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Child Poverty during the Great Recession: Predicting State Child Poverty Rates for 2010

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Abstract

The country is slowly emerging from the Great Recession, the longest period of economic downturn since the Great Depression of the 1930s. As unemployment rates have risen, poverty also has risen. More than one in five children were poor in 2009, according to data released by the Census Bureau in September. Poverty statistics for 2010 will not be released until next September. This paper uses current data on nutrition assistance and unemployment, combined with lagged child poverty data, to provide predictions of child poverty, by state, 10 months before the actual statistics will be released. The model predicts that most states will see a rise in child poverty in 2010, with the increase averaging 1.3 percentage points across the states. According to these predictions, half the states (26 states) will have child poverty rates of 20 percent or higher in 2010, almost double the number of states (14) with poverty of 20 percent or higher in the pre-recessionary period of 2000 to 2007. Nationally, the number of poor children is predicted to rise by nearly 1 million, from 14.7 million in 2009 to 15.6 million children in 2010. The national child poverty rate is estimated to increase from 20.0 percent in 2009 to 21.3 percent in 2010. These predictions are subject to uncertainty, but nonetheless provide an early glimpse of how children are continuing to be affected by the Great Recession's lingering effects.

Keywords: child poverty, Great Recession, food assistance programs, unemployment

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INTRODUCTION

The country is slowly emerging from the Great Recession, the longest period of economic downturn since the Great Depression of the 1930s. The national unemployment rate peaked at 10.1 percent in October 2009, several months after the recession was technically over, and unemployment has remained high in the past year. As unemployment rates have risen, poverty also has risen. More than one in five children were poor in 2009, according to data released by the Census Bureau in September.

How much higher will child poverty be in 2010, a year when the national unemployment rate has averaged 9.7 percent thus far (January to September)? And what will child poverty be in the various states, which had unemployment rates varying from 3.8 percent in North Dakota to 13.7 percent in Michigan during the first nine months of this year?

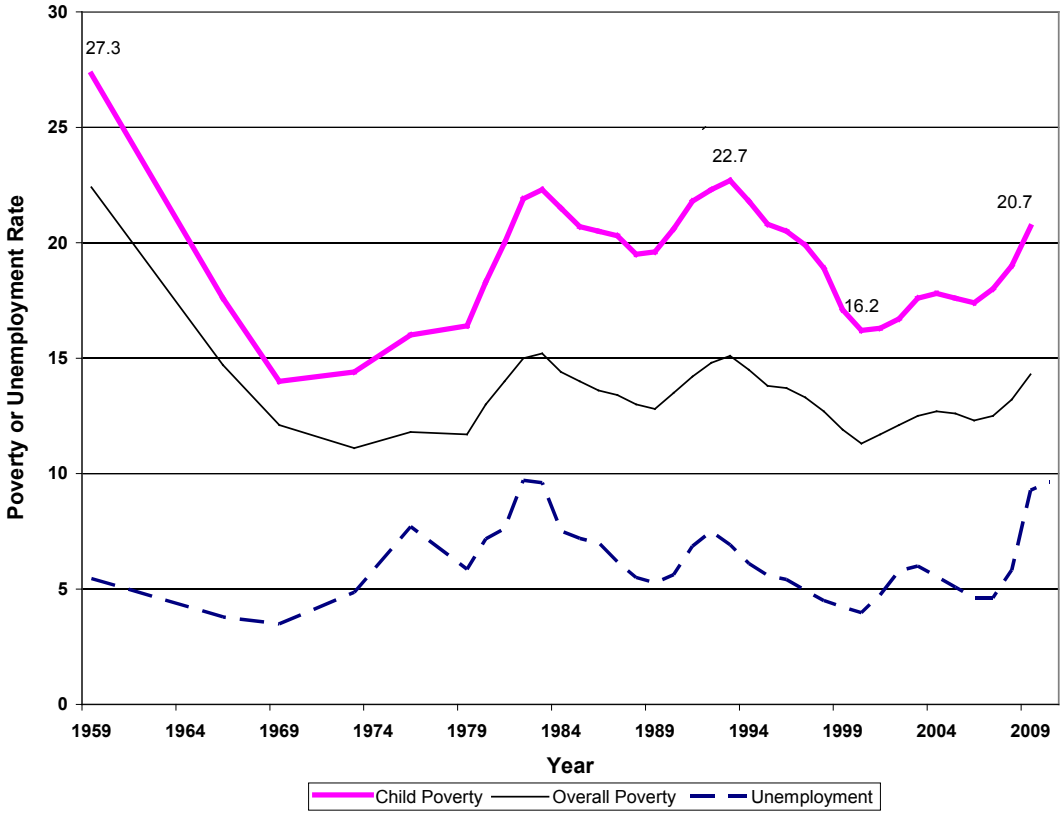
Poverty statistics for 2010 will not be calculated and released until next September, but many policymakers and child advocates would like to have a sense of the child poverty rate now. Moreover, they would like to know it not just nationally but also for their own state. This issue brief attempts to meet this need by providing predictions of child poverty, by state, 10 months before the actual statistics will be released.

The paper begins by examining the initial effects of the Great Recession on child poverty thus far, as evident in a comparison of child poverty in 2009 with child poverty in a pre-recessionary period, defined as 2000 to 2007. A second section describes a new model that predicts child poverty based on state unemployment rates, lagged child poverty, and the percentage of the state population that uses Supplemental Nutrition Assistance Program benefits (SNAP benefits, formerly food stamps). The brief concludes with predictions for child poverty in 2010, by state.

CHILD POVERTY: HISTORIC AND RECENT DATA

Poverty rates—for children and for all individuals—have tended to increase during times of higher unemployment, as shown in Figure 1. Moreover, child poverty has been persistently higher than overall poverty over the past decades, with the gap growing, rather than shrinking. As a nation we have been successful in bringing down elderly poverty rates (from 35.0 percent in 1959 to a low of 8.9 percent in 2009), but we have not been as successful in reducing economic hardship among children, another vulnerable group. The persistence of high levels of child poverty is of particular concern because of evidence that poverty during childhood has lingering negative effects on an individual's life chances, particularly when poverty is experienced during early childhood, when poverty lasts for several years of childhood, or both.

Figure 1: Overall and Child Poverty Rates, 1959–2009



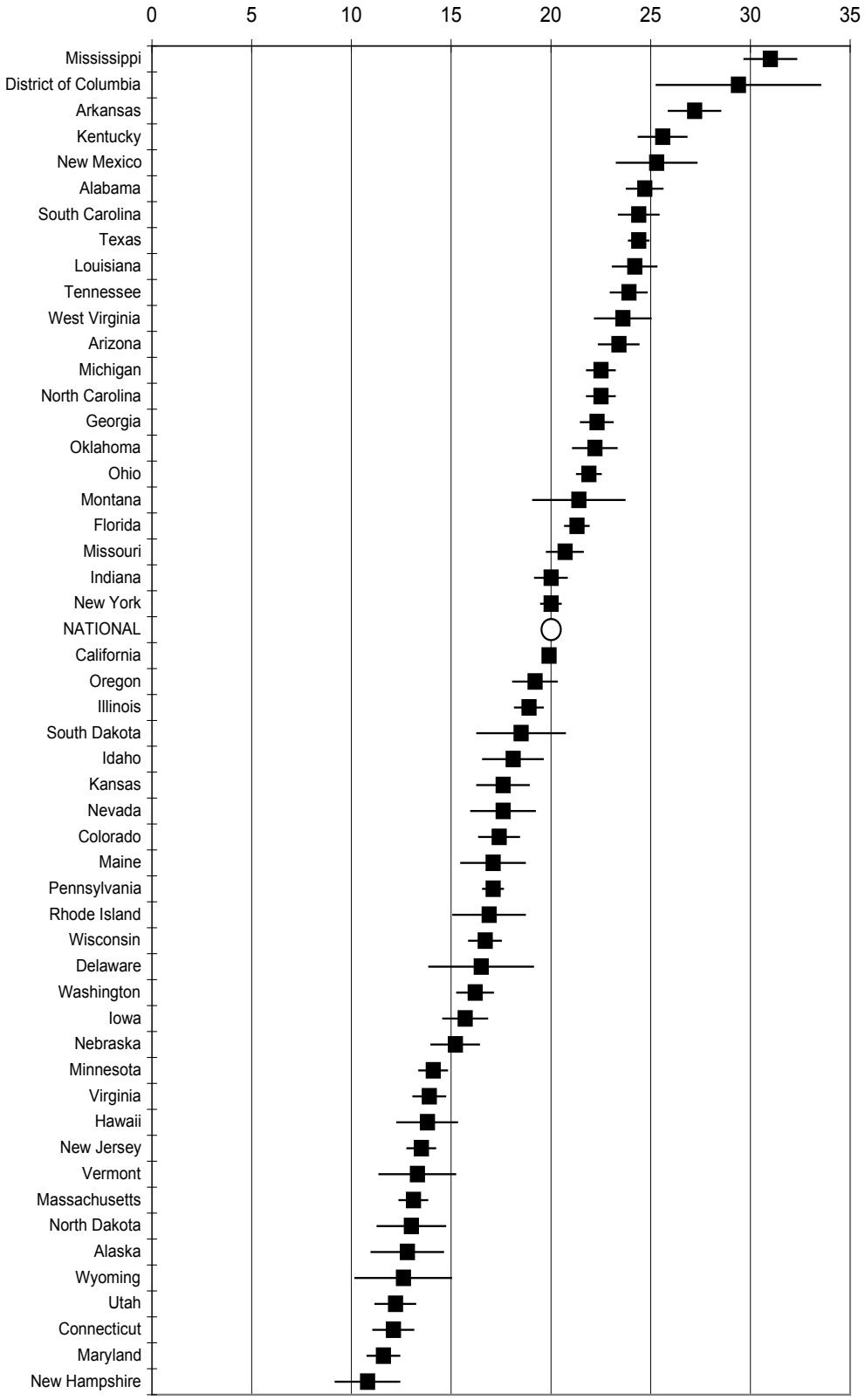
Source: U.S. Census Bureau and Bureau of Labor Statistics.

As shown in Figure 1, one in five children (20.7 percent) were poor in 2009, a considerable increase from 16.2 percent poor in 2000, though not as high as the most recent previous peak of 22.7 percent in 1993. These national poverty statistics are based on data from the long-running annual supplement to the Current Population Survey (CPS). State-level poverty statistics, which are drawn from the newer and larger American Community Survey (ACS), show a large variation in child poverty across the states, ranging from 31.0 percent in Mississippi to 10.8 percent in New Hampshire in 2009 (see Figure 2). That is, nearly three in ten children in Mississippi, compared to about one in ten children in New Hampshire, lived in families with annual cash incomes below the national poverty thresholds, which were about $17,000 for a family of three and $22,000 for a family of four in 2009.

