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**State Food Stamp  
Participation Rates for the  
Working Poor in 2001**

*Final Report*

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## I. INTRODUCTION

The Food Stamp Program (FSP) is a key source of nutrition assistance for many people who are working but earning little from their jobs. With legislation enacted in recent years to emphasize the importance of moving from public assistance to employment, food stamps can provide a critical work support during the transition to self-sufficiency. In light of this, states now have the flexibility to tailor food stamp eligibility rules to more effectively meet the needs of their residents who are working but still poor. For instance, to ensure that a working parent who needs a car to get to work is not ineligible for food stamps because of the value of that car, a state can relax the eligibility rules related to calculating the value of a vehicle when applying the food stamp asset test. Also, the Farm Security and Rural Investment Act of 2002 allowed states to extend the period of time that transitional food stamp benefits are available to those who are leaving Temporary Assistance to Needy Families.<sup>1</sup> Meanwhile, states have adopted simpler income reporting options that reduce barriers to participation for the “working poor”—that is, people who are eligible for food stamps but live in households in which someone earns income from a job—so that not all minor changes in income and employment need to be reported to the food stamp office.

Of the more than 17 million people who received food stamps in 2001, over 6 million—38 percent—were working poor, 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.<sup>2</sup> Despite the fact that

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<sup>1</sup> A family’s transitional food stamp benefit is set at the time the family leaves public assistance and is not impacted by increases in family income during the transition period.

<sup>2</sup> The percentage of participating households that have earnings, as opposed to the percentage of participating people who live in households that have earnings, increased from 23 to 27 between 1996 and 2001. The higher percentages for the person-level measure reflect the larger-than-average size of households with earnings.

the working poor make up a larger portion of the program caseload, many people who have jobs but are eligible for food stamps still do not participate in the program. The rate of participation by the working poor in 2001 (54 percent) remained significantly lower than the rate for all eligible people (60 percent).<sup>3,4</sup> However, the gap between the rates has narrowed over time—it was 13 percentage points just two years earlier.

Reasons for low participation among the working poor include lack of knowledge of the program and expected low benefits (McConnell and Ponza 1999). While some working poor believe that they are not eligible for the program, those who expect to be eligible for only a small benefit believe the benefit is not worth the time associated with filling out applications and the out-of-pocket expense and wages lost due to traveling to the food stamp office to apply initially or periodically reapply. In recognition of these barriers to participation, the U.S. Department of Agriculture’s strategic plan for 2002 to 2007 includes strategies to “enhance support and access for working families” and to “target outreach efforts to special audiences such as the working poor.”

In this report we discuss our progress in deriving state participation rates for the working poor. We build upon recent studies examining national participation rates for socioeconomic and demographic subgroups (Cunningham 2003 and 2004) and rates for states among the entire eligible population (Castner and Schirm 2004b). In Chapter II we focus on the feasibility of deriving these rates by state, discussing steps to overcome data limitations and small sample sizes, the estimation methods that we use, and how we measure uncertainty in the estimates. In

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<sup>3</sup> The participation rate for the working poor is calculated as the number of participating working poor divided by the number of eligible working poor, with the result expressed as a percentage.

<sup>4</sup> Cunningham (2003) reports both this 60 percent rate for all eligible people for fiscal year 2001 and a 62 percent rate for September 2001, as well as a participation rate of 52 percent for “individuals in households with earnings.” See Chapter II for more information about the differences in estimated participation rates.

Chapter III we present the rates, noting the variation across states and comparing a state's rate for all eligible people with its rate for the working poor. In particular, we examine whether some states have a rate for the working poor that is high relative to their rate for all eligible people and if some states have a rate for the working poor that is low relative to their rate for all eligible people.

Although we present estimated participation rates for the working poor in this report, we are still in the early stages of developing and assessing such rates. These estimates are less precise than estimates for all eligible people, and like the rates for all eligible people, they will be revised when we incorporate recent improvements to our methods for simulating program eligibility.

This report presents our best estimates of participation rates using the data and simulation methods that were available at the commencement of the study. It does not seek to explain the variation in the state estimates, except in those cases where we point out how a data limitation leads to a result that may be inaccurate for that state. To assess sources of variation in the rates, or to measure the impact of state programs and policies on a state's participation rate requires the examination of both household- and state-level influences on participation, a substantially more extensive analysis than can be undertaken in this study.

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## II. METHODOLOGY

### A. SHRINKAGE ESTIMATION

In deriving state estimates of food stamp participation rates, even for all eligible people, we are limited by the small samples for most states in the leading national surveys used to determine eligibility. The “direct” estimates from these surveys are imprecise because of the substantial sampling error that results when using only the information in the small sample (e.g., using only 2001 data on households from Wyoming to compute a 2001 estimate for Wyoming). To improve precision, we use an “indirect” estimator, which “borrows strength” from other states, time periods, or data sources (e.g., assuming that what happened in other states in 2001 or what happened in Wyoming and other states in other years is relevant to estimating what happened in Wyoming in 2001). The indirect estimator we use for estimating state participation rates is a “shrinkage” estimator, or one that averages estimates obtained from different methods. This estimator combines direct sample and regression estimates and borrows strength across states and over time.<sup>5</sup> It also borrows strength from data outside the main sample survey (the Current Population Survey), specifically, data from administrative records systems and the decennial census.

