Reaching Those in Need:

STATE SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM PARTICIPATION RATES IN 2011

USDA

FOOD AND NUTRITION SERVICE

The Supplemental Nutrition Assistance Program (SNAP) is a central component of American policy to alleviate hunger and poverty. The program's main purpose is "to permit low-income households to obtain a more nutritious diet...by increasing their purchasing power" (Food and Nutrition Act of 2008). SNAP is the largest of the domestic food and nutrition assistance programs administered by the U.S. Department of Agriculture's Food and Nutrition Service. During fiscal year 2013, the program served over 47 million people in an average month at a total annual cost of over $76 billion in benefits.

The national SNAP participation rate is the percentage of eligible people in the United States who actually participate in the program. SNAP eligibility criteria include, but are not limited to, income guidelines and either United States citizenship or legal immigrant status with, for most, at least five years' residency. SNAP provides an important support for the "working poor"—people who are eligible for SNAP benefits and live in households in which someone earns income from a job. In 2011, over 18 million SNAP participants—41 percent of all SNAP participants—lived in households that had income from earnings, up from 30 percent of all participants in 1996, the year in which more emphasis was placed on work for public assistance recipients through the enactment of the Personal Responsibility and Work Opportunity Reconciliation Act.

Recent studies have examined national participation rates as well as participation rates for socioeconomic and demographic subgroups (Eslami and Cunnyngham 2013), and State rates for all eligible people and for the working poor (Cunnyngham 2012). This document presents estimates of SNAP participation rates for all eligible people and for the working poor by States for fiscal year 2011. These estimates can be used to assess recent program performance and focus efforts to improve access.

Participation Rates in 2011

Seventy-nine percent of eligible people in the United States received SNAP benefits in fiscal year 2011. Participation rates varied widely from State to State, however. Twenty-six States had rates that were significantly higher (in a statistical sense) than the national rate, and 12 States had rates that were significantly lower. Among the regions, the Midwest Region had the highest participation rate. Its 85 percent rate was significantly higher than the rates for all of the other regions except the Southeast Region. The Western Region's participation rate of 68 percent was significantly lower than the rates for all of the other regions. (See the last page for a map showing regional boundaries.)

In 2011, 67 percent of eligible working poor in the United States participated in SNAP, but as with participation rates for all eligible people, rates for the working poor varied widely across States. Twenty-one States had rates for the working poor that were significantly higher than the national rate for the working poor, and 10 States had rates that were significantly lower.

While 79 percent of all eligible people in the United States participated in 2011, only 67 percent of the eligible working poor participated, a significant difference of over 11 percentage points. In 38 States, the participation rate for the

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How Many Were Eligible in 2011? What Percentage Participated?

Participation Rates and Confidence Intervals
(Participation Rate = 100 x Number of People Participating ÷ Number of People Eligible)
(Estimated participation rates are in red; estimated bounds of confidence intervals are in black.)