Child poverty rates in most states were higher in 2009 than in earlier years, reflecting the initial impact of the recession. Prior to the recession, 14 states or jurisdictions experienced high rates of child poverty, defined in this analysis as rates of 20 percent or higher, or at least one child in five being poor. These 14 states or jurisdictions with high child poverty during 2000 to 2007 are clustered in the southern and southwestern regions of the country: Alabama, Arizona, Arkansas, Kentucky, Louisiana, Mississippi, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and West Virginia, and the District of Columbia (which is hereafter referred to as a state). In 2009, the number of states with high levels of child poverty swelled to 22 states, including the original 14 states plus a geographically diverse set of eight additional states: Georgia, Florida, Indiana, Michigan, Missouri, Montana, New York, and Ohio (see Map 1).

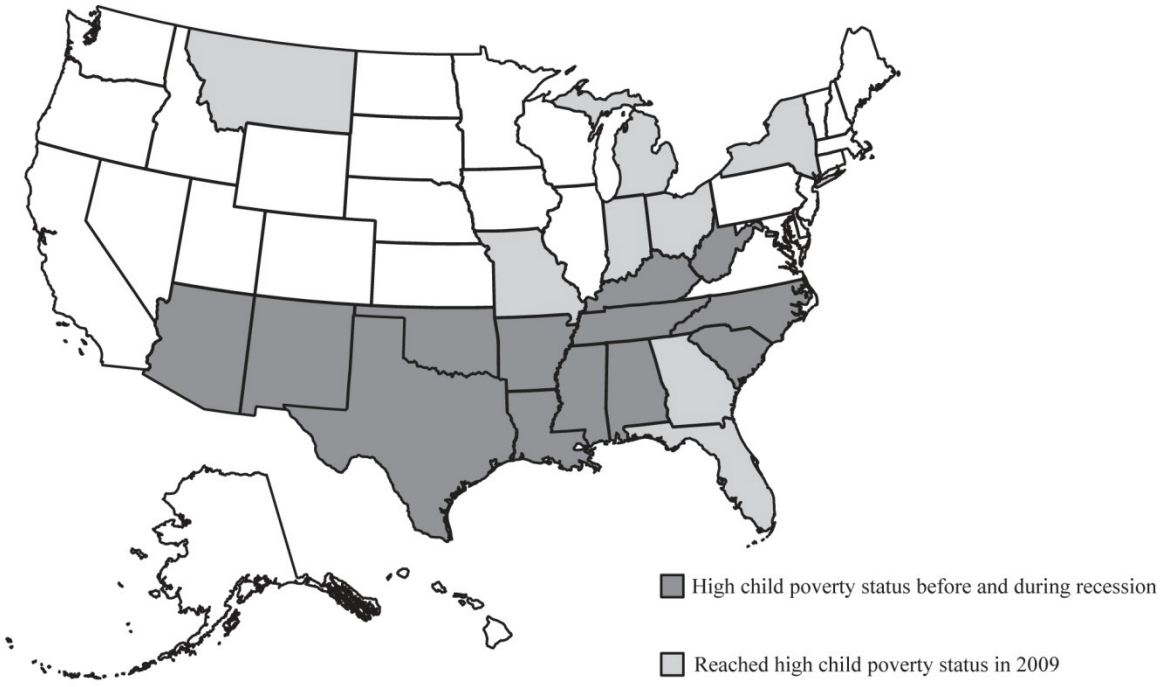
The highest increases were in Michigan, Indiana, and Ohio, where child poverty in 2009 was 4 to 6 percentage points above the average levels for 2000 to 2007 (see Table 1). Not every state experienced an increase in poverty rates: child poverty dropped in one state (Louisiana) and moved so modestly in 14 states that the changes upward (10 states) or downward (four states) were not large enough to exceed the margin of error around the 2009 estimate. More than two-thirds of the states, however, had markedly

Figure 2. Child Poverty Rates in 2009: Point Estimates and 90 Percent Confidence Intervals



Source: U.S. Census Bureau, 2009 American Community Survey, Table GCT1704. Confidence intervals are shown at the 90 percent confidence level.

Map 1: Child Poverty Before and During the Great Recession



Note: High child poverty status is defined as having a child poverty rate >= 20 percent. Poverty before the recession is measured over the 2000-2007 period.

higher poverty rates in 2009 than during the pre-recessionary period (36 states, as denoted by the asterisks in Table 1).[1] The lack of noticeable increase in the other states reflects data limitations, as noted below.

Methodological Notes

The state-level poverty estimates in Figure 2 and Table 1 are presented as point estimates surrounded by a margin of error, drawing attention to the lower levels of precision for estimates in less-populated states. For about two-thirds of the states (35 states), the margin of error is between 0.5 and 1.5 percentage points. For example, child poverty in Colorado is estimated as 17.4 percent plus or minus a margin of error of 1.0 percent at the 90 percent confidence level. This means that one can state with 90

[1]A stricter test of statistical significance would look beyond the margin of error around the 2009 estimate to also take into account the margin of error around the eight-year average base period. However, this simple comparison gives a rough sense of which increases are large for a given state.

Table 1. Child Poverty Rates Before and During the Recession

State	Poverty Rate in 2000–2007	Poverty Rate in 2009 With Margin of Error			Change in Poverty Rate	
Alabama	**23.3%**	**24.7%**	+/-	1.1%	**1.4%**	*
Alaska	**12.3**	**12.8**	+/-	1.7	**0.5**	
Arizona	**20.6**	**23.4**	+/-	0.9	**2.8**	*
Arkansas	**24.1**	**27.2**	+/-	1.3	**3.1**	*
California	**18.6**	**19.9**	+/-	0.4	**1.3**	*
Colorado	**13.6**	**17.4**	+/-	1.0	**3.8**	*
Connecticut	**10.9**	**12.1**	+/-	1.0	**1.2**	*
Delaware	**13.5**	**16.5**	+/-	1.8	**3.0**	*
District of Columbia	**30.9**	**29.4**	+/-	3.8	**-1.5**	
Florida	**18.0**	**21.3**	+/-	0.5	**3.3**	*
Georgia	**19.0**	**22.3**	+/-	0.7	**3.3**	*
Hawaii	**13.0**	**13.8**	+/-	1.5	**0.8**	
Idaho	**16.4**	**18.1**	+/-	1.5	**1.7**	*
Illinois	**16.2**	**18.9**	+/-	0.5	**2.7**	*
Indiana	**15.3**	**20.0**	+/-	0.9	**4.8**	*
Iowa	**13.2**	**15.7**	+/-	1.0	**2.5**	*
Kansas	**14.1**	**17.6**	+/-	1.0	**3.5**	*
Kentucky	**22.4**	**25.6**	+/-	1.0	**3.2**	*
Louisiana	**28.1**	**24.2**	+/-	1.0	**-3.9**	
Maine	**15.0**	**17.1**	+/-	1.6	**2.2**	*
Maryland	**11.0**	**11.6**	+/-	0.7	**0.6**	
Massachusetts	**12.7**	**13.1**	+/-	0.6	**0.4**	
Michigan	**16.7**	**22.5**	+/-	0.6	**5.8**	*
Minnesota	**10.9**	**14.1**	+/-	0.6	**3.2**	*
Mississippi	**28.8**	**31.0**	+/-	1.6	**2.2**	*
Missouri	**17.0**	**20.7**	+/-	0.8	**3.7**	*
Montana	**18.7**	**21.4**	+/-	2.2	**2.7**	*
Nebraska	**13.4**	**15.2**	+/-	1.1	**1.8**	*
Nevada	**15.4**	**17.6**	+/-	1.4	**2.3**	*
New Hampshire	**8.4**	**10.8**	+/-	1.3	**2.4**	*
New Jersey	**11.3**	**13.5**	+/-	0.6	**2.2**	*
New Mexico	**26.0**	**25.3**	+/-	1.7	**-0.7**	
New York	**19.6**	**20.0**	+/-	0.4	**0.4**	
North Carolina	**20.1**	**22.5**	+/-	0.8	**2.4**	*
North Dakota	**14.0**	**13.0**	+/-	2.0	**-1.0**	
Ohio	**17.5**	**21.9**	+/-	0.6	**4.4**	*
Oklahoma	**21.7**	**22.2**	+/-	1.2	**0.5**	
Oregon	**17.7**	**19.2**	+/-	1.2	**1.5**	*
Pennsylvania	**16.1**	**17.1**	+/-	0.5	**1.1**	*
Rhode Island	**17.3**	**16.9**	+/-	1.6	**-0.4**	
South Carolina	**20.8**	**24.4**	+/-	1.0	**3.7**	*
South Dakota	**15.4**	**18.5**	+/-	2.1	**3.1**	*
Tennessee	**21.0**	**23.9**	+/-	1.0	**2.9**	*
Texas	**22.7**	**24.4**	+/-	0.5	**1.7**	*
Utah	**11.5**	**12.2**	+/-	0.8	**0.7**	
Vermont	**12.7**	**13.3**	+/-	2.2	**0.6**	
Virginia	**12.7**	**13.9**	+/-	0.7	**1.2**	*
Washington	**15.3**	**16.2**	+/-	0.8	**0.9**	*
West Virginia	**24.8**	**23.6**	+/-	1.7	**-1.2**	
Wisconsin	**13.9**	**16.7**	+/-	0.7	**2.8**	*
Wyoming	**12.9**	**12.6**	+/-	2.2	**-0.3**	
U.S. Total	**17.8**	**20.0**	+/-	0.2	**2.2**	*

Source: U.S. Census Bureau, 2009 American Community Survey, Table 1704, and earlier years of ACS. The margin of error is shown at the 90 percent confidence interval. * The increase is larger than margin of error.

percent confidence that the child poverty rate for the underlying population (not just the sample interviewed in the survey) lies somewhere between 16.4 percent and 18.4 percent.

One very large state—California—has a smaller margin of error (0.3 percentage points), while the remaining 15 states have a margin of error of 1.5 percentage points or more. These include the District of Columbia with a 4.1 percentage point margin of error, and 14 states with margins of error between 1.5 and 2.6 percentage points. In practical terms, this means that smaller states can see changes in reported poverty rates of as much as 2 percentage points without any real change in the underlying poverty rates. It also means that any predictions for less-populated states will be at best midpoint estimates in a range of plus or minus 2 to 3 percentage points.

The margins of error would be even larger with CPS data, which surveys 70,000 rather than close to 3 million households, and thus the ACS is the clear choice for state-level poverty estimates. However, the ACS does have two drawbacks relative to the CPS. First, the ACS data do not extend back further than 2000, and so the historical time series is limited and does not include previous recessions other than the small recession of 2001.[2] On the other hand, this short time series is available for 51 different states, allowing the relationship between poverty and economic activity to be observed repeatedly. Second, the ACS data are not as current as the CPS data. What are commonly referred to as the "2009 ACS data" are data collected between January and December 2009, but because families are asked about income over the previous 12 months, the data are a reflection of economic conditions between January 2008 and November 2009, a 23-month time period that is roughly an average of conditions in 2008 and 2009, not simply calendar year 2009.[3] This lagged time frame—combined with deteriorating economic conditions in 2009 compared to 2008—may help explain why the ACS data show a slightly lower national estimate of child poverty in 2009 than the CPS data (20.0 percent vs. 20.7 percent). While I will follow convention

[2]The "ACS" data for 2000 to 2004 are actually from its precursor. Even so, the ACS provides a better source for trend data on state-level child poverty estimates from 2000 to 2009 than the alternatives.

