10%
Illinois	3,123	\$305	\$340	-\$35	-10%
Maryland	1,422	\$273	\$315	-\$42	-13%
Oregon	1,872	\$273	\$309	-\$36	-12%
Virginia	885	\$293	\$304	-\$11	-4%
Male	3,333	\$288	\$323	-\$36	-11%
Female	3,969	\$295	\$326	-\$32	-10%
Under 18 years	2,982	\$359	\$410	-\$51	-12%
18 to 64 years	3,874	\$261	\$285	-\$24	-9%
65 years and older	446	\$147	\$156	-\$8	-5%
Married couple	2,798	\$313	\$346	-\$33	-9%
Cohabiting partners	1,086	\$318	\$368	-\$49	-13%
Female reference person	2,471	\$308	\$348	-\$41	-12%
Male reference person	384	\$280	\$296	-\$16	-5%
Unrelated individuals	563	\$109	\$102	\$7	6%
White	4,599	\$285	\$316	-\$32	-10%
White, not Hispanic	3,246	\$277	\$305	-\$28	-9%
Black	2,098	\$304	\$340	-\$36	-11%
Asian	223	\$309	\$326	-\$17	-5%
Hispanic (any race)	1,478	\$298	\$341	-\$43	-13%

Table 4. Demographics of Underreporting Conditional on Receipt in Both Sources, Pooled Sample 2009-2015 (con't)

	Unweighted Observations	Mean Monthly SNAP Benefit in CPS ASEC	Mean Monthly SNAP Benefit in Admin	Mean Difference	Percent Under- Reporting
Native born	6,494	\$292	\$324	-\$32	-10%
Foreign born	808	\$287	\$330	-\$43	-13%
Naturalized citizen	314	\$236	\$266	-\$30	-11%
Not a citizen	494	\$314	\$364	-\$49	-14%
Total, aged 25 and older	3,625	\$246	\$266	-\$20	-8%
No high school diploma	931	\$255	\$273	-\$18	-7%
High school, no college	1,365	\$250	\$268	-\$17	-6%
Some college, no degree	1,050	\$240	\$268	-\$28	-11%
Bachelor's degree or higher	279	\$215	\$226	-\$11	-5%
Owner	2,316	\$265	\$300	-\$35	-12%
Owner/mortgage	1,468	\$259	\$302	-\$43	-14%
Owner/no mortgage/rent free	1,012	\$279	\$299	-\$20	-7%
Renter	4,822	\$303	\$337	-\$34	-10%
Inside MSAs	5,870	\$293	\$324	-\$31	-10%
Inside principal cities	2,495	\$297	\$332	-\$35	-11%
Outside principal cities	3,375	\$290	\$318	-\$29	-9%
Outside MSAs	1,432	\$285	\$327	-\$42	-13%
With private insurance	1,370	\$222	\$250	-\$28	-11%
With public, no private insurance	4,788	\$321	\$356	-\$35	-10%
Not insured	1,144	\$248	\$283	-\$35	-12%

Table 4. Demographics of Underreporting Conditional on Receipt in Both Sources, Pooled Sample 2009-2015 (con't)

	Unweighted Observations	Mean Monthly SNAP Benefit in CPS ASEC	Mean Monthly SNAP Benefit in Admin	Mean Difference	Percent Under- Reporting
Total 18 to 64 years	3,874	\$261	\$285	-\$24	-9%
All workers	2,209	\$255	\$285	-\$30	-10%
Worked full-time, year-round	815	\$251	\$271	-\$20	-8%
Less than full-time, year-round	1,394	\$257	\$292	-\$35	-12%
Did not work at least 1 week	1,665	\$269	\$286	-\$17	-6%
Total 18 to 64 years	3,874	\$261	\$285	-\$24	-9%
With a disability	774	\$219	\$237	-\$17	-7%
With no disability	3,096	\$273	\$299	-\$26	-9%
Positive SNAP benefit amount in CPS	7,302	\$291	\$325	-\$34	-10%
Positive SNAP benefit amount in Admin Data	7,302	\$291	\$325	-\$34	-10%

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements and state SNAP administrative records. The administrative records for Illinois and Maryland cover calendar years 2009–2015, Oregon covers calendar years 2009–2014, and Virginia covers calendar years 2009–2013.

