## Reaching Those in Need:

## STATE FOOD STAMP PARTICIPATION RATES IN 2005



The Food Stamp Program 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 Stamp Act of 1977, as amended). The Food Stamp Program 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 2007, the program served 26 million people in an average month at a total annual cost of over $\$ 30$ billion in benefits.

The Government Performance and Results Act of 1993 calls for policymakers to assess the effects of programs, and one important measure of a program's performance is its
ability to reach its target population. The national food stamp participation rate-the percentage of eligible people in the United States who actually participate in the program - has been a standard for assessing performance for about 25 years. The U.S. Department of Agriculture's budget request for fiscal year 2008 includes a performance target to reach 68 percent of the eligible population by 2010.
The Food Stamp Program provides an important support for the "working poor"-people who are eligible for the Food Stamp Program and live in households in which someone earns income from a job. Of the 26 million people who received food stamps in an average month in 2006, over 10 million41 percent-lived in households that had income from earnings, up from 30 percent of all food stamp recipients 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 (Wolkwitz 2007), and rates for all eligible people and for the working poor for States (Cunnyngham, Castner, and Schirm 2006). This document presents estimates of food stamp participation rates for all eligible people and for the working poor for States for fiscal year 2005 . These estimates can be used to assess recent program performance and focus efforts to improve performance.

## Participation Rates in 2005

About 65 percent of eligible people in the United States received food stamp benefits in fiscal year 2005. Participation rates varied widely from State to State, however. Eighteen States had rates that were significantly higher (in a statistical sense) than the national rate, and 20 States had rates that were significantly lower. Among the regions, the Midwest Region had the highest participation rate. Its 71-percent rate was significantly higher than the rates for all of the other regions except for the Mountain Plains Region. The Western Region's participation rate of 57 percent was significantly lower than the rates for all of the other regions. (See the last page for a map showing regional boundaries.)



## How Many Were Eligible in 2005? What Percentage Participated?



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 Arizona's participation rate was 66 percent in 2005, the true rate may have been higher or lower. However, the chances are 90 in 100 that the true rate was between 61 and 71 percent.

## How Many Working Poor Were Eligible in 2005? What Percentage Participated?

Eligible
Working Poor
(Thousands)


| 2,607 | Midwest Region |
| :--- | :--- |
| 3,558 | Southeast Region |
| 3,167 | Southwest Region |
| 1,331 | Mountain Plains Region |
| 1,628 | Mid-Atlantic Region |
| 1,008 | Northeast Region |
| 3,339 | Western Region |

17,238 United States

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

In 2005, 57 percent of eligible working poor in the United States participated in the Food Stamp Program, but as with participation rates for all eligible people, rates for the working poor varied widely across States. Eighteen States had rates for the working poor that were significantly higher than the national rate, and 18 States had rates that were significantly lower.
While 65 percent of all eligible people in the United States participated in 2005, only 57 percent of the eligible working poor participated, a significant difference of 8 percentage points. In 25 States, the participation rate for the working poor in 2005 was-like the national rate for the working poor-significantly lower than the rate for all eligible people; in 10 of these States, the rate for the working poor was more than 8 percentage points lower than the rate for all eligible people. 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 2005 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. Missouri, Tennessee, Oregon, and Maine
were very likely at the top, with higher rates for all eligible people than most States. In contrast, Wyoming, Nevada, and California likely had lower rates than most 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 2005. Missouri was very likely ranked at the top, with a higher rate for the working poor than most States. In contrast, Colorado and California 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 fairly consistently been in the top or bottom of the distribution of rates in recent years. In all 3 years from 2003 to 2005, Kentucky, Louisiana, Maine, Missouri, Oklahoma, Oregon, Tennessee, and West Virginia had significantly higher participation rates for all eligible people than two-thirds of the States, while Arkansas, the District of Columbia, and South Carolina had significantly higher rates than half of the States. Colorado, Florida, Maryland, New Hampshire, New Jersey, South Dakota, and Wisconsin had significantly lower rates than half of the States in all 3 years,
while California, Massachusetts, Nevada, 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, the rankings do not exactly match. Three States (North Dakota, Wisconsin, 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, and the District of Columbia is ranked significantly lower.

