

The State of the Safety Net in the Post-Welfare Reform Era

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Abstract:

The passage of the 1996 welfare reform bill led to sweeping changes to the central U.S. cash safety net program for families with children. Importantly, along with other changes, the reform imposed lifetime time limits for receipt of welfare de facto ending the entitlement nature of cash welfare for poor families with children in the United States. Despite dire predictions about poverty and deprivation, the previous research shows that caseloads declined and employment increased, with no detectible increase in poverty or worsening of child-well-being. We re-evaluate these results in light of the severe recession which began in December 2007. In particular, we examine how the cyclicity of the response of program caseloads and family well-being has been altered by the implementation of welfare reform. We find that use of food stamps and non-cash safety net program participation have become significantly more responsive across economic cycles after welfare reform, going up more after reform when unemployment increases. By contrast, there is no evidence that cash welfare for families with children is more responsive after reform, and some evidence that it might be less so. There is some evidence that poverty increases more with the unemployment rate after reform (and no evidence that poverty increases less with unemployment after reform). We find that reform has led to no significant effects on the cyclical responsiveness of food consumption, food insecurity, health insurance, household crowding, or health.

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1. INTRODUCTION

The passage of the Personal Responsibility and Work Opportunity Act of 1996 made sweeping changes to the central cash safety net program in the United States. The Aid to Families with Dependent Children Program, commonly known as “welfare”, had provided cash benefits to low income, primarily single parent, families with children since 1935. After 60 years with minimal changes, President Clinton made good on his pledge to “end welfare as we know it,” signing the 1996 federal welfare reform legislation and thereby eliminating AFDC and replacing it with Temporary Assistance for Needy Families. TANF, or welfare as we know it now, imposes stringent work requirements, sanctions for noncompliance, and lifetime time limits for receipt of welfare. Importantly, the imposition of time limits de facto ended the entitlement nature of cash welfare for poor families with children in the United States.

In the wake of this landmark welfare reform legislation, there was substantial concern that the new policy would lead to increases in poverty and deprivation among disadvantaged families. This important change to U.S. policy led to literally hundreds of studies evaluating the impacts of welfare reform on family and child well-being. A broad summary of that voluminous literature is that welfare reform led to a significant reduction in welfare participation, an increase in female employment, with little consistent evidence that reform led to an increase (or decrease) in poverty or a worsening of (or improvement in) child well-being.¹

However, the literature also shows that the strong labor market of the late 1990s along with the dramatic expansion of “in work” aid for low income families with children through the Earned Income Tax Credit, may have softened the impact of welfare reform (Meyer and Rosenbaum 2001, Grogger 2003). Thus at the end of the great expansion of the 1990s, cash welfare caseloads had fallen by more than 50 percent (from their peak in 1994) down to levels not seen since 1970. Between 1992

¹ Comprehensive reviews of the welfare reform can be found in Blank (2002) and Grogger and Karoly (2005). Existing work looks at the effects of reform on program participation, income and earnings, consumption, child outcomes, and a host of other measures.

and 2000, the employment rate of single women with children increased by 15.3 percentage points from 69.4 to 84.7 and the child poverty rate declined 6.1 percentage points from 22.3 to 16.2.

Of course, the dramatic expansion of the 1990s eventually ended. We entered a short recession in 2001, followed by a relatively weak expansion. Then, in December 2007 we entered the current “great” recession, which has been deeper and longer than any other post-war downturn. In this contraction, the national unemployment rate increased by more than 5 percentage points from 5.0 in December 2007 to 10.1 in October 2009, exceeding the largest increases seen during the deep recessions of the early 1980s. Incomes are down, poverty is up, and participation in government assistance to families through use of unemployment benefits and food assistance has risen substantially. By contrast, TANF caseloads have remained relatively flat.