[3]The period ranges from January 2008 to November 2009 because families interviewed in January 2009 report on income between January and December 2008, families interviewed in February report on income between February 2008 and January 2009, and so on, with families interviewed in December 2009 reporting on income between December 2008 and November 2009.

and refer to "2009 data" and "2010 predictions," the 2009 data are actually for 2008 to 2009 and my predictions are actually for the 2009 to 2010 period.

As a final measurement note, this paper follows official poverty measures and bases poverty on a family's cash income, without making adjustments for tax credits, non-cash benefits, medical expenses, work expenses, or geographic differences in the cost of living, as is increasingly being done in poverty research. While cash-based measures are less comprehensive than alternate poverty measures, they provide a useful poverty statistic, particularly for trends over time. Many of the cross-state differences in the official poverty statistics outlined below, however, would look quite different under an alternative measure that adjusted for geographic differences in the cost of living.

MODELING THE RELATIONSHIP BETWEEN CHILD POVERTY AND ECONOMIC CONDITIONS

The predictions of child poverty presented in this brief are based on a model of the historical relationship between state child poverty rates and economic conditions, combined with economic indicators measured partway through 2010. The model uses three state-specific and time-varying measures of economic need—unemployment rates, lagged child poverty, and the percentage of population receiving Supplemental Nutrition Assistance Program (SNAP) benefits. Each of these three economic indicators is discussed below, followed by a description of how these variables affect child poverty in the full model, which is estimated across a pooled-time series dataset covering the 51 states from 2001 to 2009.

Unemployment Rates

As already shown in Figure 1, child poverty tends to be higher when unemployment rates are high. A number of economists have analyzed this relationship; in a recent example, Rebecca Blank analyzed national poverty rates from 1959 to 2007, finding that unemployment rates had a significant impact on overall poverty as well as poverty for specific demographic groups. Unemployment rates had a

particularly strong impact on child poverty rates, with each 1 percentage point change in the unemployment rate being associated with a 0.39 percentage point change in the child poverty rate.[4]

Lagged Child Poverty

Child poverty in the previous year also is a common and good predictor of child poverty in the current year. This makes sense: a state economy that has many factory closings, depressed rural areas, or deteriorating inner cities in one year is unlikely to see a dramatic economic turnaround in the next. And even if there were such a turnaround, the demographic factors that contribute to a state's high or low child poverty rate will move more slowly than the economic factors. States with higher numbers of single-parent families, Hispanic, or African American families, and/or low-skilled workers are likely to have higher child poverty rates, regardless of the overall level of economic activity.

Supplemental Nutrition Assistance Program (SNAP)

This model differs from others in using a new indicator of economic conditions among low-income families, namely, enrollment in food stamps, or to use the modern term, SNAP benefits. The specific indicator is the percentage of the population in each state that is receiving SNAP benefits, calculated as the monthly number of participants (averaged over January to June and adjusted to remove recipients of disaster assistance), divided by the estimated population. The model uses SNAP benefits in the first six months of the year because such data are available in early fall 2010 for use in predicting child poverty in 2010. In addition to its timely availability, several other factors make SNAP data a good predictor of child poverty rates.

[4]R. M. Blank, "Economic Change and the Structure of Opportunity for Less-Skilled Workers," in *Changing Poverty, Changing Policies*, eds. M. Cancian and Sheldon H. Danziger (New York: Russell Sage Foundation, 2009). Blank's analysis included several other measures of economic conditions, and each of them had a significant association with poverty, including unemployment rates, lagged poverty, wage inequality (the log of the 50/10 ratio), inflation (Consumer Price Index), and the level of the poverty line relative to median income. She did not find a significant effect for the size of spending on public assistance, the one policy variable included in the analysis.

The vast majority of SNAP recipients are poor: 86 percent of SNAP recipients have gross monthly incomes below the poverty guidelines and the incomes of the remaining 14 percent are not much higher.[5] Moreover, SNAP provides assistance to a broad proportion of the low-income population. Two-thirds of eligible low-income individuals do indeed sign up for and receive benefits. Moreover, uptake is particularly high among families with children: the participation rate was recently estimated as 94 percent among poor families with children.[6] As a result of this high uptake, combined with the high rates of poverty among families with children, almost half (48 percent) of all SNAP participants are children.[7]

The main challenge to using SNAP participant data to track economic need is that caseloads can increase or decrease due to changes in federal laws and states' administrative practices.[8] This challenge would preclude using SNAP caseload data if the analysis extended back into the 1970s, 1980s, and 1990s, when there were major policy changes in the Food Stamp Program. However, even in the past decade, there have been some policy changes that have led to increases in the SNAP caseload, independent of changes due to economic conditions. One such expansion was the restoration of eligibility for certain immigrants in the 2002 Farm Bill; this change was estimated to increase caseloads by 385,000 persons or an estimated 1 percent to 2 percent by 2006, when fully phased in.[9] The 2002 Farm Bill also allowed states to implement broad-based categorical eligibility policies, thereby exempting households from asset limits, and in some states, also raising income eligibility tests. A recent analysis suggests that 340,000 participants who were eligible under the broad-based categorical eligibility would have failed traditional

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[5]All but 3 percent have gross monthly incomes below 130 percent of poverty. J. Leftin, A. Gothro, and E. Eslami, *Characteristics of Supplemental Nutrition Assistance Program Households: Fiscal Year 2009*, Table A-3, Food and Nutrition Service, U.S. Department of Agriculture, Alexandria, VA, 2010. Available at http://www.fns.usda.gov/ora/menu/Published/snap/FILES/Participation/2009Characteristics.pdf.

[6]J. Leftin, *Trends in Supplemental Nutrition Assistance Program Participation Rates: 2000 to 2008,* Table B-5A, Food and Nutrition Service, U.S. Department of Agriculture, Alexandria, VA, 2010.

[7]Leftin et al., *Trends in SNAP Participation Rates*, Table A-23. The percentage of children was slightly higher (49 percent) in 2006 to 2008.

[8]In addition, caseloads can show temporary spikes when individuals are given SNAP benefits as disaster assistance following a hurricane, tornado, or other disaster; I have addressed this issue by removing recipients of disaster assistance from SNAP participant counts in my analysis.

[9]Congressional Budget Office, *Pay-As-You-Go Cost Estimate of H.R. 2642, Farm Security and Rural Investment Act of 2002*, May 22, 2002, p. 11. Available at http://www.cbo.gov/ftpdocs/34xx/doc3468/hr2646omb.pdf (downloaded 10/20/2010).

income limits; these 340,000 participants represented 1.2 percent of average monthly participants in 2008.[10]

In addition to these specific policy changes, there has been a shift in states' administrative practices over the past decade, including more outreach, streamlined application processes, and simplified program rules and reporting in order to encourage more eligible individuals to sign up for benefits. Such efforts appear to have had an effect: participation or take-up rates among eligible individuals have increased from about 55 percent in 2000 to 2002 to about 66 percent to 67 percent between 2006 and 2008, which is equivalent to a 21 percent increase in the number of people receiving benefits over the past several years.[11] In other words, the general increase in participation among eligible individuals was considerably larger than any of the specific eligibility expansions made in the past decade.

Even against this backdrop of growth related to policy and administrative practice, the response of the SNAP caseload to the recession has been dramatic. Between June 2007 and June 2010, the number of people receiving nutrition assistance benefits increased by 54 percent, or 13.9 million people, as monthly caseloads averaged over the first six months of the year skyrocketed from 26.2 million to 40.3 million participants. This extraordinary increase means that roughly 6.6 million more children were receiving SNAP benefits in spring 2010 than three years earlier. Most of these 6.6 million children are poor, and thus tracking SNAP recipients can be a good way to predict child poverty.

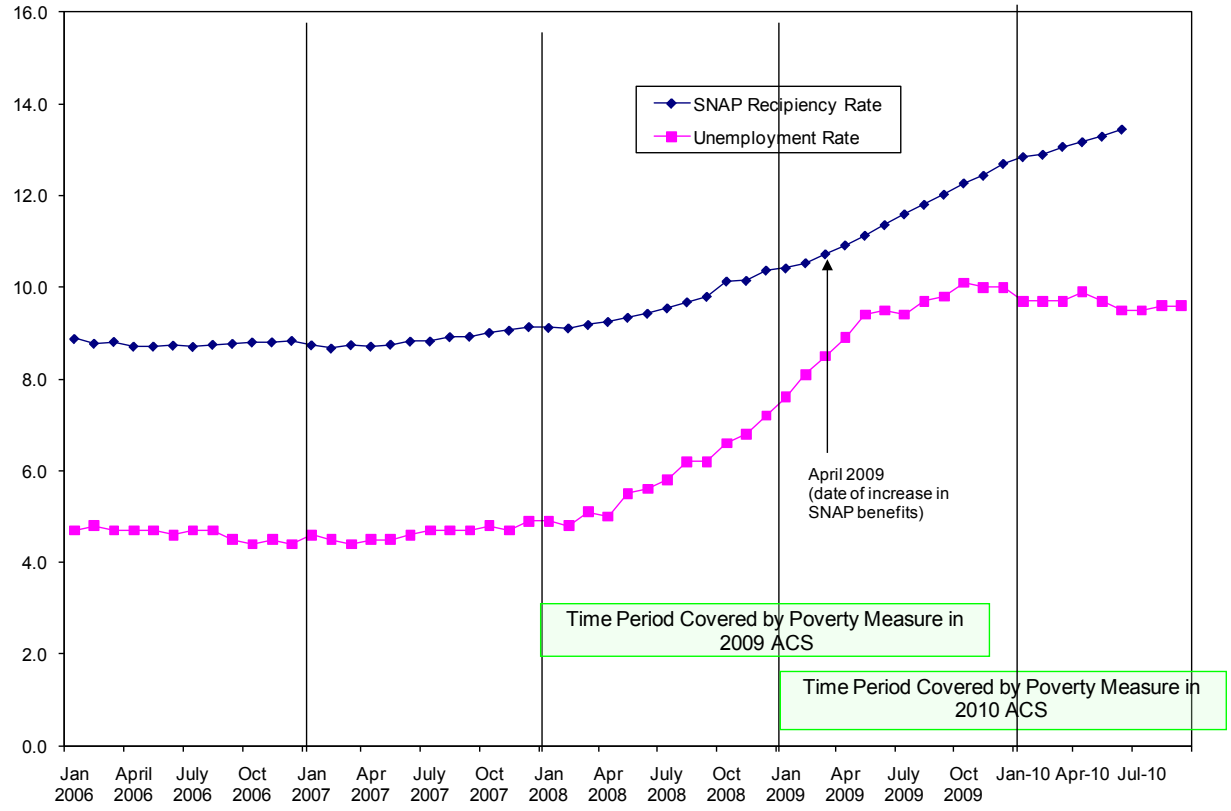
While most of the dramatic caseload growth from 2007 to 2010 represents deteriorating economic conditions, it is important to note an important policy change that took place on April 1, 2009. Under the American Recovery and Reinvestment Act (ARRA) of 2009, maximum benefits increased by 13.6 percent, resulting in a jump in average nutrition benefits from $252 per household in March 2009 to $295

[10]Leftin et al., *Trends in SNAP Participation Rates*, Appendix D., p. 57. A large number of states have implemented some type of broad-based categorical eligibility, theoretically allowing many families at higher income levels to participate, but the number of families who in fact do so is restricted by national rules that reduce benefit amounts as income rises, bringing potential benefits to zero for most families at higher income levels.