Eligible People (Thousands)				
211	Maine	94%	100%	100%
636	Oregon	94%	100%	100%
887	Washington	95%	100%	100%
128	District of Columbia	92%	99%	100%
1,719	Michigan	94%	99%	100%
72	Vermont	91%	97%	100%
1,289	Tennessee	90%	95%	100%
1,019	Missouri	86%	91%	96%
872	Kentucky	85%	90%	96%
736	Wisconsin	85%	89%	94%
800	Massachusetts	83%	88%	93%
392	Iowa	81%	87%	92%
374	West Virginia	80%	86%	92%
445	New Mexico	81%	86%	90%
692	Oklahoma	80%	85%	90%
137	Delaware	80%	85%	90%
1,942	Ohio	81%	85%	89%
388	Connecticut	79%	85%	90%
982	Alabama	80%	85%	89%
255	Idaho	80%	85%	90%
1,858	Pennsylvania	81%	84%	88%
2,001	Illinois	80%	84%	87%
1,645	North Carolina	79%	83%	88%
2,029	Georgia	79%	83%	88%
171	Rhode Island	78%	82%	87%
3,474	Florida	79%	82%	86%
698	Maryland	76%	81%	86%
1,006	South Carolina	77%	80%	84%
750	Mississippi	75%	79%	84%
1,142	Arizona	74%	79%	84%
125	South Dakota	74%	79%	84%
3,422	New York	76%	79%	82%
1,072	Virginia	74%	79%	83%
353	Utah	74%	79%	83%
123	New Hampshire	73%	78%	83%
1,090	Louisiana	73%	77%	82%
587	Minnesota	72%	77%	81%
149	Montana	69%	75%	80%
68	North Dakota	69%	75%	81%
644	Arkansas	69%	74%	78%
4,965	Texas	70%	72%	75%
1,218	Indiana	67%	71%	75%
420	Nevada	65%	69%	73%
425	Kansas	65%	69%	73%
248	Nebraska	64%	69%	74%
125	Alaska	63%	68%	74%
1,008	New Jersey	63%	67%	72%
658	Colorado	61%	66%	70%
232	Hawaii	55%	61%	66%
6,129	California	55%	57%	59%
60	Wyoming	52%	57%	62%
8,204	Midwest Region	83%	85%	87%
12,048	Southeast Region	82%	84%	87%
5,188	Northeast Region	79%	82%	84%
5,275	Mid-Atlantic Region	78%	80%	82%
3,497	Mountain Plains Region	76%	78%	81%
7,836	Southwest Region	73%	75%	77%
9,826	Western Region	66%	68%	69%
51,873	United States	78%	79%	80%

A confidence interval expresses our uncertainty about the true value of a participation rate. Each interval displayed here is a 90-percent confidence interval. One interpretation of such an interval is that there is a 90-percent chance that the true participation rate falls within the estimated bounds. For example, while our best estimate is that Georgia's participation rate was 83 percent in 2011, the true rate may have been higher or lower. However, the chances are 90 in 100 that the true rate was between 79 and 88 percent.

How Many Working Poor Were Eligible in 2011? What Percentage Participated?

Participation Rates and Confidence Intervals
(Participation Rate = 100 x Number of People Participating ÷ Number of People Eligible)
(Estimated participation rates are in red; estimated bounds of confidence intervals are in black.)

Eligible Working Poor (Thousands)				
83	Maine	91%	100%	100%
288	Oregon	84%	93%	100%
841	Michigan	84%	91%	99%
137	West Virginia	78%	87%	96%
340	Wisconsin	77%	84%	91%
394	Washington	75%	82%	89%
208	Iowa	74%	81%	87%
146	Idaho	74%	80%	87%
233	New Mexico	72%	80%	88%
716	Pennsylvania	73%	80%	86%
448	Missouri	73%	79%	86%
27	Vermont	71%	79%	88%
557	Tennessee	70%	77%	83%
64	South Dakota	70%	76%	82%
387	Alabama	70%	76%	82%
426	South Carolina	69%	76%	82%
318	Mississippi	67%	74%	82%
1,010	Georgia	68%	74%	81%
792	Ohio	68%	74%	80%
271	Arkansas	68%	74%	80%
33	North Dakota	66%	74%	81%
67	Montana	66%	73%	80%
359	Oklahoma	65%	72%	78%
492	Louisiana	65%	72%	78%
693	North Carolina	65%	71%	77%
583	Arizona	65%	71%	78%
532	Indiana	64%	70%	77%
66	Delaware	62%	69%	77%
363	Kentucky	62%	69%	76%
509	Virginia	63%	69%	75%
210	Utah	62%	68%	75%
1,395	New York	62%	67%	72%
278	Minnesota	61%	67%	73%
295	Massachusetts	60%	66%	73%
152	Connecticut	59%	66%	73%
980	Illinois	61%	66%	70%
1,428	Florida	60%	66%	71%
54	New Hampshire	58%	65%	72%
2,753	Texas	60%	65%	69%
287	Maryland	58%	64%	70%
75	Rhode Island	58%	64%	70%
233	Kansas	58%	63%	69%
132	Nebraska	56%	61%	67%
191	Nevada	55%	61%	66%
59	Alaska	53%	60%	68%
458	New Jersey	51%	57%	64%
29	Wyoming	51%	57%	63%
350	Colorado	49%	54%	60%
36	District of Columbia	36%	46%	57%
138	Hawaii	38%	44%	50%
3,171	California	40%	44%	47%
3,762	Midwest Region	72%	76%	79%
5,181	Southeast Region	68%	72%	75%
2,209	Mid-Atlantic Region	67%	70%	74%
1,773	Mountain Plains Region	66%	69%	72%
2,080	Northeast Region	64%	68%	72%
4,109	Southwest Region	64%	68%	71%
4,971	Western Region	52%	55%	58%
24,085	United States	66%	67%	69%