Our paper enters at this point. We seek to evaluate the impact of welfare reform on disadvantaged families in the great recession. We know that economic downturns adversely affect employment, income, and family well-being. We also know that downturns cause larger negative impacts on those with lower education and skill levels (Hoynes 2000, Hines, Hoynes and Krueger 2001). Here we ask whether the impact of the cycle on disadvantaged families has changed with welfare reform. With welfare providing “less protection,” are economic shocks causing more adverse outcomes? We focus attention on the non-elderly and in particular, on families with children. This is a natural choice given that our paper studies the effects of reforms of the cash assistance system that is exclusively targeted to families with children.² In an effort to broadly capture possible effects of reform, we look not only at use of cash welfare (AFDC/TANF) but at family well-being measures and other aspects of the safety net. Outcomes we examine include official poverty and alternative poverty, earnings and income, participation in food stamps, participation in Supplemental Security Income (SSI) and disability income, receipt of child support or alimony income, whether individuals

² Studying the effects of the great recession on operation of the safety net for the elderly is also an important topic, but not one within the scope of our exercise.

live in public housing or get a rent subsidy, food consumption, food insecurity, health insurance coverage, health status, and measures of doubling up or the presence of single female headed family units. We combine use of administrative data and household survey data to assemble a comprehensive picture of family well-being post welfare reform.

We begin in Section 2 with a descriptive and expansive look at expansions and contractions from 1979 to the present. For each contraction or expansion, we report data on *changes* in spending on government assistance programs (cash welfare, unemployment insurance, and food assistance); spending on the Earned Income Tax Credit; family employment and poverty; measures of housing stress; health insurance coverage and access; and family consumption. In so doing, we pay particular attention to changes during the current recession compared to those during the early 1980s recessions. This approach, while informative about the basic facts, does not allow us to identify the role welfare reform has played in causing these changes.

In Section 3, we step back and provide a brief description of welfare and the safety net for low income families, with a focus on recent important changes in government assistance programs. In Section 4, we present our core findings about how welfare reform has affected the relationship between economic cycles and family well being among the disadvantaged. To identify the impact of welfare, we take advantage of the rich variation across states in timing and severity of economic cycles and welfare reform. Our econometric model is a basic state-year panel where we regress various family outcomes on the state-year unemployment rate, a measure of welfare reform, and the interaction between the unemployment rate and welfare reform. The estimate on the interaction identifies how welfare reform has affected the impact of cycles on family well being.

This approach allows us to estimate how an increase in the area unemployment rate affects outcomes among the disadvantaged, and whether/how those impacts changed with the dramatic reform to welfare. Ours is the first paper to address this issue. We utilize data from many sources in order to broadly evaluate the issue. We start with administrative data on participation in

AFDC/TANF and food assistance caseloads, to document the “first stage” of the policies. We then analyze data from 30 years of March Current Population Survey data, which allows us to examine impacts on family and household measures of well-being including earnings and income, poverty (both official and alternative poverty), living arrangements and housing stress, program participation beyond AFDC/TANF and Food Stamps, health insurance coverage, and health status. Finally, we present results for food consumption, from the Panel Study of Income Dynamics, and food insecurity, from the food security supplements to the Current Population Survey.

In Section 5, we re-examine the effects of welfare reform and how it responds to the business cycle. First, we briefly touch on what is known about the response of public assistance and the safety net to the recession of 2001. Then, we revisit the topic of reductions in welfare participation with reform, in particular whether they have been driven by changes in eligibility (access) or changes in take-up. We then go on to explore what is known about those who pre-reform were at risk of being on welfare but are no longer on welfare (known as “disconnected women” in a growing literature). Finally, we conclude in Section 6.

Using both administrative and survey data, we find both food stamps and a broader measure of non-cash safety net participation have become more responsive across economic cycles after welfare reform. While always countercyclical, both of these measures increase more with unemployment after welfare reform. All measures of poverty (official and our own alternative measure) are countercyclical, and being under 150% of the official poverty threshold is also significantly more countercyclical after reform. By contrast, there is no evidence that cash welfare for families with children is more responsive after reform, and some evidence that it might be less so. We find the reform has led to no significant effects on the cyclical responsiveness of food consumption, food insecurity, receipt of child support or alimony, receipt of SSI or DI, health insurance, household crowding, or health.