[11]Author's analysis of data provided in Leftin et al., *Trends in SNAP Participation Rates*.

per household in April 2009. The average per person benefit increased as well, from $114 to $133.[12] Such an increase could motivate some people who had not previously applied for benefits to submit an application, further increasing uptake of benefits. However, as shown in Figure 3, there was no noticeable jump in recipient counts in April 2009. Instead, there has been a steady increase in participation over time, suggesting that most of the observed increase is driven by economic need, not by increased size or attractiveness of the nutrition benefit or other policy changes.[13]

Figure 3. Measures of Economic Need, 2006–2010



Sources: U.S. Bureau of Labor Statistics and SNAP National Data Bank Version 8.2 Public Use.

Note: Unemployment data are seasonally adjusted and SNAP data have been adjusted to remove disaster relief assistance.

[12]Food and Nutrition Service, U.S. Department of Agriculture, *Program Data, Supplemental Nutrition Assistance Program, Monthly Data National Summary* (data as of November 2, 2009). Available at http://www.fns.usda.gov/pd/34SNAPmonthly.htm (downloaded 11/11/09).

[13]Even without a sharp jump in April 2009, the higher benefit may lead to gradually increasing participation over time, as families learn about the higher benefit and come in to apply or get re-certified in the months since April.

To a large extent, predictions of child poverty rely on the relationship between poverty and overall economic conditions. It also is true, however, that there is considerable stability in poverty rates, with some states consistently having high rates over the past decade (e.g., the District of Columbia, Mississippi, Arkansas, Louisiana, New Mexico) and other states consistently having low rates (e.g., New Hampshire, Connecticut, New Jersey, and, in most years, Maryland and Minnesota). Not all of this variation can be explained by economic conditions in these states, and so my model includes a measure of state fixed effects, in order to capture unobserved underlying differences across the states, which might include wage levels in the state, the proportion of female-headed families, the racial and ethnic composition, levels of public support for poor families, and other factors.

The full prediction model is shown in Table 2; the first column shows the basic model and the second column shows the model with state fixed effects to control for unobserved state-specific factors. Under this second version of the model, which is used for the predictions, the child poverty rate goes up by 0.25 percentage points for each 1 percentage point change in the unemployment rate, and by 0.34 percentage points for each 1 percentage point change in the SNAP recipiency rate. The poverty rate in the preceding year also affects poverty in the current year, even after controlling for the underlying characteristics of the state.

PREDICTING CHILD POVERTY IN 2010

The final step is to predict child poverty rates in 2010 based on economic conditions observed thus far; that is, unemployment rates through September 2010, SNAP recipiency rates through June 2010, and child poverty from 2009.[14]

[14]The model is built with SNAP recipiency rates based on data for January through June in every year, thereby avoiding the need to forecast SNAP caseloads for the second half of 2010. (To calculate recipiency rates, I do have to project state populations for 2010; I made the simplifying assumption that every state experiences the same population growth between 2009 and 2010 as the national population growth between 2008 and 2009.) However, the model does use full-year employment rates, even though I only had data through September. For prediction purposes, I made the simplifying assumption that unemployment averaged over January to September 2010 was a good estimate of unemployment for the full calendar year, in every state. While I might not make such an assumption in some years, it seems safe to do so this year, because national projections of unemployment in 2010 are running very close to actual unemployment over the first nine months. Specifically, unemployment for January

Table 2. Regression Estimates of the Effects of Economic Conditions on Child Poverty Rates, 2001–2009

	Dependent Variable: Poverty Rate Among Persons Under 18	
Variable	Model A	Model B
Unemployment Rate	.2859***	.2492***
SNAP Recipiency Rate (January–June)	.1676***	.3376***
Poverty in Previous Year	. 8364***	.2233***
Constant	9.4240***	0.1442
State Fixed Effects	No	Yes
Number of Observations	459	459

*** Significant at 1 percent level.

Before looking at the model output, it is possible to make some basic predictions about child poverty in 2010. The high level of child poverty in many states last year suggests that poverty will remain high in many states next year. Most states are seeing modest increases in unemployment in the past year; nationally, the unemployment rate looks to be slightly higher in 2010 than 2009 (9.7 percent based on nine months of data vs. 9.3 percent). If unemployment were the only predictor of child poverty, one might expect only modest increases in child poverty next year in most states.

However, SNAP recipiency rates are continuing to grow rapidly. Between the first six months of 2009 and the first six months of 2010, the average monthly SNAP caseload grew by an additional 6.7 million or 21 percent, reaching 40.3 million in the first six months of 2010. The percentage of the population receiving nutrition assistance increased from 10.9 percent to 13.0 percent. In other words, more than one in eight Americans are receiving SNAP benefits in 2010, based on data for the first half of the year. Moreover, this increase is occurring across almost all states. With the one exception (Missouri), all states have seen an increase in SNAP recipiency rates of at least 1 percentage point. The continuing increase in SNAP caseloads suggests that child poverty is likely to be on the rise.

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to September 2010 has averaged 9.7 percent; both the Office of Management of Budget and the Economist Intelligence Unit have projected a 9.7 percent unemployment rate for the year as a whole; the Congressional Budget Office has projected a slightly lower rate, 9.5 percent. These estimates were made in July (OMB), August (CBO), and September (EIU), and are reported in E. Monea and I. Sawhill, *An Update to 'Simulating the Effect of the Great Recession on Poverty*,' Washington, DC: Brookings Institution, 2010. Available at http://www.brookings.edu/papers/2010/0916_poverty_monea_sawhill.aspx.

Indeed, the model predicts that most states will see an increase in child poverty rates between 2009 and 2010, with the increase high enough in 30 states to exceed the margin of error for the 2009 estimate (see Table 3). Most of the remaining 21 states will see smaller increases, or in a handful of cases, small decreases, but not in excess of the margins of error for their states. Child poverty is estimated to increase by 1.3 percentage points, on average, ranging from an increase of 4 percentage points in Louisiana to a decrease of 0.5 percentage points in Kansas. Because the decrease is within the range of statistical imprecision around the poverty estimate for Kansas, it may not reflect a true drop in child poverty.

Under these predictions, half the states (26 states) will have child poverty rates of 20 percent or more, including almost all 22 states that currently have such high levels of child poverty, plus California and a few smaller states. This is a dramatic increase from before the recession, when only 14 states had child poverty rates of 20 percent or more. Specific state predictions are shown in Table 3 and state-by-state graphs of child poverty, predicted child poverty, nutrition assistance, and unemployment are provided in the Appendix.

Nationally, the number of poor children is predicted to rise by nearly 1 million, from 14.7 million in 2009 to 15.6 million children in 2010. As a result, the national child poverty rate is estimated to rise to 21.3 percent, a 1.3 percentage point increase above the 20.0 percent rate reported in the 2009 ACS data and 3.5 percentage points above child poverty before the recession (in 2000 to 2007).

What is the range of uncertainty around these predictions? Rounded numbers are shown in Table 3 to highlight the lack of precision. Recall that even if we had the actual ACS survey data from a sample of families in each state, child poverty rates would be estimated with a margin of error of about +/ 1 percentage point in most states, with larger sampling errors of 2 to 3 percentage points in the smaller states. The range of uncertainty is even larger here, where we do not have actual data, but rather predictions from a model.

To test the model's predictive powers, I ran nine different simulations, estimating how well the model would have predicted poverty in each year between 2001 and 2009, assuming the actual poverty

Table 3. Actual 2009 and Predicted 2010 Child Poverty Rates

State	Poverty Rate in 2009 With Margin of Error			Predicted Rate for 2010	
Alabama	**24.7%**	+/-	1.1%	**27%**	*
Alaska	**12.8**	+/-	1.7	**14**	
Arizona	**23.4**	+/-	0.9	**25**	*
Arkansas	**27.2**	+/-	1.3	**27**	
California	**19.9**	+/-	0.4	**21**	*
Colorado	**17.4**	+/-	1.0	**17**	
Connecticut	**12.1**	+/-	1.0	**14**	*
Delaware	**16.5**	+/-	1.8	**18**	
District of Columbia	**29.4**	+/-	3.8	**33**	
Florida	**21.3**	+/-	0.5	**23**	*
Georgia	**22.3**	+/-	0.7	**24**	*
Hawaii	**13.8**	+/-	1.5	**15**	
Idaho	**18.1**	+/-	1.5	**20**	*
Illinois	**18.9**	+/-	0.5	**20**	*
Indiana	**20.0**	+/-	0.9	**20**	
Iowa	**15.7**	+/-	1.0	**16**	
Kansas	**17.6**	+/-	1.0	**17**	
Kentucky	**25.6**	+/-	1.0	**26**	
Louisiana	**24.2**	+/-	1.0	**28**	*
Maine	**17.1**	+/-	1.6	**19**	*
Maryland	**11.6**	+/-	0.7	**13**	*
Massachusetts	**13.1**	+/-	0.6	**15**	*
Michigan	**22.5**	+/-	0.6	**23**	*
Minnesota	**14.1**	+/-	0.6	**14**	
Mississippi	**31.0**	+/-	1.6	**33**	*
Missouri	**20.7**	+/-	0.8	**20**	
Montana	**21.4**	+/-	2.2	**22**	
Nebraska	**15.2**	+/-	1.1	**16**	
Nevada	**17.6**	+/-	1.4	**20**	*
New Hampshire	**10.8**	+/-	1.3	**11**	
New Jersey	**13.5**	+/-	0.6	**14**	
New Mexico	**25.3**	+/-	1.7	**28**	*
New York	**20.0**	+/-	0.4	**22**	*
North Carolina	**22.5**	+/-	0.8	**24**	*
North Dakota	**13.0**	+/-	2.0	**15**	
Ohio	**21.9**	+/-	0.6	**22**	
Oklahoma	**22.2**	+/-	1.2	**24**	*
Oregon	**19.2**	+/-	1.2	**21**	*
Pennsylvania	**17.1**	+/-	0.5	**19**	*
Rhode Island	**16.9**	+/-	1.6	**21**	*
South Carolina	**24.4**	+/-	1.0	**25**	
South Dakota	**18.5**	+/-	2.1	**19**	
Tennessee	**23.9**	+/-	1.0	**25**	*
Texas	**24.4**	+/-	0.5	**26**	*
Utah	**12.2**	+/-	0.8	**14**	*
Vermont	**13.3**	+/-	2.2	**15**	*
Virginia	**13.9**	+/-	0.7	**15**	*
Washington	**16.2**	+/-	0.8	**18**	*
West Virginia	**23.6**	+/-	1.7	**26**	*
Wisconsin	**16.7**	+/-	0.7	**18**	*
Wyoming	**12.6**	+/-	2.2	**14**	
U.S. Total	**20.0**	**+/-**	**0.2**	**21.3**	*

Source: The American Community Survey and the author's estimates.