A confidence interval expresses our uncertainty about the true value of a participation rate. Each interval displayed here is a 90-percent confidence interval. One interpretation of such an interval is that there is a 90-percent chance that the true participation rate falls within the estimated bounds. For example, while our best estimate is that Indiana's working poor participation rate was 70 percent in 2011, the true rate may have been higher or lower. However, the chances are 90 in 100 that the true rate was between 64 and 77 percent.

working poor in 2011 was—like the national rate for the working poor—significantly lower than the rate for all eligible people. In 13 of these States, the difference between the rate for the working poor and the rate for all eligible people was significantly greater than the 11 percentage point difference between the national rates. In no State was the rate for the working poor significantly higher than the rate for all eligible people.

State Comparisons

The estimated participation rates presented here are based on fairly small samples of households in each State. Although there is substantial uncertainty associated with the estimates for some States and with comparisons of estimates from different States, the estimates for 2011 show whether a State's participation rate for all eligible people was probably at the top, at the bottom, or in the middle of the distribution. Maine and Oregon were very likely at the top, with higher rates for all eligible people than all other States. In contrast, Wyoming, California, and Hawaii likely had lower rates than other States.

Similarly, it is possible to determine that some States were probably at the top, at the bottom, or in the middle of the distribution of rates for the working poor in 2011. Maine was very likely ranked at the top, with a higher rate for the working poor than most States. In contrast, California, Hawaii, and the District of Columbia likely had lower rates than most States.

How a State compares with other States may fluctuate over time due to statistical variability in estimated rates and true changes in rates. The statistical variability is sufficiently great that a large change in a State's rate from the prior year should be interpreted cautiously, as should differences between the rates of that State and other States. It may be incorrect to conclude that program performance in the State has improved or deteriorated dramatically. Despite this uncertainty, the estimated participation rates for all eligible people and the working poor suggest that some States have been fairly consistently in the top or bottom of the distribution of rates in recent years. In all 3 years from 2009 to 2011, the District of Columbia, Kentucky, Maine, Michigan, Missouri, Oregon, Tennessee, Vermont, and Washington had significantly higher participation rates for all eligible people than two-thirds of the States. An additional State—Massachusetts—had a significantly higher rate than half of the States. Minnesota had significantly lower rates than half of the States in all 3 years, while California, Colorado, Hawaii, Kansas, New Jersey, Nevada, Texas, and Wyoming had significantly lower rates than two-thirds of the States.

A State ranked near the top or bottom of the distribution of participation rates for all eligible people is likely to be ranked near the top or bottom, respectively, of the distribution of participation rates for the working poor. Although the rankings of States by participation rates for the working poor and for all eligible people are generally similar, they do not exactly match. Eight States (Arkansas, Idaho, Indiana, Louisiana, Mississippi, Montana, West Virginia, and Wyoming) are ranked significantly higher for all 3 years when ranked by their participation rate for the working poor than when ranked by their participation rate for all eligible people. In contrast, 6 States—Connecticut, Illinois, Kentucky, Massachusetts, Rhode Island, and Tennessee—and the District of Columbia are ranked significantly lower for all 3 years when ranked by their participation rate for the working poor than when ranked by their participation rate for all eligible people.