To improve precision even further, we borrow strength across groups—all eligible people and the working poor—by jointly deriving estimates of state participation rates for the working poor with those of all eligibles.<sup>6,7</sup> Along with allowing us to borrow strength across the two

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<sup>5</sup> Regression estimates are predictions based on nonsample or highly precise sample data, such as census and administrative records data, from all of the states and all of the years for which estimates are sought.

<sup>6</sup> Full details on the shrinkage estimation process are provided in Castner and Schirm (2004a).

<sup>7</sup> We have been deriving estimates of food stamp participation rates for all eligible people for several years. We examined the impact of the joint derivation on the estimates for all eligible people and found there was little effect on participation rates, the rankings of states by rates, or the precision of the estimates.

groups (all eligible people and the working poor), jointly deriving the estimates also allows us to formally test the difference between the rates for the two groups. From this, we are able to determine whether a state's rate for the working poor is significantly different than its rate for all eligible people.

## **B. USE OF FSPQC DATA AND IDENTIFICATION OF THE WORKING POOR**

A food stamp participation rate is obtained by dividing an estimate of the number of people receiving food stamps by an estimate of the number of people eligible for food stamps, with the resulting ratio expressed as a percentage. We define as “working poor” any person who is eligible for food stamps and lives in a household in which some member earns money from a job. To derive direct sample estimates of participation rates, we use Current Population Survey (CPS) data to estimate the total percentage eligible as well as the percentage who are eligible and working poor.<sup>8</sup> We use the Food Stamp Program Quality Control data (FSPQC) to estimate the percentage of recipients who are correctly receiving benefits and the percentage who are working poor and correctly receiving benefits.<sup>9,10</sup>

Use of the FSPQC data for estimating the number of working poor participants presents three issues: (1) the use of sample data introduces sampling error in the numerator that contributes to the overall imprecision of the estimated rates, (2) the estimates of the percentage of participants who are correctly eligible and the percentage who are working poor and correctly

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<sup>8</sup> We multiply the percentage eligible by state and the percentage working poor and eligible by state by the Census Bureau's state population estimates for July 1 of each year to obtain the number eligible and the number working poor and eligible.

<sup>9</sup> We exclude from our estimate of participants those people who were ineligible for food stamps and, thus, are not included in our estimate of eligibles.

<sup>10</sup> We multiply the percentage correctly eligible by state and the percentage working poor and correctly eligible by state by the food stamp Statistical Summary of Operations data to obtain the number of correctly eligible participants and the number of working poor and correctly eligible participants.

eligible are correlated because both are derived from the FSPQC data, and (3) the FSPQC data might not allow us to identify all households with earners. To reduce the impact of using sample data in the numerator, we changed from a one-month focus for the estimates to a monthly average over the fiscal year, which increased the sample size. We then accounted for the correlation between the percentage of participants who are correctly eligible and who are working poor and correctly eligible in our calculations. Finally, to improve the identification of households with earnings in the FSPQC data, we developed an algorithm that takes into account various potential indicators of earnings, not just earned income.

Although the FSPQC data are collected primarily to estimate issuance error rates, they also have information about household characteristics. This secondary information, though, can be prone to error and may not contain all of the information relevant for the purposes of identifying the working poor. For example, the FSPQC data record only income that is counted toward the food stamp benefit. In households where earned income may have been excluded from the benefit calculation (e.g., a few states had waivers to exclude earned income from the benefit calculation for households receiving Temporary Assistance for Needy Families (TANF)), we would not be aware that the household had earnings.

To develop an algorithm to correctly identify households that were very likely to have a member who worked, we reviewed data from many households to determine how we might use other information available (besides earned income), such as the earned income deduction and workforce participation information.<sup>11</sup> We also reviewed information FNS provided concerning waivers that allowed states to exclude earned income from the benefit calculation for households with TANF income. The algorithm based on our analysis identifies a household as working poor

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<sup>11</sup> Any household with earnings should have some portion of that earnings deducted from household income before the final benefit calculation. This earned income deduction is recorded separately.

if two of the three earnings indicators (earned income, earned income deduction, workforce participation) showed someone was working. Additionally, if someone had earned income and the total earned income and unearned income summed to the recorded total income, we identified the household as working poor. Finally, in the two states with waivers (Indiana and Connecticut), we identified households as working poor if the household had both reported TANF income and someone in the household with workforce participation information indicating they were working. (More details pertaining to our algorithm are provided in Appendix A.)

In Table II.1 we show the percentage of participating households that are correctly eligible and working poor based on the different indicators. The first column shows the percentage of participating households identified as working poor because the household data showed both earned income and an earned income deduction. The second column shows the additional percentage that were counted as working poor because the household had earned income (but no earned income deduction) that is consistent with other information on the file, and the third column shows the addition from households that had an earned income deduction (but no earned income) that was consistent with other information on the file. The fourth column shows the additional percentage included by examining the workforce participation information. At the national level, we found that about 42 percent of participating households were correctly eligible and working poor, but across the states, this percentage ranged from approximately 14 to 56.

Due to errors in the FSPQC data from California, we may be underestimating the number of participating working poor in that state, which would lead to underestimating the participation rate for the working poor. For 1999 and 2000, the data contain very few households with a recorded earned income deduction, which removes the deduction as a possible indicator of earnings in the household. In addition, the workforce participation information was missing for

many households. These two indicators are important in identifying households with earnings, so incomplete or incorrect information makes it difficult to identify households with earnings. The earned income deduction information has been available more recently (2001 and later), which will help us improve the estimates in the future.