Notes: Rounded numbers are shown to highlight the lack of precision in these estimates.

* The predicted increase is larger than the margin of error.

rates for that year were unknown.[15] At the state level, the predicted poverty rates were within 2.0 percentage points of the actual poverty rates 87 percent of the time and within 3.0 percentage points of the actual rates 97 percent of the time, with most of the larger discrepancies occurring in the District of Columbia and the smaller states. At the national level, the simulated child poverty rate was generally within 0.5 percentage points of the actual rate—except in 2009, the first year of the recession, when the model overestimated child poverty by 0.7 percentage points.[16]

It is important to acknowledge the uncertainty of predictive models and the lack of precision in child poverty estimates. Nonetheless, there is little doubt that child poverty is on the rise, due to the lingering effects of the Great Recession. So far this year we have seen persistently high rates of unemployment along with continued rapid growth in the number of children and families receiving nutrition assistance. As shown in this paper, high unemployment and receipt of SNAP benefits this year, taken in conjunction with high child poverty last year, signals high numbers of children are living in families with income below the poverty line. Moreover, the increases in unemployment, nutrition assistance, and child poverty are occurring throughout the nation, meaning that public agencies and private charities in every state can expect to see continued increases in the number of children and families seeking assistance in meeting basic needs.

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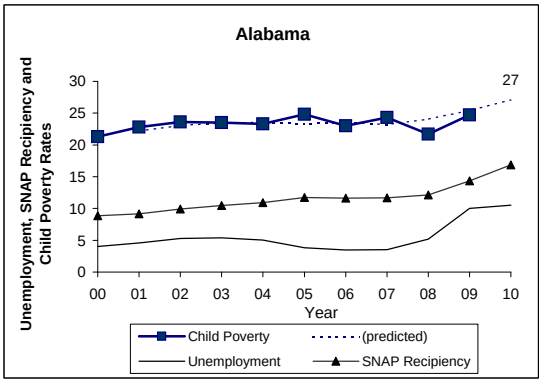
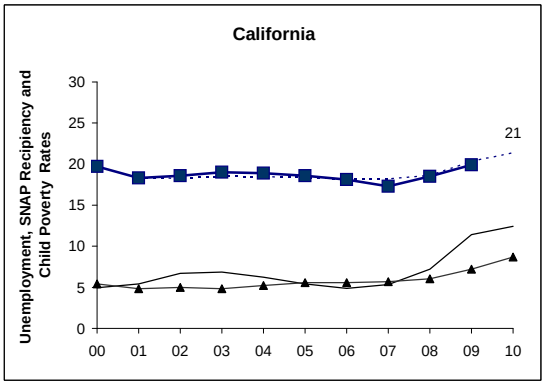
[15]That is, I estimated the model's coefficients nine different times, dropping a different year of data in each analysis, and using the model to estimate child poverty for the year of dropped data. For example, I dropped the 2005 data, ran the model on data from 2001 to 2004 and 2006 to 2009, and then used those coefficients—combined with the dropped data on conditions in 2005—to predict child poverty in 2005, simulating an estimate of poverty in a year "outside" the data used to estimate the model. I thank Mark Nord of the Economic Research Service of the U.S.D.A. for suggesting this method of testing the model and Alexander Gold of the Brookings Institution for doing the nine sets of simulations.

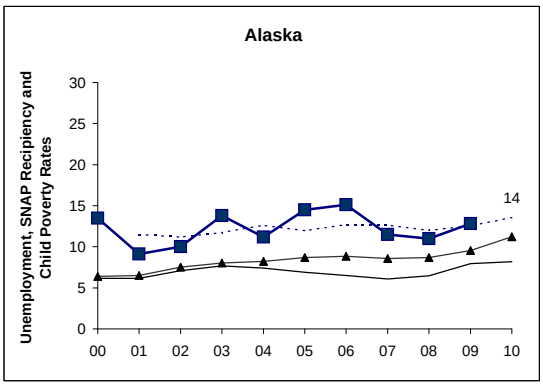
[16]On one hand, one might wonder if the 21.7 percent prediction for 2010 is too high, given the model's overestimate for 2009 (as well as smaller overestimates for 2008 and 2007). On the other hand, my prediction is considerably below results from simulation runs by my Brookings colleagues Emily Monea and Isabel Sawhill, which suggest that child poverty might rise to 22.8 percent in 2010 and 24 percent or higher in future years (see Monea and Sawhill, *An Update to 'Simulating the Effect of the Great Recession on Poverty'*). Taking this into account, one might equally suspect the prediction to be an underestimate as an overestimate. (Note that some of the 1.5-percentage-point difference between Isaacs and Monea/Sawhill may be explained by the difference between the ACS data used in my state-level model and the CPS data used in their national-level model; recall that the 2009 child poverty rates from the two data sources differed by 0.7 percentage points.)

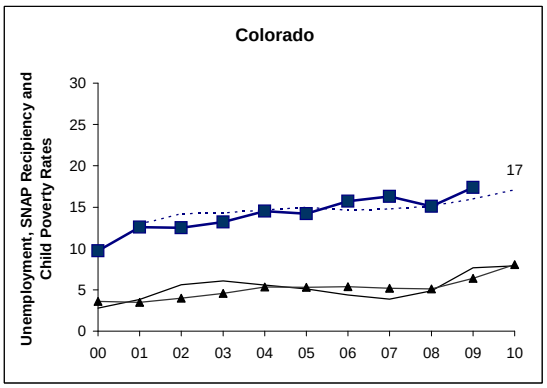
Appendix

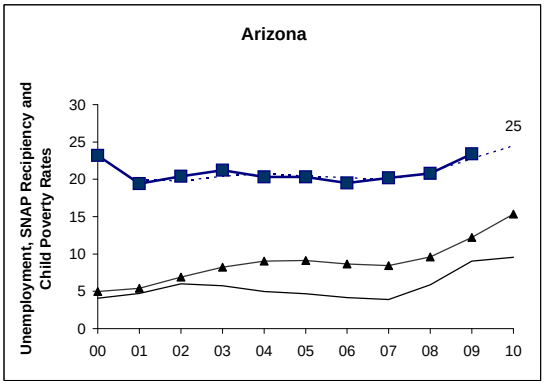
State-by-State Unemployment, SNAP Recipiency, and Actual and Predicted Child Poverty Rates, 2000-2010

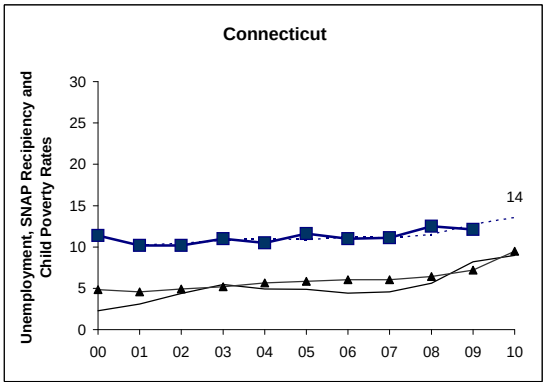


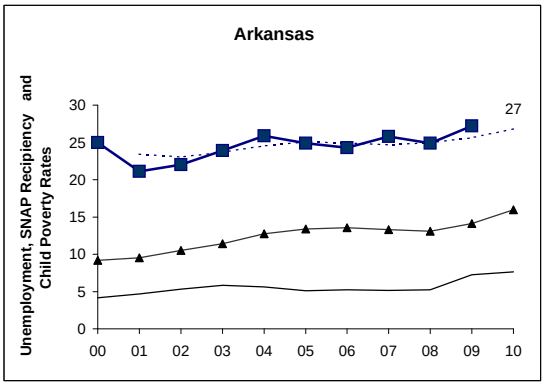


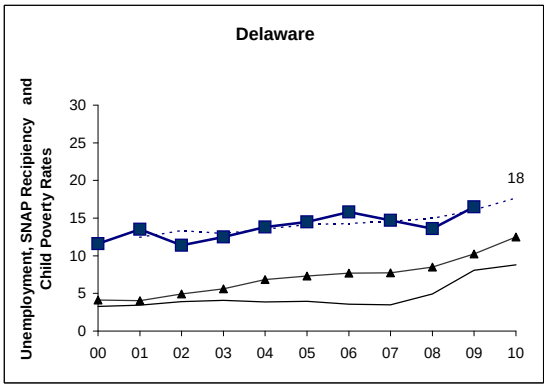


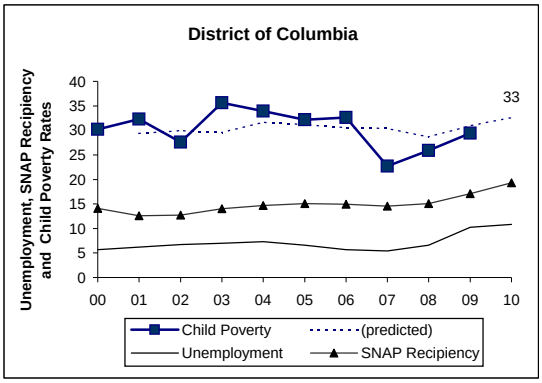


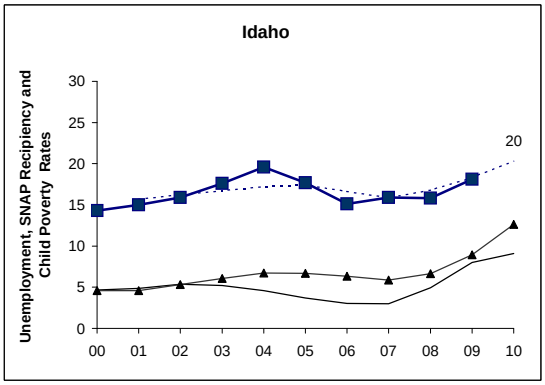









District of Columbia
Unemployment, SNAP Recipiency and Child Poverty Rates
33
Child Poverty
(predicted)
Unemployment
SNAP Recipiency