Estimation Method

The estimates presented here were derived using shrinkage estimation methods developed to improve precision when sample sizes are small, as they are for most states in the Current Population Survey (Cunnyngham et al. 2013, and Cunnyngham et al. forthcoming). Drawing on data from the Current Population Survey, the American Community Survey, and administrative records, the shrinkage estimator averaged direct sample estimates of participation rates with predictions from a regression model. To further improve precision, the shrinkage estimator used data for all the states, all three years, and both groups (all eligible individuals and the working poor) to derive each estimate.

The direct sample estimates were obtained by applying SNAP eligibility rules to households in the Current Population Survey to estimate numbers of eligible people and by using SNAP administrative data to estimate numbers of participating people. Eslami and Cunnyngham (2013) present details on the estimation methods used to derive the direct sample estimates. The direct sample estimates differ methodologically from estimates developed for prior reports. The motivation for the methodological improvements was to increase the precision of the estimates and allow us to better account for differences between the data used to estimate the number of participants and the data used to estimate the number of eligible individuals.

The regression predictions of participation rates were based on observed indicators of socio-

Participation Rates

	All Eligible People			Working Poor		
	2009	2010	2011	2009	2010	2011
Alabama	71%	76%	85%	63%	69%	76%
Alaska	60%	68%	68%	55%	61%	60%
Arizona	65%	77%	79%	57%	70%	71%
Arkansas	65%	71%	74%	65%	72%	74%
California	48%	52%	57%	32%	40%	44%
Colorado	54%	66%	66%	38%	57%	54%
Connecticut	70%	77%	85%	51%	60%	66%
Delaware	70%	74%	85%	58%	62%	69%
District of Columbia	81%	87%	99%	34%	39%	46%
Florida	63%	76%	82%	48%	63%	66%
Georgia	65%	75%	83%	57%	68%	74%
Hawaii	59%	64%	61%	47%	49%	44%
Idaho	62%	78%	85%	59%	76%	80%
Illinois	73%	79%	84%	55%	62%	66%
Indiana	65%	72%	71%	65%	72%	70%
Iowa	77%	84%	87%	70%	78%	81%
Kansas	56%	66%	69%	45%	60%	63%
Kentucky	83%	88%	90%	65%	70%	69%
Louisiana	72%	71%	77%	69%	67%	72%
Maine	99%	100%	100%	91%	94%	100%
Maryland	66%	69%	81%	52%	54%	64%
Massachusetts	77%	83%	88%	55%	63%	66%
Michigan	81%	94%	99%	78%	88%	91%
Minnesota	61%	71%	77%	48%	61%	67%
Mississippi	66%	70%	79%	64%	66%	74%
Missouri	80%	89%	91%	66%	76%	79%
Montana	57%	73%	75%	52%	71%	73%
Nebraska	65%	71%	69%	56%	64%	61%
Nevada	52%	60%	69%	44%	51%	61%
New Hampshire	68%	80%	78%	56%	69%	65%
New Jersey	54%	61%	67%	42%	51%	57%
New Mexico	70%	77%	86%	65%	74%	80%
New York	65%	74%	79%	53%	64%	67%
North Carolina	67%	74%	83%	54%	64%	71%
North Dakota	71%	75%	75%	68%	71%	74%
Ohio	72%	80%	85%	63%	71%	74%
Oklahoma	71%	78%	85%	59%	65%	72%
Oregon	97%	100%	100%	82%	90%	93%
Pennsylvania	73%	81%	84%	69%	77%	80%
Rhode Island	64%	79%	82%	48%	64%	64%
South Carolina	72%	76%	80%	67%	72%	76%
South Dakota	63%	78%	79%	60%	74%	76%
Tennessee	90%	94%	95%	74%	76%	77%
Texas	55%	64%	72%	44%	58%	65%
Utah	64%	75%	79%	51%	64%	68%
Vermont	84%	92%	97%	67%	77%	79%
Virginia	67%	74%	79%	56%	67%	69%
Washington	87%	95%	100%	69%	76%	82%
West Virginia	86%	86%	86%	90%	86%	87%
Wisconsin	71%	83%	89%	68%	79%	84%
Wyoming	57%	62%	57%	55%	60%	57%
Mid-Atlantic Region	68%	74%	80%	59%	66%	70%
Midwest Region	72%	81%	85%	63%	72%	76%
Mountain Plains Region	67%	77%	78%	55%	68%	69%
Northeast Region	69%	77%	82%	55%	65%	68%
Southeast Region	70%	78%	84%	58%	67%	72%
Southwest Region	60%	67%	75%	51%	62%	68%
Western Region	57%	64%	68%	41%	50%	55%