2. CYCLES, THE SAFETY NET, AND FAMILY WELL BEING

In this section, we examine the changes in government assistance and family outcomes that have occurred, historically, across expansions and contractions in the U.S. We begin, in Figure 1, by presenting our measure of the economic cycle—the unemployment rate—annually from 1962 to 2009. The current recession officially began in December 2007 and since that time the unemployment rate has risen from 5 percent in December 2007 to a peak of 10.1 in October 2009. While the recession officially ended in July 2009, the unemployment rate remains high, at 9.6 percent in September 2010 (seasonally adjusted). Based on the annual averages, shown in Figure 1, unemployment in the current recession has increased from 4.6 in 2007 to 9.3 in 2009. In our analysis, we compare results for the current recession to the deep recessions of the early 1980s. (Two recessions in quick succession led to an increase in the unemployment rate from 5.8 percent in 1979 to 9.7 percent in 1982.)

In addition to the unemployment rate, Figure 1 also includes data on the percent of persons in poverty annually for 1962 to 2009. We view the poverty rate as a central measure of family well-being, and thus rely on it heavily in our work. Official poverty status in the U.S. is determined by comparing total pre-tax family cash income to poverty thresholds, which vary by family size, number of children, and presence of elderly persons. (Thus, all persons in the same family have the same poverty status.) In 2009, the poverty threshold for a family of four (two adults, two children) was roughly \$22,000. This measure of resources has numerous drawbacks. Notably, there is no geographic variation in the thresholds, despite wide variation in costs and wages across regions, and the thresholds are based on outdated budgeting rules of thumb which fail to adjust for many categories of expenses (e.g., shelter, clothing, work related expenses, medical expenses, and utilities), and thus do not capture measures of needs. The thresholds are also updated annually by the CPI-U, which may not well capture changes in needs. Further, the measure of family cash income is not a complete measure of family resources. It excludes non-cash government transfers (such as food

stamps or housing subsidies or housing vouchers); subtractions from income (such as income or payroll taxes); or additions to income (such as the Earned Income Tax Credit) made through the tax system. These limitations in the official poverty definition have been noted by many, and a recent National Academy of Sciences (NAS) panel made recommendations for revisions (Citro and Michael, 1995). Throughout the paper, we make use, to the fullest extent possible, of an alternative poverty definition using a comprehensive post-tax post-transfer income concept. Of particular relevance for our work is the measurement of non-cash benefits, the Earned Income Tax Credit, and taxes.³

Figure 1 shows that poverty declined substantially between the early 1960s and the mid 1970s with shorter periods of increases and decreases since that time. In the current recession, the percent of persons in poverty has increased by 1.8 percentage points, from 12.5 in 2007 to 14.3 in 2009. The fact that unemployment has not improved in late 2009 and 2010 suggests that poverty will likely increase further before it declines. We also plot NAS alternative poverty (incorporating non-cash transfers, taxes, out of pocket medical expenditures, and work-related deductions in income, and including consumption based measures in the thresholds) for the available years (1999-2008). This NAS measure of alternative poverty, while higher than official poverty, follows a very similar trend.⁴

Given our focus on the effects of welfare programs, we report in Figure 2 the official poverty rates for children, as well as all nonelderly. In 2009 15.1 percent of nonelderly persons were poor and 20.7 percent, or more than one in five, children were poor. The figure also shows the unemployment

³ The poverty thresholds were developed in 1963-1964, adopted in 1969, and official statistics are available back to 1959. The thresholds have been adjusted each year to reflect changes in the cost of living using the CPI-U, but otherwise have changed little since their creation. Congress recently passed a law mandating that the Census Bureau develop a supplemental poverty measure which will be published in addition to the official measure. The Census Bureau and BLS have long examined various alternative measures of both income and thresholds, publishing various experimental series (for example, Dalaker, 2005) as well as exploring whether the NAS recommendations could be implemented (e.g., Garner and Short, 2008).

⁴ In Figure 1, we plot Census tabulations of the NAS alternative poverty for available years. In our own empirical analysis of the March CPS data, we are able to construct a consistent alternative poverty measure for calendar years 1980-1986, 1988-1990, and 1991-2008. Due to Census data limitations at the time of writing, the Census tabulations as well as our own tabulations of alternative poverty are not yet available for 2009.

rate, with grey shading for periods of contractions.⁵ Finally, Figure 2 also includes a vertical line indicating the passage of welfare reform in August 1996. This figure shows that poverty rates are countercyclical, rising in downturns and falling in expansions. These simple time series do not reveal any obvious evidence of a change in the cyclicality of poverty following welfare reform (that is, it does not appear that poverty more closely tracks the unemployment rate after 1996). One can, however, see the strong expansion of the late 1990s was associated with decreases in unemployment rates and poverty.