### **C. MEASURING UNCERTAINTY IN THE ESTIMATED RATES**

Estimates of participation rates are subject to uncertainty that is attributable to several sources of potential estimation error, including the possibly large errors that might arise when estimates must be derived from fairly small samples of households. We measure this uncertainty using confidence intervals, specifically, 90 percent confidence intervals. One interpretation of such a confidence interval is that there is a 90 percent chance that the true participation rate falls within the estimated bounds of the interval.

Confidence intervals around rates for the working poor are generally wider than confidence intervals around the rates for all eligible people, showing more uncertainty in the rates for the working poor. In Table II.2 we present the ratio of the width of the confidence intervals for rates for the working poor to the width of the confidence intervals for rates for all eligible people, by state for 1999-2001. On average, the confidence intervals for the working poor are about 50 percent wider than those for all eligible people.

### **D. DIFFERENCES FROM PREVIOUSLY PUBLISHED RATES**

The estimates of participation rates for the working poor presented here differ by one to two percentage points from the estimates in Cunyningham's (2003) report *Trends in Food Stamp Participation Rates: 1999 to 2001* due to improvements made for this study in identifying working poor participants in FSPQC data.<sup>12</sup>

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<sup>12</sup> The improvements are described above in Section B.

Subsequently, we made substantial revisions to the methodology for estimating the eligible food stamp population, but those revisions were not available when we began deriving the estimates. Thus, the rates for not only the working poor but also all eligible people differ by several percentage points from those presented in Cunnyingham's (2004) report *Trends in Food Stamp Participation Rates: 1999 to 2002*. One of the key methodological changes reflected in the Cunnyingham (2004) study has to do with how we determine whether households have asset holdings below the FSP eligibility requirements. Since 2001, several programmatic changes have been made to the vehicle portion of the FSP asset test. First, the federal rules were changed to exclude low-equity vehicles (equity less than \$1,500) from the asset test. Then, states were given the freedom to align their FSP vehicle rules with their TANF vehicle rules, as long as the rules were less restrictive than the FSP federal rules. Since that time, many states have chosen to relax their vehicle rules, often excluding vehicles from the asset test entirely.

The impacts of the expansions to vehicle policies are not captured in the rates presented in this report, nor are several other changes in data and methods. These changes are included and discussed in Cunnyingham (2004). When we revise the state estimates in the future, we expect them to be revised downward, on average, though the impacts will vary by state.

TABLE II.1

## PERCENTAGE OF FOOD STAMP PARTICIPANTS WITH EARNERS IN THE HOUSEHOLD, BY INDICATORS OF EARNINGS, 2001

	Both Earned Income and Earnings Deduction	No Earnings Deduction But Earned Income Consistent with Other Income	No Earned Income But Earnings Deduction Consistent with Other Income	Earned Income or Deduction Consistent with Other Non-Income Information	Total
Alabama	36.5	0.1	0.4	0.1	37.1
Alaska	41.5	0.6	0.1	0.2	42.4
Arizona	35.4	0.8	4.9	0.1	41.2
Arkansas	38.0	0.4	0.5	0.2	39.1
California	16.2	12.9	4.3	2.2	35.5
Colorado	43.4	0.6	2.6	0.3	46.9
Connecticut	16.7	1.4	0.1	10.0	28.1
Delaware	34.2	0.1	1.2	0.0	35.5
District of Columbia	12.3	0.7	0.0	0.4	13.5
Florida	32.6	1.5	3.1	0.4	37.6
Georgia	38.0	0.2	1.1	0.0	39.3
Hawaii	36.5	0.9	2.6	0.2	40.2
Idaho	52.5	0.8	2.3	0.6	56.1
Illinois	39.1	0.0	1.5	0.2	40.8
Indiana	38.4	1.2	1.0	2.3	42.8
Iowa	40.2	0.6	0.2	0.2	41.2
Kansas	38.5	0.1	1.6	1.0	41.1
Kentucky	37.5	0.7	0.2	0.0	38.5
Louisiana	45.5	0.5	0.5	0.0	46.6
Maine	34.2	0.2	0.5	0.2	35.1
Maryland	26.3	0.8	0.6	0.2	27.8
Massachusetts	19.8	0.8	2.6	0.4	23.6
Michigan	42.6	0.0	0.5	0.3	43.4
Minnesota	30.5	1.4	0.1	3.6	35.6
Mississippi	38.0	0.4	2.1	0.0	40.5
Missouri	40.2	0.6	1.3	0.4	42.4
Montana	40.6	0.3	0.3	0.6	41.6
Nebraska	40.1	0.2	0.5	1.0	41.7
Nevada	25.9	0.2	1.1	0.0	27.2
New Hampshire	27.5	0.4	0.7	0.8	29.3
New Jersey	21.1	2.7	1.5	1.0	26.3
New Mexico	37.9	0.3	2.1	0.6	41.0
New York	22.9	1.1	1.4	0.5	25.9
North Carolina	37.7	0.5	2.0	0.0	40.2
North Dakota	51.6	0.7	0.0	0.2	52.5
Ohio	34.3	0.2	3.9	1.0	39.4
Oklahoma	40.2	0.7	1.7	1.6	44.2
Oregon	42.9	0.8	2.7	3.7	50.1
Pennsylvania	36.3	0.1	0.3	0.2	36.9
Rhode Island	19.7	0.0	2.0	0.0	21.6
South Carolina	34.6	1.3	0.5	0.0	36.5
South Dakota	38.5	0.0	2.3	1.4	42.2
Tennessee	34.6	1.6	1.1	1.0	38.3
Texas	44.8	0.5	5.8	0.1	51.2
Utah	45.1	0.3	2.4	1.9	49.7
Vermont	26.5	0.4	0.6	0.0	27.4
Virginia	37.7	2.4	0.8	0.4	41.3
Washington	28.8	0.0	2.8	0.6	32.1
West Virginia	34.9	0.2	0.3	0.1	35.5
Wisconsin	44.5	1.1	2.0	0.1	47.7
Wyoming	54.3	0.7	0.4	0.0	55.4
United States	38.1	0.6	2.8	0.7	42.2