There is substantial uncertainty associated with most of these estimates. Confidence intervals that measure the uncertainty in the estimates for 2009 and 2010 are presented in Cunnyngham et al. (forthcoming). These confidence intervals are generally about as wide as the confidence intervals that are presented in this document for the 2011 estimates.

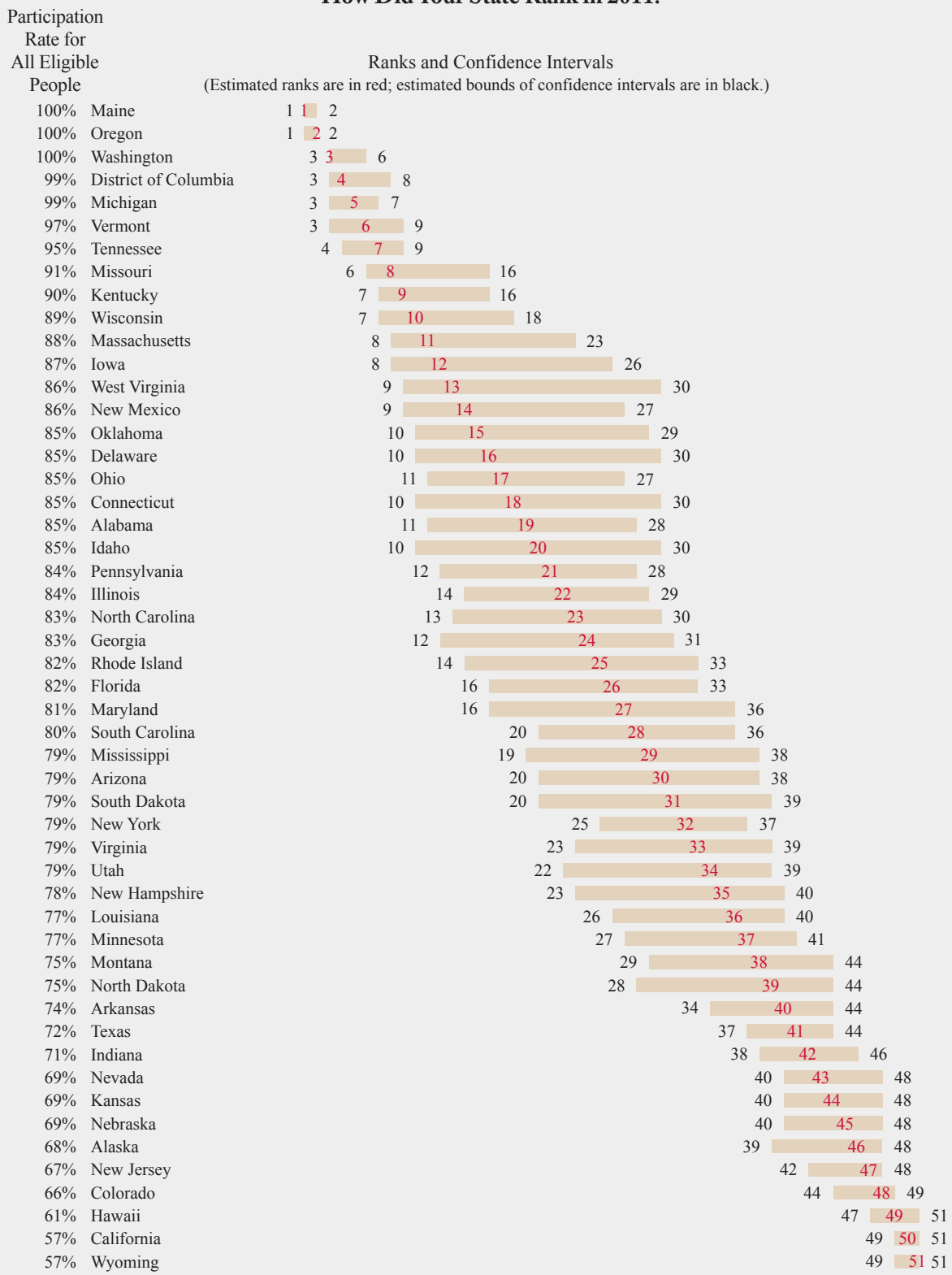
economic conditions, such as the percentage of the total State population receiving SNAP benefits. The regression model was chosen for its strong predictive ability for all three years. Because of differences between the years being estimated as well as methodological changes, the regression model differs slightly from the one developed for the prior report.