Note: Adjusted using IPW and excluding imputed SNAP values. Values are conditional on positive SNAP benefit in both CPS ASEC and administrative records. 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. Variations in Reported Values of SNAP Receipt, Pooled Sample 2009-2015

Panel A. Share of Individuals with Reported CPS SNAP Values within \$100/Month (or \$1200/Year) of Administrative Records

	Pooled Sample	Illinois	Maryland	Oregon	Virginia
Number of Observations within \$1,200 (unweighted)	4,613	1,877	914	1,210	612
Total Number of Observations (unweighted)	7,278	3,118	1,420	1,855	885
Percentage within \$1,200	63.1%	59.2%	63.8%	66.9%	71.1%

Panel B. Distribution of Monthly SNAP Differences

	Pooled Sample	Illinois	Maryland	Oregon	Virginia
Median	\$13.8	\$20.4	\$11.3	\$17.5	\$3.2
Mean	\$36.9	\$37.4	\$43.8	\$46.7	\$11.4
Std. Dev.	\$157.1	\$169.5	\$155.6	\$142.1	\$125.6

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements and state SNAP administrative records. The administrative records for Illinois and Maryland cover calendar years 2009–2015, Oregon covers calendar years 2009–2014, and Virginia covers calendar years 2009–2013.

Note: Adjusted using IPW, excluding imputed SNAP values, and excluding outliers where CPS SNAP amount exceeds administrative records amount by more than \$15,000/year. Values are conditional on positive SNAP benefit in both CPS ASEC and administrative records. 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. Total Reported SNAP Dollars in CPS ASEC vs. Administrative Records, Pooled Sample 2009-2015

(dollar amounts in thousands)

	Unweighted Observations	CPS ASEC	Admin Data	Average Yearly SNAP Benefit Not Reported in the CPS ASEC	Percentage of Total SNAP Dollars Captured by CPS ASEC
Pooled Sample	83,922	\$16,712,044	\$29,010,985	\$1,756,992	57.6%
Illinois	31,708	\$8,665,910	\$15,003,501	\$905,370	57.8%
Maryland	23,326	\$2,582,894	\$5,081,051	\$356,880	50.8%
Oregon	12,834	\$3,224,532	\$4,925,238	\$283,451	65.5%
Virginia	16,054	\$2,238,708	\$4,001,195	\$352,497	56.0%

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements and state SNAP administrative records. The administrative records for Illinois and Maryland cover calendar years 2009–2015, Oregon covers calendar years 2009–2014, and Virginia covers calendar years 2009–2013.

Note: Adjusted using IPW and excluding imputed SNAP values. 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. Demographic Characteristics of Misreporting, Regression Results: Pooled Sample 2009-2015 (continued on the next pages)

	Unreported SNAP Receipt	Underreported SNAP Monthly Amount
Log earnings	0.005 (0.004)	-0.25 (1.82)
Number of kids	-0.027*** (0.007)	26.50*** (4.19)
Married partner		(omitted)
Cohabiting partners	-0.019 (0.025)	26.61** (13.45)
Female reference person	-0.092*** (0.021)	9.30 (10.00)
Male reference person	0.036 (0.033)	22.72 (17.88)
Unrelated individuals	-0.024 (0.027)	19.11** (9.55)
White		(omitted)
Black	0.068*** (0.018)	-2.25 (8.58)
Asian	-0.042 (0.048)	-5.04 (21.54)
Hispanic (any race)	0.039 (0.029)	-14.93 (12.94)
No foreign born individuals in the household		(omitted)
At least one foreign born individual in the household	0.034 (0.028)	17.17 (15.15)

Table 7 (continued)