TABLE II.2

RATIOS OF WIDTH OF CONFIDENCE INTERVAL FOR PARTICIPATION RATE  
FOR WORKING POOR TO WIDTH OF CONFIDENCE INTERVAL FOR  
PARTICIPATION RATE FOR ALL ELIGIBLE PEOPLE

	1999	2000	2001
Alabama	1.566	1.689	1.914
Alaska	1.546	1.545	1.596
Arizona	1.375	0.810	1.220
Arkansas	1.514	1.485	1.575
California	0.841	1.405	0.856
Colorado	1.219	1.108	1.308
Connecticut	1.494	1.540	1.650
Delaware	1.655	1.859	1.685
District of Columbia	1.073	1.313	1.060
Florida	1.393	1.442	1.612
Georgia	1.453	1.768	1.494
Hawaii	1.229	1.839	1.500
Idaho	1.454	1.532	1.629
Illinois	1.524	1.551	1.486
Indiana	1.552	1.635	1.695
Iowa	1.126	1.030	1.163
Kansas	1.348	1.337	1.402
Kentucky	1.624	1.572	1.639
Louisiana	1.440	1.600	1.649
Maine	1.734	1.789	1.705
Maryland	1.466	1.516	1.463
Massachusetts	0.910	1.132	1.142
Michigan	1.424	1.757	1.638
Minnesota	1.247	1.133	1.271
Mississippi	1.973	1.562	1.499
Missouri	1.774	1.812	1.816
Montana	1.373	1.406	1.266
Nebraska	1.420	1.322	1.453
Nevada	1.315	1.080	1.174
New Hampshire	1.554	1.637	1.479
New Jersey	1.059	1.225	1.954
New Mexico	1.406	1.157	1.584
New York	1.347	1.500	1.263
North Carolina	1.376	1.885	1.613
North Dakota	1.653	1.644	1.800
Ohio	1.334	1.404	1.634
Oklahoma	1.633	1.536	1.568
Oregon	1.473	1.490	1.436
Pennsylvania	1.744	1.756	1.902
Rhode Island	1.579	1.621	1.678
South Carolina	1.442	1.417	1.428
South Dakota	1.478	1.473	1.548
Tennessee	1.596	1.521	1.606
Texas	1.556	1.602	0.955
Utah	1.401	1.332	1.373
Vermont	1.755	1.874	2.257
Virginia	1.408	1.326	1.601
Washington	1.416	1.369	1.294
West Virginia	2.112	1.676	0.956
Wisconsin	1.391	1.291	1.496
Wyoming	1.399	1.296	1.558
United States	1.355	1.789	1.405



### **III. PARTICIPATION RATES FOR THE WORKING POOR**

Using the estimation procedures described above, we jointly derived estimates of food stamp participation rates for the working poor and for all eligibles for 1999-2001. The results are presented and discussed here.

#### **A. PARTICIPATION RATES FOR THE WORKING POOR**

In 2001, 54 percent of the eligible working poor in the United States participated in the FSP, but rates varied widely across states, with some over 65 percent and some under 45 percent. Twenty-four states had rates that were significantly higher than the national rate, and nine states had rates that were significantly lower. Table III.1 shows the participation rates by state for 1999-2001. Tables III.2 to III.4 present the participation rates by state for each year separately, along with 90-percent confidence intervals.

Although there is substantial uncertainty associated with the participation rates for the working poor, it is still 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. West Virginia and Maine were very likely at the top, with higher rates than most states in 2001. In contrast, Nevada, Massachusetts, and California likely had lower rates than most states. The District of Columbia, New Jersey, Arizona, New York, Florida, Texas, Maryland, Colorado, Idaho, North Carolina, and Kansas probably fell in the bottom half of the distribution,<sup>13</sup> while Missouri, Oregon, Kentucky, Michigan, Louisiana, Indiana, Pennsylvania, Hawaii, South Dakota, Illinois, Vermont, North Dakota, Wisconsin, and Tennessee were probably in the top half in 2001.

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<sup>13</sup> New Hampshire has an estimated participation rate that is lower than some of the rates that probably fell in the lower half of the distribution. However, the uncertainty associated with New Hampshire's participation rate does not allow us to have as much confidence in placing New Hampshire in the lower half of the distribution as we have with other states.