The shrinkage estimates presented here are substantially more precise than the direct sample estimates from the Current Population Survey. Estimates for 2009 and 2010 differ from estimates presented in Cunnyngham (2012) because of differences in (1) the three years being jointly estimated, (2) the direct sample estimation methodology, and (3) the regression model.

The estimates for all eligible people include individuals in households that pass all applicable federal SNAP income and asset tests or in which all members receive cash public assistance. People eligible solely through State categorical eligibility policies are not included in the estimates presented here. The estimates for eligible working poor include people who are eligible for SNAP as defined above and live in a household in which a member earns money from a job.

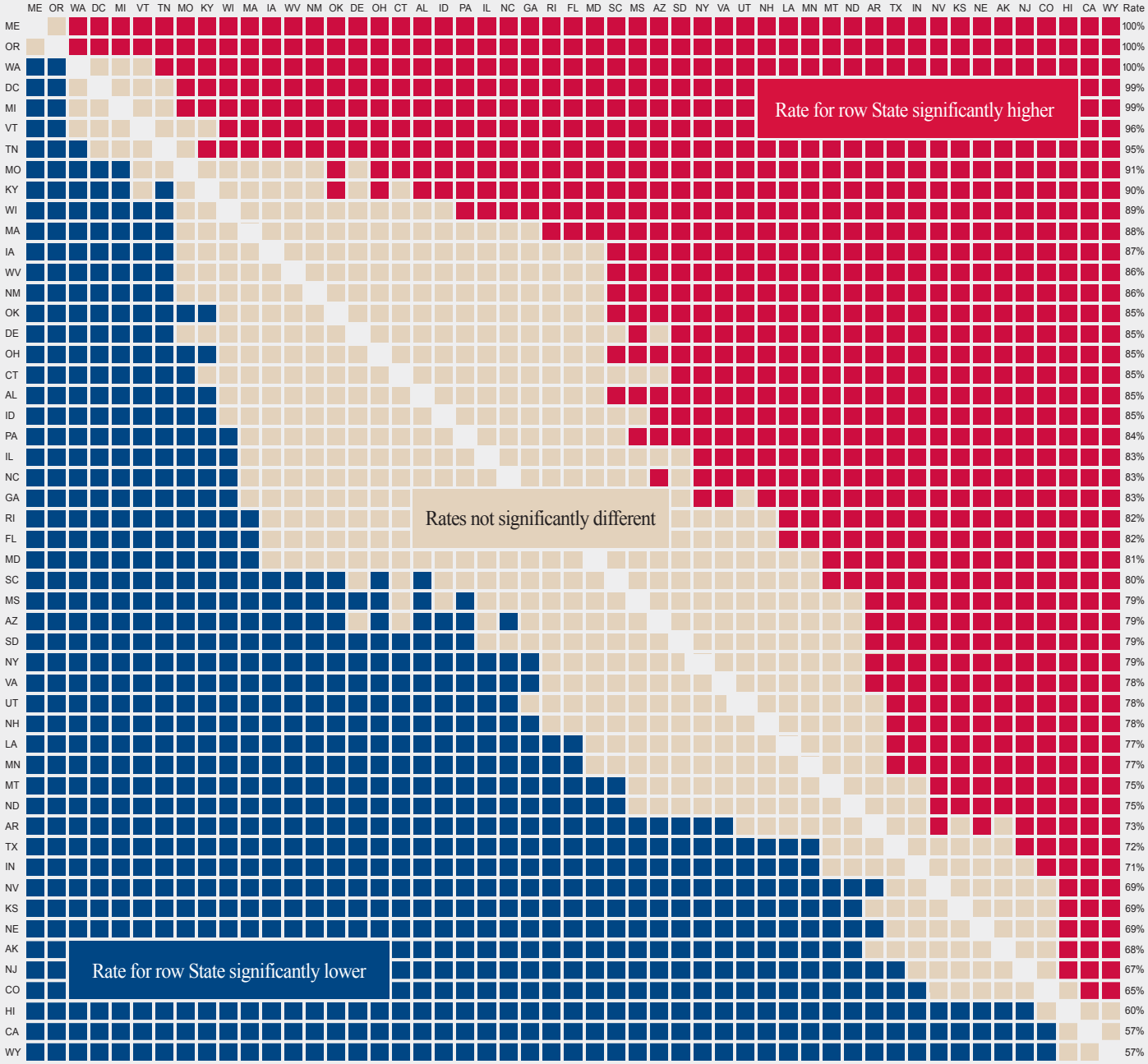
Because the Current Population Survey does not collect data on participation in the Food Distribution Program on Indian Reservations, the estimates presented here were not adjusted to reflect the fact that participants in that program were not eligible to receive SNAP benefits at the same time (Eslami and Cunnyngham 2013). The Food Distribution Program on Indian Reservations served about 78,000 people in 2011, so the effects of such adjustments would be negligible in almost all States. Because our focus in this document is on