In Table 1, we provide a description of changes in economic circumstances and well-being in contractions and expansions, both before and after welfare reform. The contractions and expansions are defined using the same periods as illustrated in Figure 2. In the first column, we present changes during the contraction of 1979-1982 which combines the two recessions during that time period. In the columns that follow we show outcomes for the contractions from 1989-1992, 2000-2003 and 2007 to the present. For the most recent contraction, most changes in outcomes are from 2007 to 2009, but as indicated in the table a few items are only available through 2008 (NAS alternative poverty, food insecurity). The final columns present the changes in outcomes during the expansions including 1982-1989, 1992-2000, and 2003-2007. We view these tabulations as interesting and descriptive; but in many cases it is difficult to reach conclusions about how cyclicalities have changed because of an inability to separate cycle from aggregate trend.

The first row of Table 1 quantifies the change in the annual unemployment rate across our contractions and expansions. By this measure, during the current recession (2007-2009), unemployment rates increased by 4.7 percentage points through 2009 compared to an increase of 3.9 percentage points between 1979-1982, and even smaller increases during the 1989-1992 and 2000-2003 contractions. The next panel of Table 1 documents how spending on the key cash or near cash

⁵ The official NBER recession dating is monthly. Most of our analyses in the paper rely on annual data. We constructed annual contraction dating by starting with the official monthly dates, augmented by examination of the national peaks and troughs in the unemployment rate. See the appendix for a side by side comparison of NBER (monthly) recession dating and our (annual) contraction dating.

government assistance programs changed over the cycle. Both food stamps and (especially) unemployment insurance show countercyclical spending. Of particular interest is the 68 percent increase in real per capita food stamp spending between 2007 and 2009. Expenditures for the Earned Income Tax Credit do not appear to follow a countercyclical pattern, although with major expansions in the program in 1986, 1990, and 1993, it is hard to distinguish any impact of cycles (Eissa and Hoynes 2006).

Perhaps surprisingly, the data on cash welfare expenditures (AFDC/TANF) do not show a clear countercyclical pattern. While cash welfare (AFDC/TANF) payments per capita increased during the 1989-1992 contraction (+10%), they *decreased* during the contractions of 1979-1982 (-14%), 2000-2003 (-17%), and 2007-2009 (-2.5%). However, the more comprehensive TANF total assistance measure (includes cash and noncash assistance) increased by 8.1 percent in the current recession.⁶ Less surprisingly, cash payments in AFDC/TANF decreased during the three expansions. Prior research shows that some of these decreases in periods of contraction are the result of structural policy-driven declines in expenditures (e.g., lower expenditures because of rules cutting eligibility in 1981 and welfare reform in the late 1990s) in excess of countercyclical increases in expenditures. This illustrates the limitations of this exercise—simple descriptive comparisons of expenditures across contractions and expansions are not definitive in identifying the effects of welfare reform on the responsiveness of the safety net.

We postpone until the next section a detailed discussion of welfare, other safety net programs and the recent reforms. However, to provide a context for the material we present in remaining panels of Table 1, here we provide a demographic profile of cash welfare recipients. In particular, Table 2 presents the characteristics of families with any cash welfare income (AFDC or general assistance) in 1995, on the eve of federal welfare reform. For comparison, we also present

⁶ After welfare reform, states had flexibility to spend federal block grant funding on not only cash assistance, but other noncash aid such as subsidized child care, transportation, education and training and so on. The total expenditure series includes spending from all sources. We discuss this more below.

these characteristics for all families with children in 1995 and families receiving welfare at the end of the period, in 2009.⁷ In 1995, almost 70% of heads of families with cash welfare income are unmarried single women, about 40% are non-Hispanic whites, 34% are non-Hispanic blacks, and 21% are Hispanic.⁸ These characteristics of welfare recipients changed little between 1995 and 2009. Compared to all families with children, the welfare population is more likely to be black or Hispanic, less educated, unmarried, female headed, with the head out of the labor force. In addition, Table 2 shows that most families receiving cash welfare also participate in other government programs: in 1995, 86% of the households receive food stamps, 90% of the heads and 97% of the children are on Medicaid or SCHIP (for the children), and 33% have government subsidized housing, while 13% received cash assistance through the Supplemental Security Income program and 65% participated in the free or reduced price school lunch program.