Changes in participation rates over time reflect true changes in participation patterns as well as statistical variability in the data. As a result, a large change in a state's rate from a prior year should be interpreted cautiously; the change does not necessarily imply that the program's performance in the state has improved or deteriorated dramatically. Similarly, differences between states should be interpreted cautiously. However, despite the uncertainty, the estimated rates suggest that some states have fairly consistently been in the top or bottom of the distribution in recent years (Table III.1). In all three years from 1999 to 2001, West Virginia, Maine, Michigan, Louisiana, Kentucky, and Pennsylvania had significantly higher participation rates for the working poor than two-thirds of the states, and Missouri, Vermont, Hawaii, and South Dakota had significantly higher rates than half of the states. Florida and New York had significantly lower rates for the working poor than half of the states in all three years, and Texas, New Jersey, Arizona, California, Massachusetts, and Nevada had significantly lower rates than two-thirds of the states.<sup>14</sup>

## **B. COMPARING RATES FOR THE WORKING POOR AND ALL ELIGIBLE PEOPLE**

While 60 percent of all eligible people participated in 2001, only 54 percent of the eligible working poor participated. This gap of 6 percentage points is significantly larger than zero but significantly smaller than the gap of 13 percentage points in 1999 (when participation rates were 48 percent for the working poor and 61 percent for all eligible people) (Table III.5).

In 12 states (Texas, Washington, Connecticut, Rhode Island, Hawaii, Arizona, New Jersey, Massachusetts, New York, Nevada, California, and the District of Columbia), the participation rate for the working poor in 2001 was—like the national rate for the working poor—significantly

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<sup>14</sup> As discussed in Chapter II, the participation rate for California may be underestimated due to limitations in the FSPQC data received from California.

lower than the rate for all eligible people. (Tables III.6-III.8 show the differences in rates and the corresponding confidence intervals for 1999-2001.) Six of these states (New Jersey, Massachusetts, New York, Nevada, California, and the District of Columbia) had a participation rate “deficit”—the participation rate for all eligible people minus the participation rate for the working poor—that was significantly larger than the national deficit of six percentage points.

In the District of Columbia, which had a participation rate for the working poor that was substantially lower than the rate for all eligible people, we find that the percentage of participants with earnings according to the FSPQC data is very low (13 percent in 2001, compared to the national average of 42 percent).<sup>15</sup> This leads to direct estimates of participation rates that are also very low. Although the District of Columbia might truly have a participation rate for the working poor that is low relative to its rate for all eligible people or the rates in other states, further assessment of the accuracy of the FSPQC data might be warranted. Also, it is important to keep in mind that the confidence intervals around the estimated rates for the District of Columbia are relatively wide, reflecting the substantial uncertainty associated with the rates.

In contrast to the pattern observed for the nation, and the states listed above, 17 states (West Virginia, Louisiana, North Dakota, Michigan, Wyoming, South Dakota, Missouri, Pennsylvania, Indiana, Kentucky, Wisconsin, South Carolina, Ohio, Oklahoma, Idaho, Mississippi, North Carolina, Virginia, and Georgia) had participation rate deficits that were significantly smaller than the national deficit of six percentage points. Indeed, in the first 5 states the rates for the working poor were significantly higher than the rates for all eligible people.

In contrast to these patterns for 2001, we find for 1999—when the national deficit was 13, rather than 6, percentage points—that 34 states had a rate for the working poor that was

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<sup>15</sup> The percentage of participants who are working poor and other values that are used to derive the estimates can be found in Castner and Schirm (2004a).

significantly lower than the rate for all eligible people and no state had a rate for the working poor that was significantly higher than the rate for all eligible people.

The estimated participation rates presented in this report shed light on how the rates for the working poor vary across states and how participation rates differ between the working poor and all eligible people. The estimates also lead to questions, especially related to why the rates vary so much across states. Other types of analyses could help identify the impact of outreach to inform eligible people of their potential eligibility and the impact of state policies and practices on the participation decisions of eligible people. Studies focusing on participation in other assistance programs, such as the Temporary Assistance for Needy Families program, could identify if success in keeping workers in these programs also leads to success in keeping workers in the Food Stamp Program.

TABLE III.1

## PARTICIPATION RATES FOR THE WORKING POOR, 1999-2001

	1999	2000	2001
Alabama	56	54	60 <sup>+</sup>
Alaska	55	63	67 <sup>+</sup>
Arizona	35	33	40 <sup>-</sup>
Arkansas	56	53	59
California	27	34	31 <sup>-</sup>
Colorado	46	46	49
Connecticut	50	54	59
Delaware	52	48	52
District of Columbia	37	47	38 <sup>-</sup>
Florida	45	44	45 <sup>-</sup>
Georgia	54	52	52
Hawaii	65	79	75 <sup>+</sup>
Idaho	46	47	50
Illinois	61	65	73 <sup>+</sup>
Indiana	62	66	77 <sup>+</sup>
Iowa	49	49	55
Kansas	41	47	52
Kentucky	70	76	83 <sup>+</sup>
Louisiana	73	73	82 <sup>+</sup>
Maine	78	81	89 <sup>+</sup>
Maryland	48	46	49
Massachusetts	24	30	30 <sup>-</sup>
Michigan	74	75	83 <sup>+</sup>
Minnesota	57	59	63 <sup>+</sup>
Mississippi	57	50	58
Missouri	69	76	86 <sup>+</sup>
Montana	52	56	60 <sup>+</sup>
Nebraska	54	55	58
Nevada	21	25	27 <sup>-</sup>
New Hampshire	42	47	51
New Jersey	35	36	39 <sup>-</sup>
New Mexico	60	44	59
New York	38	46	42 <sup>-</sup>
North Carolina	47	44	51
North Dakota	55	59	72 <sup>+</sup>
Ohio	53	56	65 <sup>+</sup>
Oklahoma	61	58	63 <sup>+</sup>
Oregon	60	70	84 <sup>+</sup>
Pennsylvania	69	72	75 <sup>+</sup>
Rhode Island	50	58	59
South Carolina	60	57	64 <sup>+</sup>
South Dakota	65	67	74 <sup>+</sup>
Tennessee	62	60	69 <sup>+</sup>
Texas	42	42	45 <sup>-</sup>
Utah	49	49	53
Vermont	67	70	73 <sup>+</sup>
Virginia	52	53	58
Washington	47	53	57
West Virginia	96	95	100 <sup>+</sup>
Wisconsin	54	62	70 <sup>+</sup>
Wyoming	57	59	65 <sup>+</sup>
United States	48	50	54