How Did Your State Rank in 2011?



A confidence interval expresses our uncertainty about the true value of a State's rank. Each interval displayed here is a 90-percent confidence interval. One interpretation of such an interval is that there is a 90-percent chance that the true rank falls within the estimated bounds. For example, while our best estimate is that Florida had the 26th highest participation rate in 2011, the true rank may have been higher or lower. However, the chances are 90 in 100 that the true rank was between 16 and 33 among all of the States. To determine how Florida or your State compares with any other State, see the chart on page 7.

How Did Your State Compare with Other States in 2011 for All Eligibles?



Whether one State has a significantly higher participation rate than a second State can be determined from this figure by finding the row for the first State at the left of the figure and the column for the second State at the top of the figure. If the box where the row and column intersect is red, there is at least a 90-percent chance that the first State (the row State) has a higher true participation rate. If the box is blue, there is at least a 90-percent chance that the second State (the column State) has a higher true participation rate. Equivalently, there is less than a 10-percent chance that the first State has a higher rate. If the box is tan, there is more than a 10-percent chance but less than a 90-percent chance that the first State has a higher rate; thus, we conclude that neither estimated rate is significantly higher.

Taking Florida, the State in the middle of the distribution, as an example, we see that it had a significantly lower participation rate than 11 other States (Maine, Oregon, Washington, the District of Columbia, Michigan, Vermont, Tennessee, Missouri, Kentucky, Wisconsin, and Massachusetts) and a significantly higher rate than 16 other States (Wyoming, California, Hawaii, Colorado, New Jersey, Alaska, Nebraska, Kansas, Nevada, Indiana, Texas, Arkansas, North Dakota, Montana, Minnesota, and Louisiana). Its rate was neither significantly higher nor significantly lower than the rates for the other 25 States, suggesting that Florida is probably in the broad center of the distribution, unlike, for example, Maine and Wyoming, which were surely at or near the top and bottom of the distribution, respectively. Although we use the statistical definition of "significance" here, most of the significant differences were at least 10 percentage points, a difference that seems important as well as significant, and all of them were at least 4 percentage points.