## Estimation Method

The estimates presented here were derived using shrinkage estimation methods (Cunnyngham, Castner, and Schirm 2007, and Cunnyngham, Castner, and Schirm forthcoming). Drawing on data from the Current Population Survey, the decennial census, and administrative records, the shrinkage estimator averaged sample estimates of participation rates with predictions from a regression model. The sample estimates were obtained by applying food stamp eligibility rules to households in the Current Population Survey to estimate numbers of eligible people and eligible working poor, while estimating numbers of participating people and participating working poor from

## Participation Rates

|  | All Eligible People |  |  | Working Poor |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2003 | 2004 | 2005 | 2003 | 2004 | 2005 |
| Alabama | 58\% | 58\% | 65\% | 54\% | 52\% | 63\% |
| Alaska | 60\% | 58\% | 67\% | 61\% | 52\% | 62\% |
| Arizona | 63\% | 68\% | 66\% | 46\% | 56\% | 54\% |
| Arkansas | 63\% | 69\% | 76\% | 63\% | 63\% | 76\% |
| California | 45\% | 48\% | 50\% | 35\% | 36\% | 34\% |
| Colorado | 46\% | 55\% | 54\% | 35\% | 46\% | 34\% |
| Connecticut | 52\% | 59\% | 62\% | 44\% | 46\% | 45\% |
| Delaware | 52\% | 61\% | 65\% | 46\% | 55\% | 58\% |
| District of Columbia | 79\% | 81\% | 71\% | 51\% | 40\% | 36\% |
| Florida | 48\% | 56\% | 59\% | 39\% | 43\% | 49\% |
| Georgia | 68\% | 66\% | 74\% | 52\% | 54\% | 69\% |
| Hawaii | 69\% | 72\% | 70\% | 59\% | 62\% | 57\% |
| Idaho | 55\% | 56\% | 62\% | 47\% | 48\% | 56\% |
| Illinois | 62\% | 69\% | 75\% | 54\% | 59\% | 64\% |
| Indiana | 62\% | 68\% | 71\% | 61\% | 68\% | 71\% |
| Iowa | 59\% | 61\% | 66\% | 49\% | 57\% | 57\% |
| Kansas | 54\% | 59\% | 61\% | 51\% | 51\% | 52\% |
| Kentucky | 68\% | 71\% | 76\% | 64\% | 66\% | 75\% |
| Louisiana | 73\% | 77\% | 76\% | 69\% | 72\% | 78\% |
| Maine | 74\% | 80\% | 85\% | 65\% | 73\% | 79\% |
| Maryland | 48\% | 54\% | 55\% | 39\% | 44\% | 41\% |
| Massachusetts | 44\% | 51\% | 54\% | 29\% | 39\% | 36\% |
| Michigan | 62\% | 67\% | 75\% | 65\% | 69\% | 75\% |
| Minnesota | 63\% | 62\% | 62\% | 49\% | 45\% | 47\% |
| Mississippi | 67\% | 60\% | 60\% | 57\% | 49\% | 61\% |
| Missouri | 77\% | 87\% | 95\% | 69\% | 79\% | 89\% |
| Montana | 49\% | 58\% | 61\% | 43\% | 49\% | 51\% |
| Nebraska | 57\% | 63\% | 65\% | 49\% | 53\% | 53\% |
| Nevada | 42\% | 49\% | 49\% | 31\% | 37\% | 42\% |
| New Hampshire | 47\% | 55\% | 55\% | 41\% | 48\% | 46\% |
| New Jersey | 49\% | 54\% | 58\% | 38\% | 44\% | 41\% |
| New Mexico | 53\% | 64\% | 69\% | 47\% | 57\% | 65\% |
| New York | 49\% | 54\% | 61\% | 43\% | 43\% | 48\% |
| North Carolina | 48\% | 56\% | 58\% | 43\% | 47\% | 56\% |
| North Dakota | 54\% | 55\% | 57\% | 54\% | 52\% | 53\% |
| Ohio | 60\% | 65\% | 68\% | 57\% | 62\% | 63\% |
| Oklahoma | 69\% | 75\% | 77\% | 67\% | 72\% | 74\% |
| Oregon | 78\% | 83\% | 86\% | 70\% | 75\% | 75\% |
| Pennsylvania | 54\% | 61\% | 68\% | 54\% | 57\% | 63\% |
| Rhode Island | 55\% | 53\% | 56\% | 40\% | 40\% | 42\% |
| South Carolina | 65\% | 67\% | 71\% | 61\% | 64\% | 70\% |
| South Dakota | 52\% | 53\% | 57\% | 48\% | 52\% | 54\% |
| Tennessee | 85\% | 84\% | 88\% | 76\% | 79\% | 83\% |
| Texas | 47\% | 57\% | 60\% | 38\% | 48\% | 56\% |
| Utah | 50\% | 60\% | 61\% | 41\% | 48\% | 50\% |
| Vermont | 61\% | 65\% | 68\% | 52\% | 54\% | 54\% |
| Virginia | 58\% | 62\% | 62\% | 43\% | 50\% | 49\% |
| Washington | 60\% | 64\% | 68\% | 44\% | 52\% | 55\% |
| West Virginia | 72\% | 76\% | 80\% | 73\% | 76\% | 81\% |
| Wisconsin | 51\% | 54\% | 59\% | 54\% | 49\% | 56\% |
| Wyoming | 45\% | 48\% | 49\% | 46\% | 49\% | 47\% |
| Northeast Region | 50\% | 55\% | 61\% | 43\% | 44\% | 47\% |
| Mid-Atlantic Region | 55\% | 61\% | 65\% | 48\% | 53\% | 54\% |
| Southeast Region | 60\% | 63\% | 67\% | 52\% | 54\% | 62\% |
| Midwest Region | 60\% | 66\% | 71\% | 57\% | 61\% | 65\% |
| Southwest Region | 54\% | 63\% | 66\% | 46\% | 55\% | 62\% |
| Mountain Plains Region | 60\% | 67\% | 70\% | 51\% | 58\% | 61\% |
| Western Region | 52\% | 55\% | 57\% | 41\% | 43\% | 43\% |
| United States | 56\% | 61\% | 65\% | 48\% | 52\% | 57\% |