Historically, families do not mix welfare and work (31% worked at the time of the survey, and 56% were out of the labor force) although the tabulations for 2009 suggest that combining welfare and work has increased somewhat since welfare reform.⁹ Those who did work before welfare reform tended to work in poorly paid occupations (Burtless, 1997). Another thing to note is that among a given entry cohort into welfare, a large share will be on welfare for a short time but a

⁷ These calculations are based on the 1996 and 2010 March Current Population Survey, which collects information on current living arrangements and income, transfers, and health insurance coverage for the prior calendar year. Like all sample surveys, the CPS relies on self-reports, and as is often the case, income is underreported in the CPS. The degree of underreporting varies both over time and across types of income as well as by reciprocity and total dollar amounts (see a summary of some of the issues in Weinberg 2004 or recent specific studies such as Meyer, Mok and Sullivan 2009, Wheaton 2007, and Bitler, Currie, and Scholz 2003). In part because of this concern about the validity of self-reports of income from public assistance and other programs, we also present results using administrative counts.

⁸ It may seem surprising that we find a quarter of families receiving welfare to have married heads. However, in AFDC, states could offer benefits to support children in two parent families where the primary earner was unemployed, and under TANF, many of the eligibility rules distinguished far less among two and one parent families. In 1995, 7% of cases were AFDC-UP cases (US House of Representatives, 1996). Further, because family structure is measured in March, while income is measured for the preceding calendar year, it is also possible that some share of individuals got married after having been on cash assistance.

⁹ In these tabulations, a family is a “welfare recipient” if they have any public assistance income (AFDC/TANF or other public assistance (e.g., general assistance) during the previous calendar year. We measure employment as of the week before the survey (we can also measure any employment during the last calendar year). Consequently, because one cannot tell from the CPS if people had earnings when they were also receiving cash assistance, the CPS does not allow for identification of simultaneous welfare and work status.

large share of the stock of current welfare caseload are long term recipients who tend to be even less attached to the labor force than other recipients (e.g., Bane and Ellwood, 1994). For example, Ellwood (1986) reports that 34% of first time AFDC recipients had not worked in the previous 2 years and 18.6 of these new recipients had a disability that limits work.

With these facts in mind, we return to Table 1 and in the remainder of the table present changes across the contractions and expansions for a broad array of outcomes relevant for the welfare population. Most outcomes are not available for all time periods, and many are only available after welfare reform. All of the poverty measures are strongly countercyclical. For example, the official poverty rate for children increased 5.5 percentage points in the 1979-1982 recession and 2.7 percentage points between 2007 and 2009. Poverty declined in 2 of the three periods of expansion, with the exception being the 2003-2007 expansion where child poverty increased by 0.4 percentage points. Extreme child poverty, the share of children in families with income below 50% of the official poverty threshold, declined across all expansions. The NAS alternative poverty measure also shows strong countercyclical pattern. (As noted above, the NAS alternative poverty measure is not yet available for 2009, so the statistics for this recession are of limited value.)

Employment for single mothers exhibits a procyclical pattern, declining by 3.9 percentage points in the current recession, compared to 1.9 percentage points in the 1979-1982 contraction. This suggests a greater sensitivity to cycles post-welfare reform, which is consistent with higher rates of attachment to the labor market for potential welfare recipients. Our comprehensive measure of “any non-Medicaid non-cash assistance (AFDC/TANF/general assistance) safety net receipt” in the household is very strongly countercyclical—increasing a striking 4.5 percentage points in the current contraction after declining in the 1992-2000 expansion by a similar amount.¹⁰

Mindful of the importance of looking at measures which capture well-being rather than

¹⁰ This measure is 1 for any household where someone reported they participated in food stamps, SSI, public housing/rental subsidies, free or reduced price school lunch, or energy assistance during the calendar year before the survey.