Idaho
Unemployment, SNAP Recipiency and Child Poverty Rates
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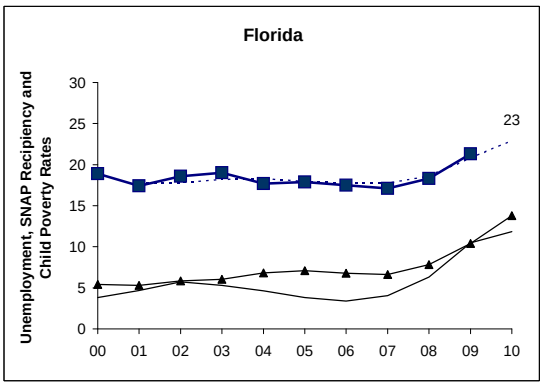
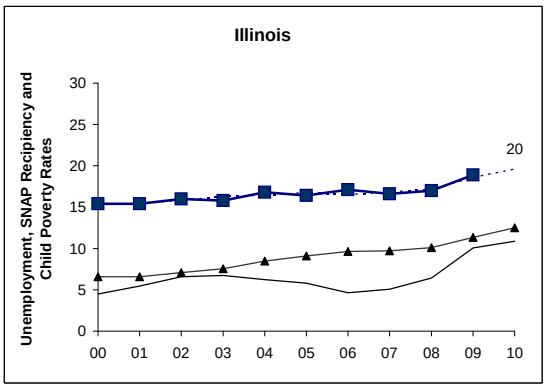
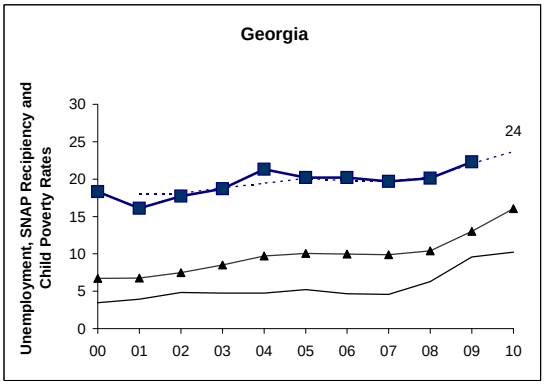

Florida
Unemployment, SNAP Recipiency and Child Poverty Rates
23


Illinois
Unemployment, SNAP Recipiency and Child Poverty Rates
20


Georgia
Unemployment, SNAP Recipiency and Child Poverty Rates
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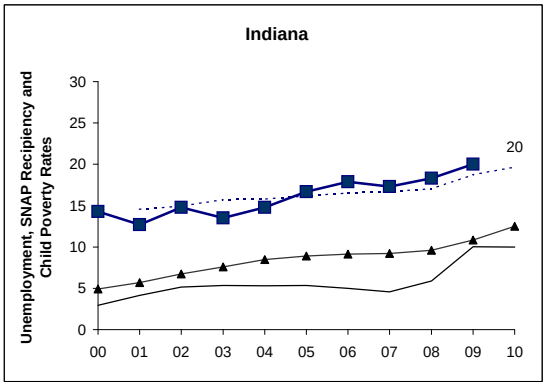
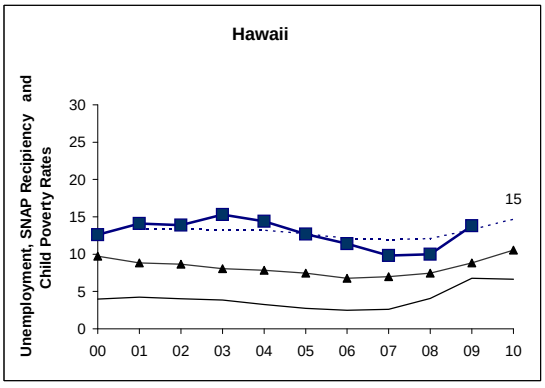

Indiana
Unemployment, SNAP Recipiency and Child Poverty Rates
20


Hawaii
Unemployment, SNAP Recipiency and Child Poverty Rates
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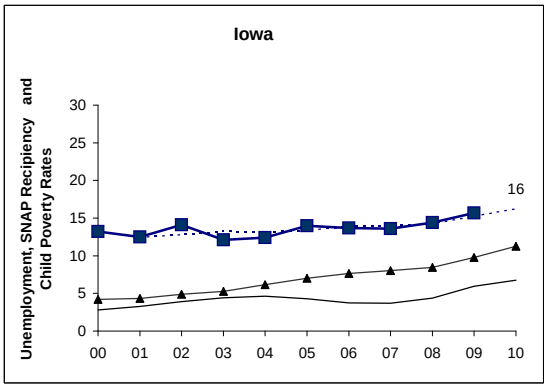
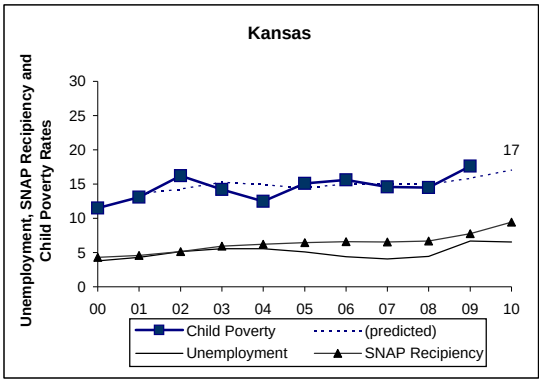

Iowa
Unemployment, SNAP Recipiency and Child Poverty Rates
16


Kansas
Unemployment, SNAP Recipiency and Child Poverty Rates
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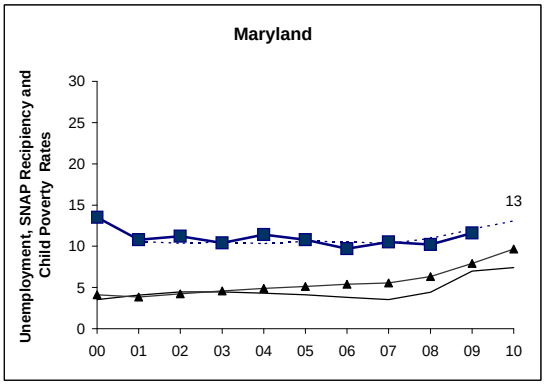
17
Child Poverty
(predicted)
Unemployment
SNAP Recipiency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Unemployment, SNAP Recipiency and Child Poverty Rates
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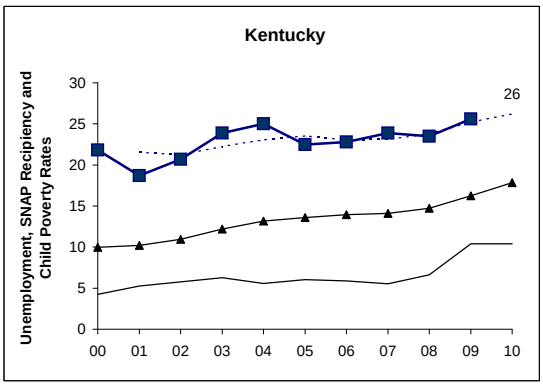
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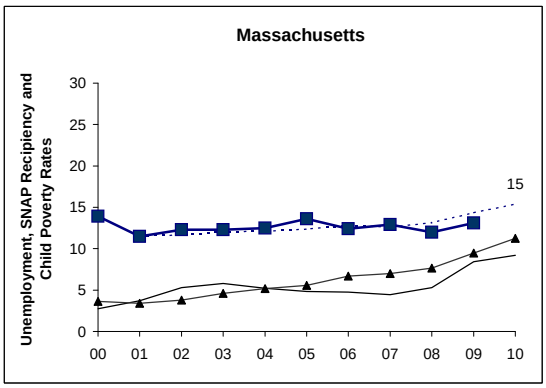
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Unemployment, SNAP Recipiency and Child Poverty Rates
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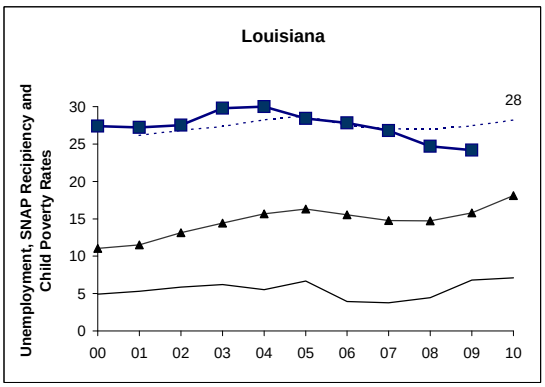
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Unemployment, SNAP Recipiency and Child Poverty Rates
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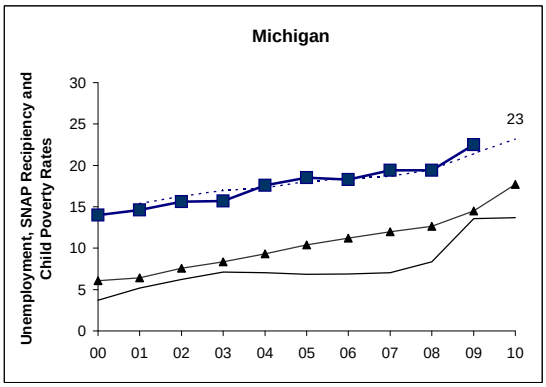
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Unemployment, SNAP Recipiency and Child Poverty Rates
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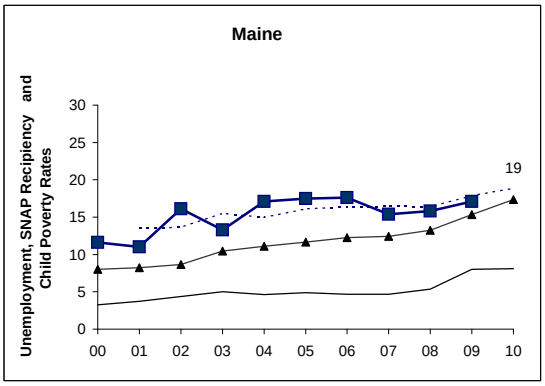
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Unemployment, SNAP Recipiency and Child Poverty Rates
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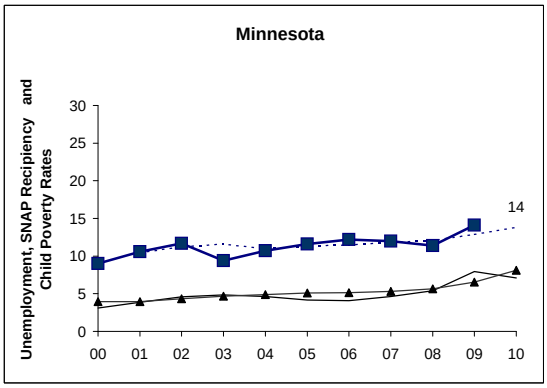
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Unemployment, SNAP Recipiency and Child Poverty Rates
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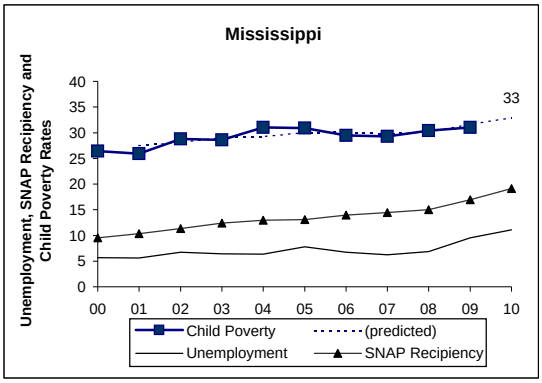
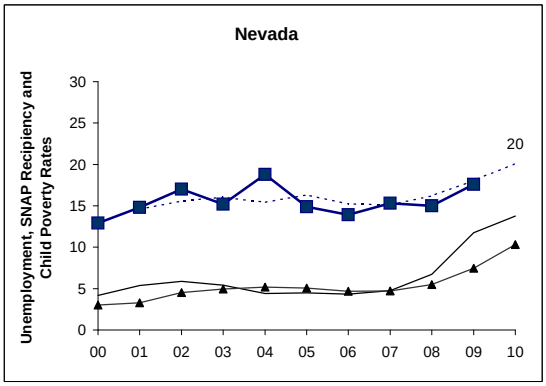