	Unreported SNAP Receipt	Underreported SNAP Value
Share of household at least 25 years old with less than high school diploma	-0.077** (0.024)	-0.13 (9.64)
Share of household at least 25 years old with a high school diploma		(omitted)
Share of household at least 25 years old with some college	-0.018 (0.021)	6.47 (10.48)
Share of household at least 25 years old with bachelor's degree	0.058* (0.033)	-5.24 (16.08)
No one 25 years old or older in the household	0.035 (0.034)	-18.91 (13.28)
Owner/mortgage		(omitted)
Owner/no mortgage/rent free	-0.042* (0.025)	-11.90 (10.99)
Renter	-0.115*** (0.020)	-16.38* (9.78)
Inside principal cities		(omitted)
Outside principal cities (but within MSA)	-0.033* (0.018)	-11.55 (7.67)
Outside MSA	-0.074** (0.023)	6.51 (10.48)

Table 7 (continued)

	Unreported SNAP Receipt	Underreported SNAP Value
With private insurance		(omitted)
With public, no private insurance	-0.304*** (0.020)	8.99 (11.13)
Not insured	-0.094*** (0.023)	16.65 (13.42)
Share with full-time, year-round work		(omitted)
Share with less than full-time, year-round work	-0.269*** (0.024)	31.50** (13.76)
Share that did not work at least 1 week	-0.224*** (0.028)	7.72 (14.49)
No one of working age (18 to 64 years)	-0.168*** (0.039)	14.10 (15.91)
No one with a disability in the household		(omitted)
At least one individual with a disability in the household	-0.071*** (0.021)	16.25* (8.92)
Constant	0.932*** (0.063)	-45.18 (31.54)
Number of SPM resource units	5,155	2,490

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements and state SNAP administrative records. The administrative records for Illinois and Maryland cover calendar years 2009–2015, Oregon covers calendar years 2009–2014, and Virginia covers calendar years 2009–2013.

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. State- and year-level fixed effects included. Adjusted using IPW, excluding imputed SNAP values, and standard errors are clustered by PIK. The omitted category indicates the benchmark group against which comparisons can be made. Probability of reporting is a linear probability model estimating the probability of a benefit amount of zero in CPS ASEC conditional on positive values in administrative records. Predicted difference in reporting is an ordinary least squares model predicting the difference between monthly administrative and CPS ASEC reported SNAP values (admin-cps) conditional on

positive values in both CPS ASEC and administrative records. 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. Number and Percent of People in Poverty by Different Sources of SNAP Values: Pooled Sample 2009-2015

Characteristic	Weighted Number (in thousands)	SPM Using Reported SNAP				SPM Using Admin SNAP				Difference			
		Number		Percent		Number		Percent		Number		Percentage Points	
		Estimate	MOE	Estimate	MOE	Estimate	MOE	Estimate	MOE				
All People	183,063	21,795	450	11.9	0.2	20,779	433	11.4	0.2	-1,016	*	-0.6	*
Illinois	81,827	10,146	333	12.4	0.4	9,632	315	11.8	0.4	-515	*	-0.6	*
Maryland	40,158	4,809	200	12.0	0.5	4,671	196	11.6	0.5	-138	*	-0.3	*
Oregon	22,991	2,829	149	12.3	0.6	2,711	147	11.8	0.6	-118	*	-0.5	*
Virginia	38,087	4,011	208	10.5	0.5	3,765	203	9.9	0.5	-246	*	-0.6	*
Male	89,759	10,279	320	11.5	0.3	9,801	307	10.9	0.3	-477	*	-0.5	*
Female	93,304	11,516	332	12.3	0.3	10,977	321	11.8	0.3	-539	*	-0.6	*
Under 18 years	42,152	5,340	215	12.7	0.5	4,813	196	11.4	0.4	-527	*	-1.2	*
18 to 64 years	115,545	13,157	362	11.4	0.3	12,730	352	11.0	0.3	-427	*	-0.4	*
65 years and older	25,366	3,298	188	13.0	0.7	3,235	186	12.8	0.7	-63	*	-0.2	*
Married couple	115,596	8,769	288	7.6	0.2	8,328	274	7.2	0.2	-442	*	-0.4	*
Cohabiting partners	13,692	1,966	147	14.4	1.0	1,900	146	13.9	1.0	-66	*	-0.5	*
Female reference person	21,914	4,825	213	22.0	0.9	4,421	197	20.2	0.8	-404	*	-1.8	*
Male reference person	7,195	1,076	97	15.0	1.2	1,046	95	14.5	1.2	-31	*	-0.4	*
Unrelated individuals	24,666	5,159	238	20.9	0.9	5,085	236	20.6	0.9	-74	*	-0.3	*
White	137,139	13,969	368	10.2	0.3	13,413	356	9.8	0.3	-556	*	-0.4	*
White, not Hispanic	119,604	10,254	321	8.6	0.3	9,929	312	8.3	0.3	-325	*	-0.3	*
Black	30,189	5,664	234	18.8	0.7	5,381	228	17.8	0.7	-283	*	-0.9	*
Asian	10,131	1,302	105	12.9	1.0	1,254	102	12.4	0.9	-49	*	-0.5	*
Hispanic (any race)	19,881	4,248	211	21.4	0.9	3,914	195	19.7	0.9	-334	*	-1.7	*