resources, in the remainder of the table, we present changes in real expenditures (in real 2009 \$ per capita from the Consumer Expenditure Survey), in food insecurity, in “doubling up” and homelessness, and in health insurance coverage and access. Our consumption measures (real expenditures) are for individuals in the lowest 20% of pre-tax income consumer units and, notably, changes in these measures do not show a consistent pattern across the contractions and expansions. Food insecurity, available only for the later period, shows an increase of 3.2 percentage points in the current contraction; this is particularly striking given that the data is only available through 2008.¹¹

The share of children living in a female headed household and the share of children living in households with two or more families (“doubling up” or housing stress) also do not exhibit strong patterns across the cycles. Curiously, homelessness, only available for the most recent period and for a sample of shelters, seems to be declining in the current recession, although the number of homeless *families* is increasing. Delay of or not getting medical care due to cost, a measure of health care access, consistently rises in contractions while health insurance coverage shows no clear cyclical trend.

To illustrate in more detail the degree of protection that cash welfare and food stamps provide in recessions, Figure 3a shows the total number of unemployed persons for the U.S., the cash welfare (AFDC or TANF) caseload, and food stamp caseload by month from January 2007 to the present. We normalize all series to 1 in December 2007 with the official start of the recession and demarcate the official end of the recession in July 2009.¹² The figure shows that food stamp caseloads have expanded significantly with the recession while TANF caseloads have changed very little. Figure 3b provides a similar analysis for the second of the two early 1980s recessions (which officially began in July 1981) and Figure 3c for the recession which began in July 1990. These

¹¹ Food security is a measure of households having enough nutritionally adequate and safe foods or having assured ability to acquire acceptable foods in socially acceptable ways (not through emergency food supplies, scavenging, etc.). Haider (2006) describes advantages and disadvantages of this measure of well-being, which contains a psychological component.

¹² These figures update earlier graphs presented in Pavetti (2010).

figures suggest that AFDC/TANF caseloads are less responsive to cycles than are food stamp caseloads and that neither program responded much during the 1981 recession.

Finally, another way to assess the role of the safety net is to examine the sources of income for the disadvantaged during a contraction. Figure 4a shows the share of total income (where for the figure, total income includes both cash income and the value of food stamps) by source for households in poverty in 1982 and 2008 while Figure 4b provides the same information for households in extreme poverty (below 50% of the official poverty threshold).¹³ This graph clearly shows the declining role of cash welfare as a countercyclical income source for the poor and the increasing role played by food stamps, earnings and SSI (cash welfare for the disabled).¹⁴

Several important points emerge from this analysis. Overall, use of the non-cash welfare safety net, poverty, food insecurity, and health care access show strong countercyclical patterns. The nature of changes in demographic stress, homelessness, and consumption across the cycles is less clear. Unfortunately, many of the outcomes of interest exhibit secular trends (e.g., children living with single female family heads, percent uninsured) and/or policy-driven structural changes (e.g., expansions in the EITC, welfare-reform induced reductions in use of cash welfare). These other factors make it difficult to draw conclusions from Table 1 (or Figure 3) concerning cycles, the disadvantaged, and welfare reform, as it is hard to separate the role of the aggregate cycle from that of other factors affecting the trends in outcomes. Just to take one example, it is well understood that AFDC caseloads declined in 1981 due to changes in the benefit reduction rate that reduced eligibility for many cash welfare recipients (Moffitt 1992, U.S. General Accounting Office 1985). This obviously complicates the interpretation of Figure 3 and Table 1. Rebecca Blank expresses our concerns well: “Note that the back-to-back recessions in the early 1980s caused a mild uptick in

¹³ We are unable to prepare this figure for 2009 because the amount of food stamps per household has not yet been released by Census with the 2010 March CPS public use data.

¹⁴ Note that there might be a mechanical increase in the share of income provided by food stamps if families leave welfare and do not replace all of their welfare income as the food stamp program reduces benefits by 30% for each dollar of other income.

caseloads, but this was quickly aborted when legislative changes in Reagan's first term ended AFDC eligibility for about 15 percent of the caseload (US GAO 1985). This policy change makes it difficult to do any quick 'eyeball' comparisons between the recession effects of the early 1980s and the early 1990s on caseloads" (Blank 2001). In sum, the data in Table 1 provide a useful description of changes in well-being in the current recession. However, to make more definitive conclusions about how the cyclicity of outcomes has changed post-welfare reform, we defer to our regression results below where we are able to separate out secular trends from cycles.