Mississippi
Unemployment, SNAP Recipiency and Child Poverty Rates
33
Child Poverty
(predicted)
Unemployment
SNAP Recipiency


Nevada
Unemployment, SNAP Recipiency and Child Poverty Rates
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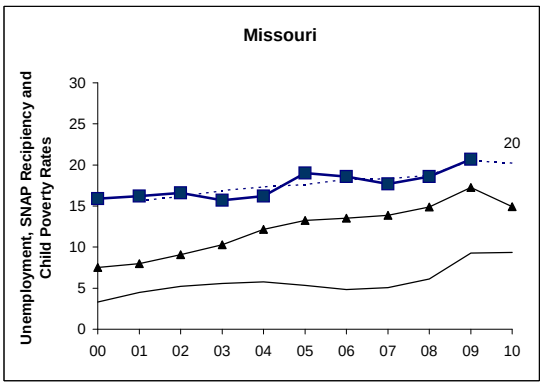
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Unemployment, SNAP Recipiency and Child Poverty Rates
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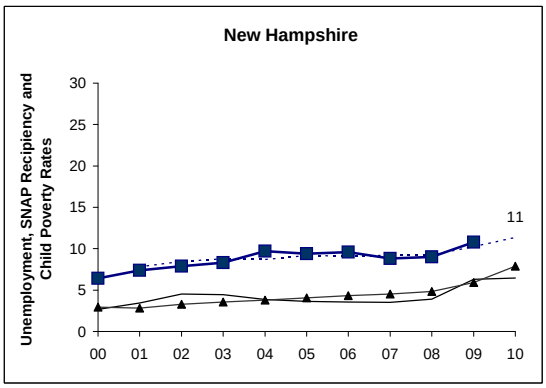
New Hampshire
Unemployment, SNAP Recipiency and Child Poverty Rates
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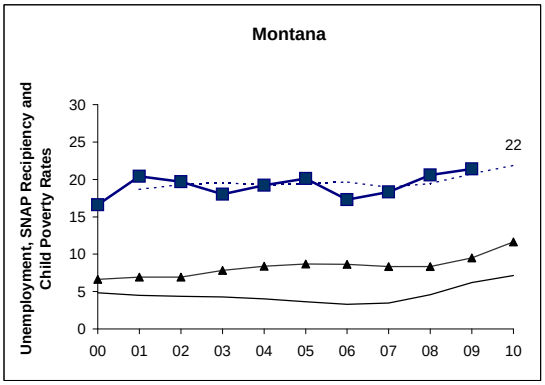
Montana
Unemployment, SNAP Recipiency and Child Poverty Rates
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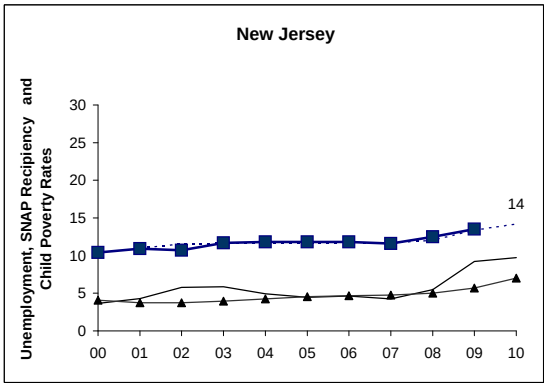
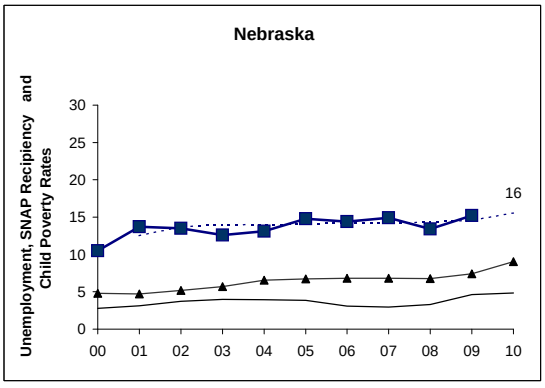

New Jersey
Unemployment, SNAP Recipiency and Child Poverty Rates
14


Nebraska
Unemployment, SNAP Recipiency and Child Poverty Rates
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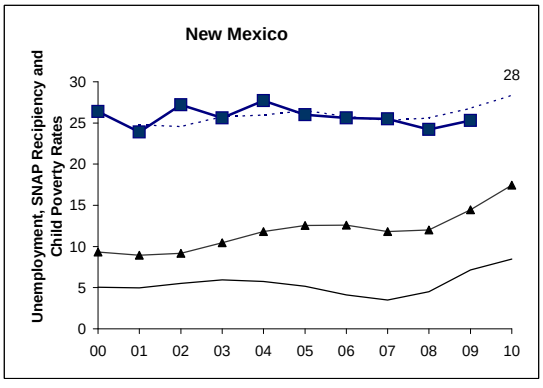
New Mexico
Unemployment, SNAP Recipiency and Child Poverty Rates
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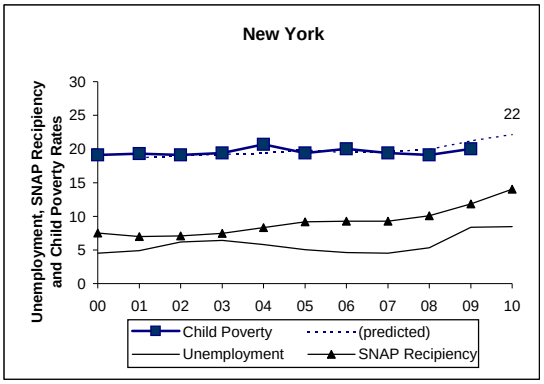
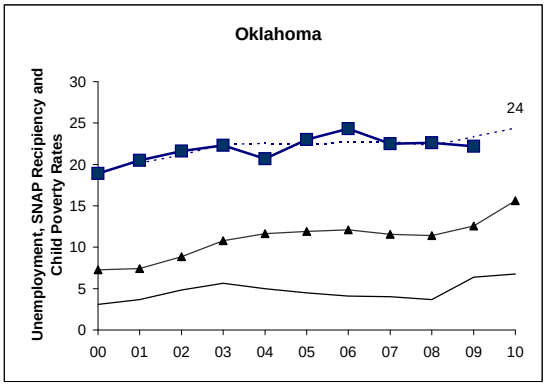
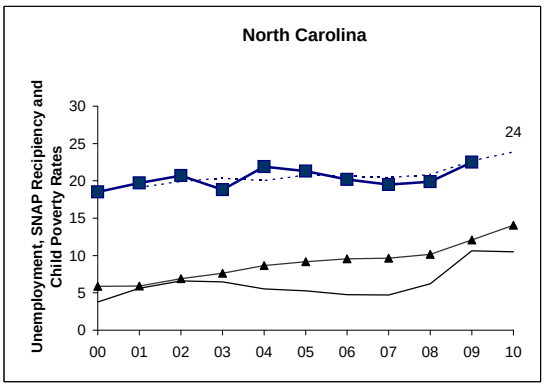
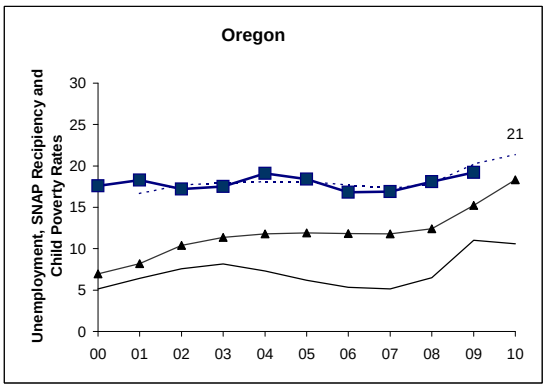
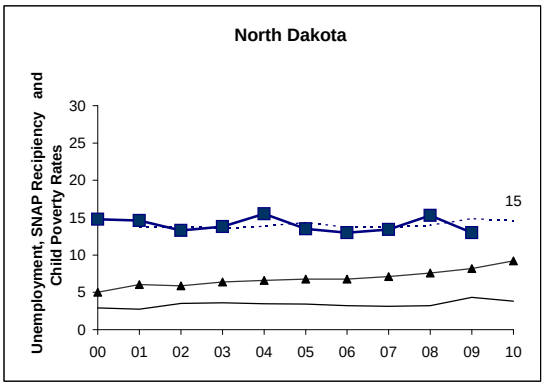
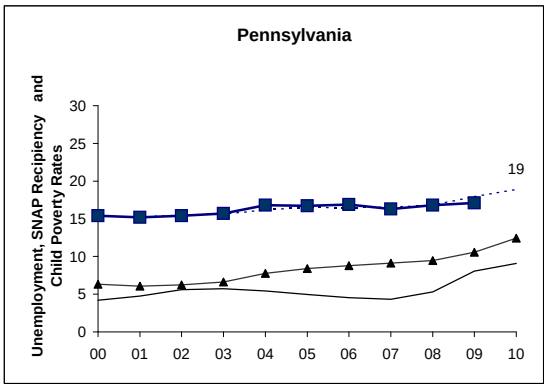

New York
Unemployment, SNAP Recipiency and Child Poverty Rates
22
Child Poverty
(predicted)
Unemployment
SNAP Recipiency