<sup>+</sup> Participation rate is significantly higher than national rate.

<sup>-</sup> Participation rate is significantly lower than national rate.

TABLE III.2

## PARTICIPATION RATES FOR THE WORKING POOR, WITH CONFIDENCE INTERVALS, 1999

	Participation	90 Percent Confidence Interval	
	Rate	Lower Bound	Upper Bound
Alabama	56	47	64
Alaska	55	45	65
Arizona	35	27	42
Arkansas	56	47	64
California	27	23	30
Colorado	46	40	53
Connecticut	50	41	60
Delaware	52	42	62
District of Columbia	37	27	47
Florida	45	40	51
Georgia	54	47	60
Hawaii	65	54	75
Idaho	46	37	55
Illinois	61	53	68
Indiana	62	53	71
Iowa	49	42	56
Kansas	41	35	47
Kentucky	70	60	81
Louisiana	73	64	82
Maine	78	67	90
Maryland	48	39	57
Massachusetts	24	19	29
Michigan	74	66	83
Minnesota	57	49	66
Mississippi	57	47	67
Missouri	69	57	81
Montana	52	43	61
Nebraska	54	45	62
Nevada	21	15	27
New Hampshire	42	32	51
New Jersey	35	30	40
New Mexico	60	52	69
New York	38	32	45
North Carolina	47	41	54
North Dakota	55	44	65
Ohio	53	47	59
Oklahoma	61	54	69
Oregon	60	51	69
Pennsylvania	69	60	79
Rhode Island	50	40	60
South Carolina	60	51	69
South Dakota	65	55	75
Tennessee	62	54	70
Texas	42	38	46
Utah	49	41	58
Vermont	67	56	77
Virginia	52	44	59
Washington	47	40	54
West Virginia	96	81	100
Wisconsin	54	45	62
Wyoming	57	50	64
United States	48	46	49

TABLE III.3

## PARTICIPATION RATES FOR THE WORKING POOR, WITH CONFIDENCE INTERVALS, 2000

	Participation Rate	90 Percent Confidence Interval	
		Lower Bound	Upper Bound
Alabama	54	46	62
Alaska	63	53	72
Arizona	33	29	37
Arkansas	53	46	61
California	34	30	37
Colorado	46	41	52
Connecticut	54	45	63
Delaware	48	38	58
District of Columbia	47	37	56
Florida	44	38	51
Georgia	52	45	59
Hawaii	79	66	91
Idaho	47	39	55
Illinois	65	57	72
Indiana	66	57	75
Iowa	49	43	55
Kansas	47	40	55
Kentucky	76	65	86
Louisiana	73	64	82
Maine	81	70	92
Maryland	46	38	54
Massachusetts	30	24	36
Michigan	75	66	84
Minnesota	59	51	66
Mississippi	50	41	59
Missouri	76	63	89
Montana	56	47	65
Nebraska	55	47	63
Nevada	25	20	31
New Hampshire	47	38	56
New Jersey	36	31	41
New Mexico	44	37	51
New York	46	40	52
North Carolina	44	39	50
North Dakota	59	49	70
Ohio	56	51	62
Oklahoma	58	52	65
Oregon	70	60	80
Pennsylvania	72	62	81
Rhode Island	58	48	67
South Carolina	57	50	64
South Dakota	67	57	78
Tennessee	60	53	67
Texas	42	38	46
Utah	49	41	57
Vermont	70	60	80
Virginia	53	46	60
Washington	53	47	60
West Virginia	95	81	100
Wisconsin	62	56	69
Wyoming	59	52	65
United States	50	49	52

TABLE III.4

## PARTICIPATION RATES FOR THE WORKING POOR, WITH CONFIDENCE INTERVALS, 2001

	Participation	90 Percent Confidence Interval	
	Rate	Lower Bound	Upper Bound
Alabama	60	53	67
Alaska	67	57	76
Arizona	40	34	46
Arkansas	59	52	65
California	31	27	34
Colorado	49	43	56
Connecticut	59	49	68
Delaware	52	42	63
District of Columbia	38	28	48
Florida	45	39	50
Georgia	52	46	59
Hawaii	75	64	86
Idaho	50	42	58
Illinois	73	66	80
Indiana	77	68	87
Iowa	55	49	62
Kansas	52	46	57
Kentucky	83	73	94
Louisiana	82	74	91
Maine	89	78	100
Maryland	49	40	57
Massachusetts	30	25	36
Michigan	83	75	92
Minnesota	63	54	72
Mississippi	58	49	67
Missouri	86	73	99
Montana	60	52	68
Nebraska	58	49	67
Nevada	27	22	31
New Hampshire	51	42	59
New Jersey	39	33	44
New Mexico	59	52	66
New York	42	37	47
North Carolina	51	46	56
North Dakota	72	61	82
Ohio	65	59	72
Oklahoma	63	56	71
Oregon	84	74	95
Pennsylvania	75	66	85
Rhode Island	59	49	69
South Carolina	64	56	73
South Dakota	74	63	84
Tennessee	69	61	77
Texas	45	42	48
Utah	53	45	61
Vermont	73	63	82
Virginia	58	50	66
Washington	57	52	63
West Virginia	100	87	100
Wisconsin	70	62	78
Wyoming	65	56	73
United States	54	52	55