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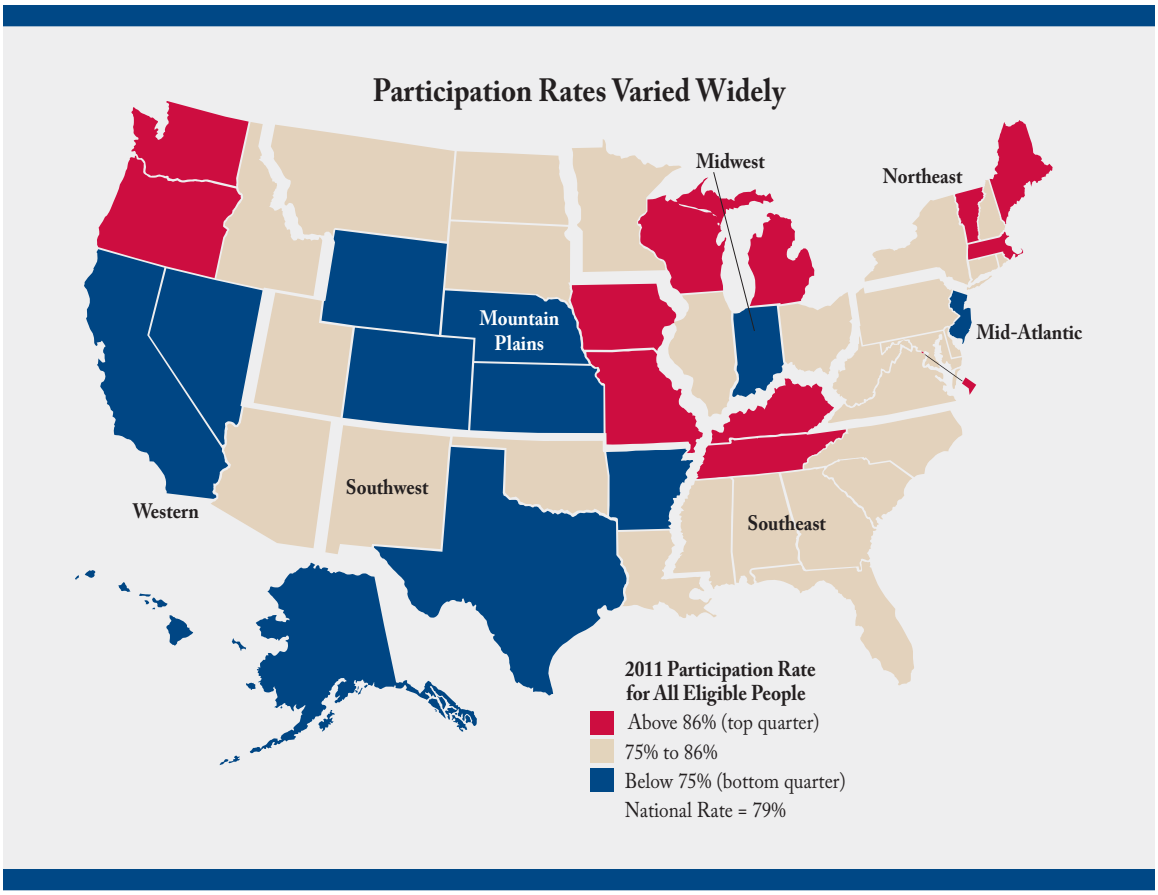

participation among people who were eligible for SNAP, the estimates of eligible people were adjusted using available data to reflect the fact that Supplemental Security Income recipients in California are not legally eligible to receive SNAP benefits because they receive cash instead.[1] It might be useful in some other contexts, however, to consider participation rates among those eligible for SNAP benefits or a cash substitute.

[1]About 1.3 million Supplemental Security Income recipients in California receive a small food assistance benefit through the State supplement. In the absence of the state rule excluding these individuals from receiving SNAP benefits, slightly less than half this number would become eligible for SNAP under current program rules.

References

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