Table 8. Number and Percent of People in Poverty by Different Sources of SNAP Values: Pooled Sample 2009-2015 (con't)

Characteristic	Weighted Number (in thousands)	SPM Using Reported SNAP				SPM Using Admin SNAP				Difference			
		Number		Percent		Number		Percent		Number		Percentage Points	
		Estimate	MOE	Estimate	MOE	Estimate	MOE	Estimate	MOE	Estimate	MOE	Estimate	MOE
Native born	160,303	17,655	404	11.0	0.2	16,778	388	10.5	0.2	-878	*	-0.5	*
Foreign born	22,760	4,140	213	18.2	0.8	4,001	207	17.6	0.8	-139	*	-0.6	*
Naturalized citizen	10,481	1,356	109	12.9	1.0	1,293	107	12.3	0.9	-63	*	-0.6	*
Not a citizen	12,279	2,784	184	22.7	1.3	2,708	178	22.0	1.2	-76	*	-0.6	*
Total, aged 25 and older	124,333	13,691	372	11.0	0.3	13,286	362	10.7	0.3	-406	*	-0.3	*
No high school diploma	11,258	3,161	183	28.1	1.3	3,040	176	27.0	1.3	-121	*	-1.1	*
High school, no college	34,736	4,892	224	14.1	0.6	4,729	217	13.6	0.6	-163	*	-0.5	*
Some college, no degree	32,227	3,301	190	10.2	0.6	3,215	186	10.0	0.5	-86	*	-0.3	*
Bachelor's degree or higher	46,112	2,338	152	5.1	0.3	2,301	150	5.0	0.3	-36	*	-0.1	*
Owner	130,014	10,204	312	7.8	0.2	9,868	303	7.6	0.2	-336	*	-0.3	*
Owner/mortgage	93,247	6,160	229	6.6	0.2	6,017	226	6.5	0.2	-142	*	-0.2	*
Owner/no mortgage/rent free	38,436	4,374	217	11.4	0.5	4,183	206	10.9	0.5	-191	*	-0.5	*
Renter	51,379	11,261	333	21.9	0.6	10,578	318	20.6	0.6	-683	*	-1.3	*
Inside MSAs	162,198	19,360	424	11.9	0.3	18,517	412	11.4	0.2	-842	*	-0.5	*
Inside principal cities	51,361	8,092	297	15.8	0.5	7,537	282	14.7	0.5	-555	*	-1.1	*
Outside principal cities	110,836	11,268	315	10.2	0.3	10,981	312	9.9	0.3	-287	*	-0.3	*
Outside MSAs	20,865	2,435	163	11.7	0.7	2,261	146	10.8	0.7	-174	*	-0.8	*

Table 8. Number and Percent of People in Poverty by Different Sources of SNAP Values: Pooled Sample 2009-2015 (con't)