TABLE III.5

## PARTICIPATION RATES FOR ALL ELIGIBLE PEOPLE, 1999-2001

	1999	2000	2001
Alabama	64	60	60
Alaska	71	73	72
Arizona	49	48	51
Arkansas	68	61	62
California	54	57	54
Colorado	54	52	52
Connecticut	66	68	67
Delaware	60	55	55
District of Columbia	93	87	77
Florida	55	52	48
Georgia	60	55	53
Hawaii	90	94	85
Idaho	48	50	48
Illinois	71	71	73
Indiana	64	67	71
Iowa	60	61	61
Kansas	48	54	55
Kentucky	77	78	77
Louisiana	76	70	73
Maine	84	82	81
Maryland	60	57	55
Massachusetts	43	45	45
Michigan	78	77	76
Minnesota	63	65	63
Mississippi	63	54	57
Missouri	73	77	79
Montana	60	60	61
Nebraska	64	63	61
Nevada	39	43	46
New Hampshire	51	57	55
New Jersey	54	54	50
New Mexico	72	59	62
New York	61	62	58
North Carolina	53	49	51
North Dakota	53	54	63
Ohio	60	62	63
Oklahoma	66	60	61
Oregon	70	77	84
Pennsylvania	73	72	69
Rhode Island	67	69	67
South Carolina	64	59	61
South Dakota	63	63	65
Tennessee	74	68	69
Texas	50	47	49
Utah	57	56	54
Vermont	78	77	72
Virginia	58	58	58
Washington	60	64	64
West Virginia	100	96	89
Wisconsin	54	61	64
Wyoming	56	56	58
United States	61	60	60

TABLE III.6

DIFFERENCES BETWEEN PARTICIPATION RATES FOR THE WORKING POOR AND  
ALL ELIGIBLE PEOPLE, WITH CONFIDENCE INTERVALS, 1999  
(Rate for Working Poor - Rate for All Eligible People)

	Difference	90 Percent Confidence Interval	
		Lower Bound	Upper Bound
Alabama	-8	-14	-2
Alaska	-16	-24	-8
Arizona	-14	-20	-9
Arkansas	-12	-19	-5
California	-28	-31	-24
Colorado	-7	-13	-2
Connecticut	-16	-24	-9
Delaware	-8	-16	-1
District of Columbia	-56	-67	-45
Florida	-10	-15	-5
Georgia	-7	-12	-2
Hawaii	-26	-35	-17
Idaho	-2	-9	4
Illinois	-10	-16	-4
Indiana	-2	-9	5
Iowa	-10	-16	-4
Kansas	-7	-12	-2
Kentucky	-6	-14	2
Louisiana	-4	-11	4
Maine	-6	-15	3
Maryland	-12	-19	-5
Massachusetts	-19	-23	-14
Michigan	-4	-10	3
Minnesota	-6	-13	2
Mississippi	-6	-14	2
Missouri	-4	-13	5
Montana	-8	-15	-1
Nebraska	-10	-17	-3
Nevada	-18	-23	-14
New Hampshire	-10	-17	-2
New Jersey	-19	-24	-14
New Mexico	-12	-18	-5
New York	-23	-29	-17
North Carolina	-6	-11	-1
North Dakota	2	-7	10
Ohio	-7	-12	-2
Oklahoma	-4	-10	1
Oregon	-10	-17	-3
Pennsylvania	-3	-11	4
Rhode Island	-17	-25	-9
South Carolina	-4	-11	3
South Dakota	2	-6	9
Tennessee	-12	-19	-6
Texas	-8	-12	-5
Utah	-8	-15	-1
Vermont	-11	-19	-2
Virginia	-7	-13	-1
Washington	-13	-19	-7
West Virginia	-4	-16	8
Wisconsin	-1	-7	6
Wyoming	1	-5	7
United States	-13	-15	-12

TABLE III.7

DIFFERENCES BETWEEN PARTICIPATION RATES FOR THE WORKING POOR AND  
ALL ELIGIBLE PEOPLE, WITH CONFIDENCE INTERVALS, 2000  
(Rate for Working Poor - Rate for All Eligible People)