There is substantial uncertainty associated with most of these estimates. Confidence intervals that measure the uncertainty in the estimates for 2003 and 2004 are presented in Cunnyngham, Castner, and Schirm (forthcoming). These confidence intervals are generally about as wide as the confidence intervals that are presented in this document for the 2005 estimates.
food stamp administrative data. The "working poor" are defined as people who are eligible for food stamps and live in a household in which a member earns money from a job. The regression predictions of participation rates were based on observed indicators of socioeconomic conditions, such as the percentage of the total State population receiving food stamp benefits.

Shrinkage estimates are substantially more precise than direct sample estimates from the Current Population Survey or the Survey of Income and Program Participation, the leading sources of data used to estimate program eligibility. Because these surveys do not collect data on participation in the Food Distribution Program on Indian Reservations, the estimates presented here are not adjusted to reflect the fact that participants in that program are not eligible to receive food stamp benefits at the same time (Wolkwitz 2007). The Food Distribution Program on Indian Reservations served about 99,000 people in 2005 , so the effects of such adjustments would be negligible in almost all States. Because our focus in this document is on participation among people who are eligible for the Food Stamp Program, 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 food stamp benefits because they receive cash instead. It might be useful in some other contexts, however, to consider participation rates among those eligible for food stamp benefits or a cash substitute.


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## How Did Your State Rank in 2005?

Participation
Rate for

## All Eligible

People
Ranks and Confidence Intervals
(Estimated ranks are in red; estimated bounds of confidence intervals are in black.)


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 Nebraska had the 26th highest participation rate in 2005, the true rank may have been higher or lower. However, the chances are 90 in 100 that the true rank was between 17 and 33 among all of the States. To determine how Nebraska or your State compares with any other State, see the chart on page 7.

How Did Your State Compare with Other States in 2005?


Whether one State has a significantly higher participation rate for all eligible people 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.

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[^1]:    Taking Nebraska, the State in the middle of the distribution, as an example, we see that it had a significantly lower participation rate than 15 other States (Missouri, Tennessee, Oregon, Maine, West Virginia, Oklahoma, Louisiana, Arkansas, Kentucky, Michigan, Illinois, Georgia, the District of Columbia, South Carolina, and Indiana) and a significantly higher rate than 15 other States (Wyoming, Nevada, California, Colorado, Massachusetts, New Hampshire, Maryland, Rhode Island, North Dakota, South Dakota, New Jersey, North Carolina, Wisconsin, Florida, and Texas). Its rate was neither significantly higher nor significantly lower than the rates for the other 20 States, suggesting that Nebraska is probably in the broad center of the distribution, unlike, for example, Missouri 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.