Characteristic	Weighted Number (in thousands)	SPM Using Reported SNAP				SPM Using Admin SNAP				Difference			
		Number		Percent		Number		Percent		Number		Percentage Points	
		Estimate	MOE	Estimate	MOE	Estimate	MOE	Estimate	MOE	Estimate	MOE	Estimate	MOE
With private insurance	131,421	8,694	294	6.6	0.2	8,340	283	6.3	0.2	-354	*	-0.3	*
With public, no private insurance	32,003	8,220	282	25.7	0.8	7,720	268	24.1	0.7	-500	*	-1.6	*
Not insured	19,639	4,882	206	24.9	0.9	4,719	204	24.0	0.9	-162	*	-0.8	*
Total 18 to 64 years	115,545	13,157	362	11.4	0.3	12,730	352	11.0	0.3	-427	*	-0.4	*
All workers	91,460	6,788	263	7.4	0.3	6,545	254	7.2	0.3	-242	*	-0.3	*
Worked full-time, year-round	63,090	2,666	167	4.2	0.3	2,547	159	4.0	0.2	-119	*	-0.2	*
Less than full-time, year-round	28,371	4,122	203	14.5	0.7	3,999	198	14.1	0.6	-123	*	-0.4	*
Did not work at least 1 week	24,085	6,369	251	26.4	0.9	6,185	246	25.7	0.9	-184	*	-0.8	*
Total 18 to 64 years	115,545	13,157	362	11.4	0.3	12,730	352	11.0	0.3	-427	*	-0.4	*
With a disability	7,701	1,752	129	22.8	1.5	1,700	128	22.1	1.4	-52	*	-0.7	*
With no disability	107,179	11,366	339	10.6	0.3	10,991	328	10.3	0.3	-375	*	-0.3	*
Positive SNAP benefit amount in CPS	16,664	5,639	235	33.8	1.1	5,438	224	32.6	1.1	-201	*	-1.2	*
Positive SNAP benefit amount in Admin Data	32,999	9,440	301	28.6	0.8	8,423	274	25.5	0.7	-1,016	*	-3.1	*

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements and state SNAP administrative records. The administrative records for Illinois and Maryland cover calendar years 2009–2015, Oregon covers calendar years 2009–2014, and Virginia covers calendar years 2009–2013.

Note: * $p < 0.10$. Adjusted using IPW, excluding imputed SNAP values, and standard errors are clustered by PIK. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

APPENDIX ONE: Misreporting by State

Appendix Table 1. Misreporting in SNAP Benefits: CPS ASEC vs. Administrative Records, Illinois 2009-2015

Administrative Records	CPS ASEC Data		Unweighted Observations
	Not Received	Received	
Not Received	99.6%	0.4%	25,435
Received	50.1%	49.9%	6,273

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements and state SNAP administrative records. The administrative records for Illinois covers calendar years 2009–2015.

Note: Adjusted using IPW and excluding imputed SNAP values. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

Appendix Table 2. Misreporting in SNAP Benefits: CPS ASEC vs. Administrative Records, Maryland 2009-2015

Administrative Records	CPS ASEC Data		Unweighted Observations
	Not Received	Received	
Not Received	99.4%	0.6%	19,678
Received	58.2%	41.8%	3,648

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements and state SNAP administrative records. The administrative records for Maryland covers calendar years 2009–2015.

Note: Adjusted using IPW and excluding imputed SNAP values. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

Appendix Table 3. Misreporting in SNAP Benefits: CPS ASEC vs. Administrative Records, Oregon 2009-2014

Administrative Records	CPS ASEC Data		Unweighted Observations
	Not Received	Received	
Not Received	99.4%	0.6%	9,717
Received	42.0%	58.0%	3,117

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements and state SNAP administrative records. The administrative records for Oregon covers calendar years 2009–2014.