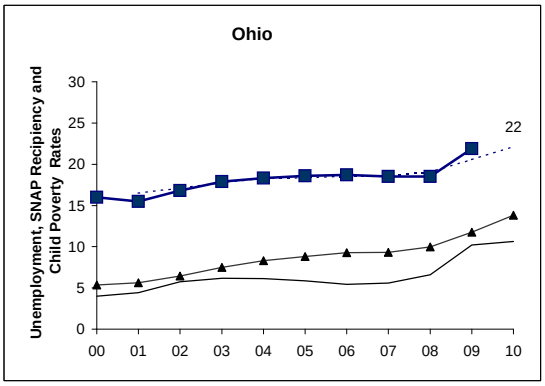

Oklahoma
Unemployment, SNAP Recipiency and Child Poverty Rates
24

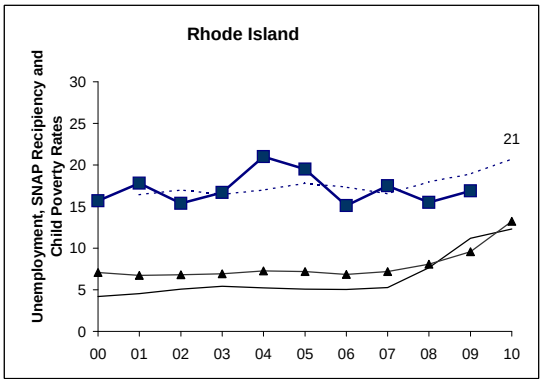

North Carolina
Unemployment, SNAP Recipiency and Child Poverty Rates
24

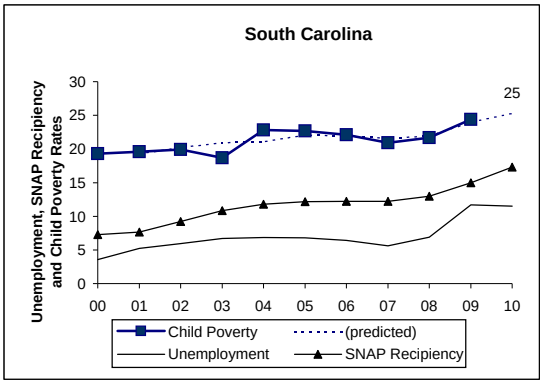

Oregon
Unemployment, SNAP Recipiency and Child Poverty Rates
21

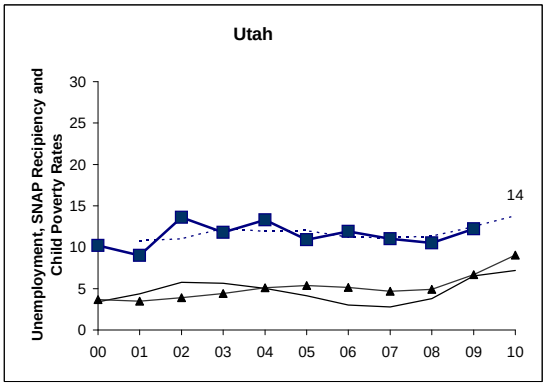

North Dakota
Unemployment, SNAP Recipiency and Child Poverty Rates
15

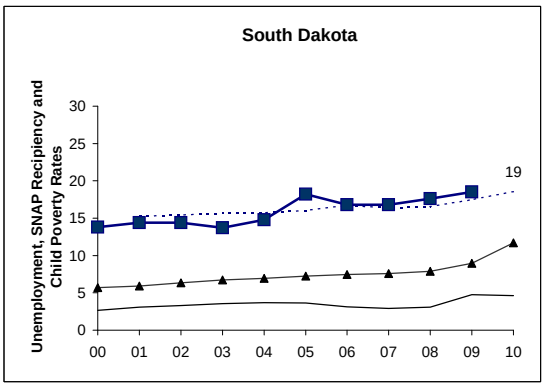

Pennsylvania
Unemployment, SNAP Recipiency and Child Poverty Rates
19

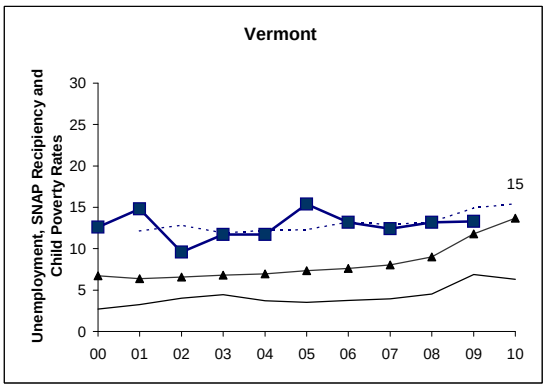

Ohio
Unemployment, SNAP Recipiency and Child Poverty Rates
22

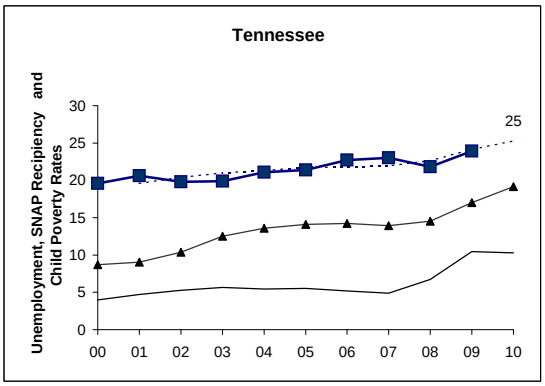

Rhode Island
Unemployment, SNAP Recipiency and Child Poverty Rates
21

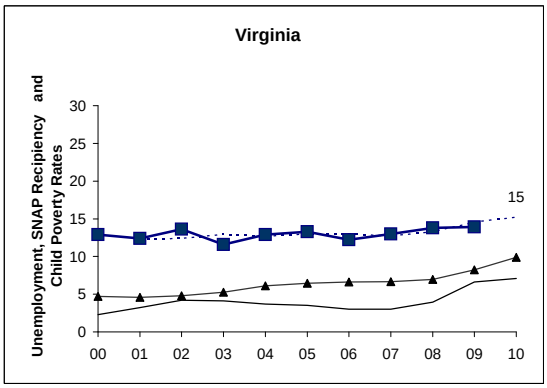

South Carolina
Unemployment, SNAP Recipiency and Child Poverty Rates
25
Child Poverty
(predicted)
Unemployment
SNAP Recipiency

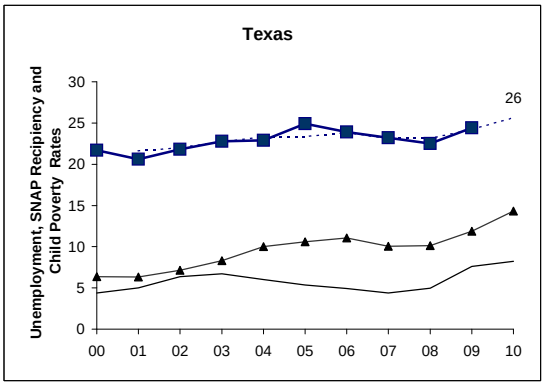

Utah
Unemployment, SNAP Recipiency and Child Poverty Rates
14

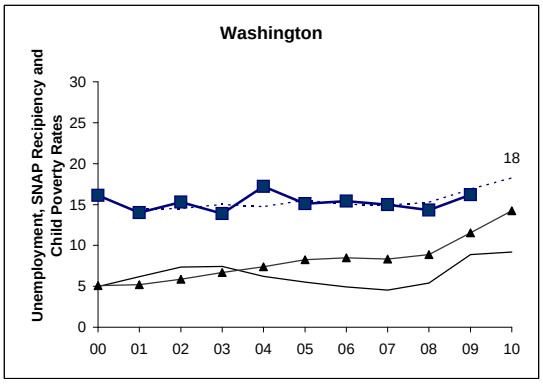

South Dakota
Unemployment, SNAP Recipiency and Child Poverty Rates
19

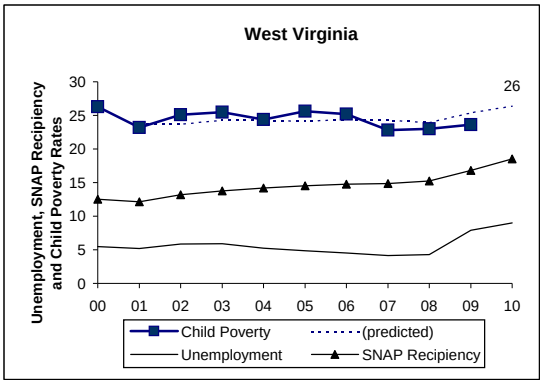

Vermont
Unemployment, SNAP Recipiency and Child Poverty Rates
15


Tennessee
Unemployment, SNAP Recipiency and Child Poverty Rates
25


Virginia
Unemployment, SNAP Recipiency and Child Poverty Rates
15


Texas
Unemployment, SNAP Recipiency and Child Poverty Rates
26


Washington
Unemployment, SNAP Recipiency and Child Poverty Rates
18


West Virginia
Unemployment, SNAP Recipiency and Child Poverty Rates
30
25
20
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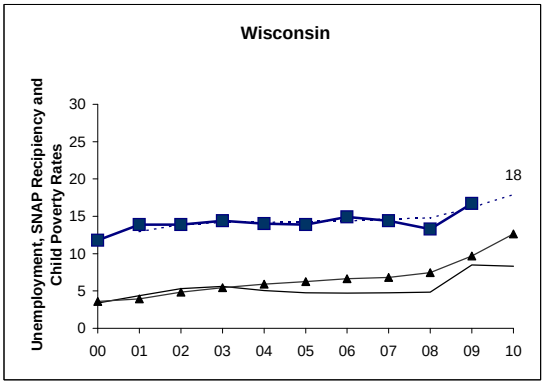
0
00 01 02 03 04 05 06 07 08 09 10
26
Child Poverty
(predicted)
Unemployment
SNAP Recipiency


Wisconsin
Unemployment, SNAP Recipiency and Child Poverty Rates
30
25
20
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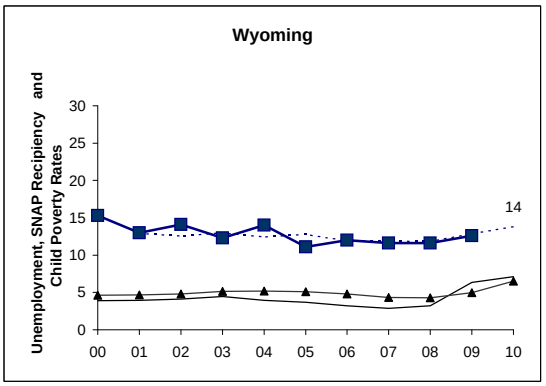
00 01 02 03 04 05 06 07 08 09 10
18


Wyoming
Unemployment, SNAP Recipiency and Child Poverty Rates
30
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20
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00 01 02 03 04 05 06 07 08 09 10
14