	Difference	90 Percent Confidence Interval	
		Lower Bound	Upper Bound
Alabama	-6	-12	0
Alaska	-11	-18	-3
Arizona	-15	-19	-11
Arkansas	-8	-14	-2
California	-24	-27	-20
Colorado	-6	-11	-1
Connecticut	-14	-21	-7
Delaware	-7	-15	0
District of Columbia	-40	-49	-32
Florida	-7	-12	-2
Georgia	-3	-8	3
Hawaii	-16	-26	-6
Idaho	-2	-8	4
Illinois	-7	-13	-1
Indiana	-1	-8	6
Iowa	-12	-17	-6
Kansas	-7	-13	-1
Kentucky	-2	-10	6
Louisiana	3	-4	10
Maine	-1	-10	7
Maryland	-11	-17	-4
Massachusetts	-16	-21	-11
Michigan	-2	-9	5
Minnesota	-6	-13	0
Mississippi	-4	-11	3
Missouri	-1	-11	8
Montana	-5	-12	3
Nebraska	-8	-14	-1
Nevada	-17	-22	-12
New Hampshire	-9	-17	-2
New Jersey	-18	-23	-14
New Mexico	-15	-20	-9
New York	-16	-21	-11
North Carolina	-5	-9	0
North Dakota	5	-3	13
Ohio	-5	-10	-1
Oklahoma	-2	-7	3
Oregon	-7	-14	1
Pennsylvania	-1	-8	7
Rhode Island	-11	-19	-4
South Carolina	-3	-8	3
South Dakota	4	-4	12
Tennessee	-8	-14	-3
Texas	-4	-7	-1
Utah	-7	-13	0
Vermont	-8	-16	1
Virginia	-5	-11	1
Washington	-10	-16	-5
West Virginia	-1	-12	10
Wisconsin	1	-4	7
Wyoming	3	-3	8
United States	-10	-11	-8

TABLE III.8

DIFFERENCES BETWEEN PARTICIPATION RATES FOR THE WORKING POOR AND  
ALL ELIGIBLE PEOPLE, WITH CONFIDENCE INTERVALS, 2001  
(Rate for Working Poor - Rate for All Eligible People)

	Difference	90 Percent Confidence Interval	
		Lower Bound	Upper Bound
Alabama	0	-6	5
Alaska	-5	-13	2
Arizona	-11	-16	-6
Arkansas	-3	-8	2
California	-23	-27	-19
Colorado	-3	-8	3
Connecticut	-8	-15	0
Delaware	-3	-11	5
District of Columbia	-39	-49	-30
Florida	-4	-8	1
Georgia	-1	-6	4
Hawaii	-10	-19	-1
Idaho	1	-4	7
Illinois	0	-6	6
Indiana	6	-1	14
Iowa	-5	-11	1
Kansas	-3	-8	2
Kentucky	6	-2	14
Louisiana	9	2	16
Maine	8	-1	17
Maryland	-7	-14	0
Massachusetts	-15	-20	-10
Michigan	7	1	14
Minnesota	0	-7	8
Mississippi	1	-6	8
Missouri	7	-2	17
Montana	-1	-8	6
Nebraska	-3	-10	4
Nevada	-19	-24	-15
New Hampshire	-5	-12	2
New Jersey	-12	-17	-6
New Mexico	-3	-9	3
New York	-16	-20	-11
North Carolina	0	-4	4
North Dakota	9	0	17
Ohio	2	-3	8
Oklahoma	2	-3	8
Oregon	0	-8	8
Pennsylvania	7	-1	14
Rhode Island	-8	-16	0
South Carolina	4	-3	10
South Dakota	8	0	17
Tennessee	0	-6	7
Texas	-3	-7	0
Utah	-1	-8	5
Vermont	0	-8	8
Virginia	0	-7	6
Washington	-6	-11	-1
West Virginia	11	1	21
Wisconsin	6	-1	12
Wyoming	7	0	14
United States	-6	-8	-5

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**APPENDIX A**

**IDENTIFYING HOUSEHOLDS WITH EARNINGS IN THE FSPQC DATA**

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For each household, the FSPQC data provide information that is necessary to calculate the food stamp benefit for the household, including types and amounts of income and types and amounts of deductions from income.<sup>16</sup>

We identified households with earnings as those who had two indicators of earnings in the household, using the following algorithm:

1. Identify at least one person with recorded earned income, AND
  - a. A recorded earned income deduction, or
  - b. Recorded earned and unearned income that sum to the recorded total income, or
  - c. Recorded earned income with the earned income deduction already subtracted and unearned income that sum to the recorded total income (some states subtract the earned income deduction from income deemed by an ineligible member before recording it on the file), or
  - d. At least one person with a recorded workforce participation variable indicating they are employed
  
2. OR, identify the household as having a recorded earned income deduction, AND
  - a. At least one person with recorded earned income, or
  - b. Earnings implied by the recorded earned income deduction and recorded unearned income that sum to the recorded total income, or
  - c. Recorded gross income that is more than the earned income implied by the earned income deduction and both unearned and earned income equal zero (to account for household records that have no recorded individual income amounts but do have what appear to be consistent household-level indicators), or

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<sup>16</sup> Under contract with FNS, Mathematica Policy Research cleans and edits the FSPQC data to ensure that the income amounts provided on the file are consistent with the benefit. Any earnings that were not included in the benefit calculation but were recorded on the file may make the household appear to be ineligible. In the process of editing the file, households whose income cannot be reconciled with the income tests are dropped. Less than five percent of the households on the file were dropped, but these households were slightly more likely to have earnings and they were not equally distributed across States. To avoid bias resulting from dropping these households, we identified working poor households using the unedited data, but use of the unedited data makes it important to check for multiple indicators to compensate for recording errors.

- d. At least one person with a recorded workforce participation variable indicating that they are employed
3. OR, in households with TANF in Connecticut and Indiana (the two states with waivers allowing TANF recipients to have earned income excluded from the benefit calculation), at least one person with a recorded employment status variable indicating they are employed