Note: Adjusted using IPW and excluding imputed SNAP values. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

Appendix Table 4. Misreporting in SNAP Benefits: CPS ASEC vs. Administrative Records, Virginia 2009-2013

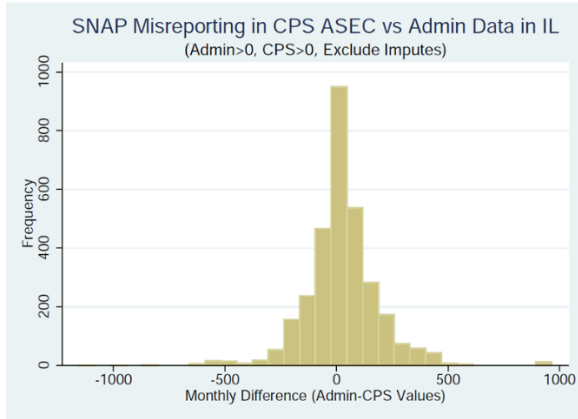
Administrative Records	CPS ASEC Data		Unweighted Observations
	Not Received	Received	
Not Received	99.8%	0.2%	13,969
Received	57.9%	42.1%	2,085

Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements and state SNAP administrative records. The administrative records for Virginia covers calendar years 2009–2013.

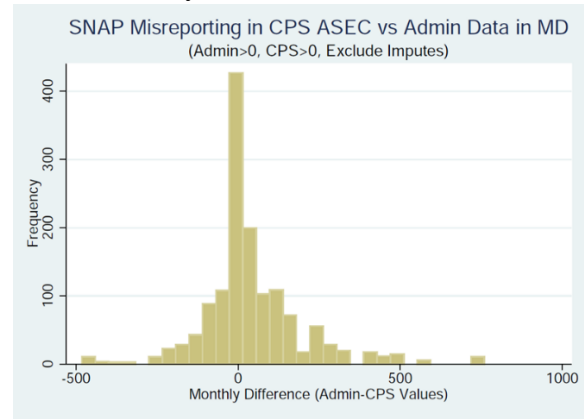
Note: Adjusted using IPW and excluding imputed SNAP values. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.

APPENDIX TWO, Figure 1: Monthly Difference in SNAP Benefits in CPS ASEC and Administrative Records for True Positives by State, 2009-2015

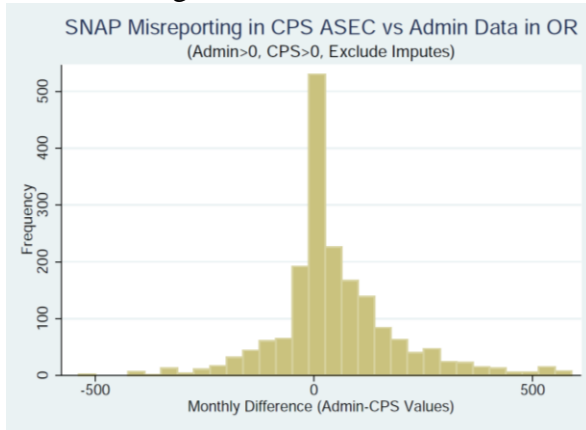
Panel A. Illinois



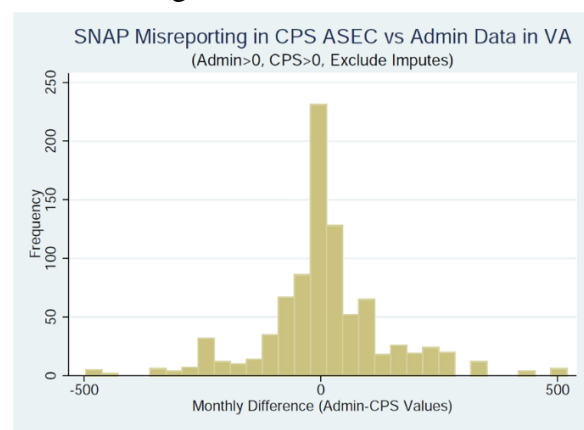
Panel B. Maryland



Panel C. Oregon



Panel D. Virginia



Source: U.S. Census Bureau, Current Population Survey, 2010–2016 Annual Social and Economic Supplements and state SNAP administrative records. The administrative records for Illinois and Maryland cover calendar years 2009–2015, Oregon covers calendar years 2009–2014, and Virginia covers calendar years 2009–2013.

Notes: Unweighted. True positives are those who have positive SNAP benefit in both CPS ASEC and administrative records. Oregon does not include data from calendar year 2015. Virginia does not include data from calendar years 2014 through 2015. For information on confidentiality protection, sampling error, non-sampling error, and definitions, see <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar16.pdf>.