3. THE U.S. SAFETY NET

Before moving to our regression results, we step back and provide more background on welfare and welfare reform. Ultimately, our aim is to analyze the impact of welfare reform on family well being over the business cycle. Cash welfare is not the only government assistance program for low income families with children. In our analysis of the impact of cycles on disadvantaged families, we seek to understand how the other elements of the safety net may have affected family well being. Therefore, here we describe not only welfare and welfare reform but we provide a brief description of the other safety net programs (and recent reforms).

Table 3 presents an overview of the central cash and near-cash safety net programs for families with children. The two primary programs for low income families include cash welfare (previously called Aid to Families with Dependent Children or AFDC, and now called Temporary Assistance for Needy Families or TANF) and food assistance through the Food Stamp Program (now called the Supplemental Nutrition Assistance Program). Food Stamps is by far the larger program of the two (especially post welfare reform): In 2009, 15 million families (or single individuals) received food stamps at a cost of \$50 billion (2009 \$) compared to fewer than 2 million families receiving cash welfare at a cost of \$9 billion. The Earned Income Tax Credit provides tax based aid for low income working families with children and in 2008, the most recent year for which data are

available, 25 million families received the EITC at a cost of \$51 billion (2008 \$). Supplemental Security Income is another cash “welfare” program, which primarily serves poor elderly and disabled adults, but also is received by disabled children in some poor families. Finally, unemployment compensation is obviously a critical element of the safety net and *the* central income replacement program in recessions. The program differs from the programs above because it is a social insurance program, determined by work history, and not conditioned on current income. Importantly, unemployment consists of several different programs including regular state benefits, state extended benefits (which generally kicks in when a state’s unemployment rate exceeds a pre-set threshold) and the federally financed emergency benefits program (which is currently in place and extends benefits well beyond the normal maximum period of receipt of 26 weeks). In 2009, on average, about 6 million persons per week received some form of unemployment compensation at a cost of nearly 131 billion dollars (2009 \$).

The average monthly payment per family in 2009 is \$397 for cash welfare (TANF) and \$276 for food stamps. Earned Income Tax Credit payments in 2008 averaged \$2,046 per year, or \$171 per month. By contrast, the regular state weekly unemployment compensation payments in the fourth quarter of 2009 averaged \$308 per week (or \$1335 per month). In the final column in the table, we report results from a recent Center for Budget and Policy Priorities study (Sherman 2009) on the number of children that these programs lifted out of poverty (in 2005). The EITC leads, having lifted 2.6 million children out of poverty, followed by food stamps at 2.2 million, and then by SSI and TANF which each removed about 1 million children from poverty.¹⁵

In our analysis, we focus on cash welfare (TANF) and food stamps, but in our analysis of family income and poverty, we indirectly analyze the impacts of all the programs in Table 3 as well

¹⁵ These calculations for poverty alleviation perform the hypothetical exercise of eliminating one program at a time, while maintaining all of the others. The exact numbers differ somewhat from study to study; for another set of estimates see Meyer (2010). Of course, EITC eligibility rules mean most EITC benefits are received by individuals near the poverty line, thus making it more likely for the EITC to lift families out of poverty. Other programs such as AFDC/TANF have eligibility thresholds further from the poverty line, making it less likely they will lift families out of poverty.

as broader measures of any safety net use which encompass other programs such as the Free and Reduced Price School Lunch program and public housing/rental vouchers.¹⁶

Eligibility Rules, Benefits, and Recent Reforms for the Key Safety Net Programs

A. Cash Welfare (Temporary Assistance for Needy Families, TANF)

Nationwide, cash welfare for low income families started with the Aid to Families with Dependent Children, a program created by the Social Security Act of 1935. The program was jointly funded by the state and federal governments (with a higher federal matching rate for lower income states). States had authority to set benefit levels, while federal rules dictated most of the remaining eligibility and benefit rules. A family was eligible if they satisfied income and asset tests and assistance was primarily limited to single women with children.¹⁷ The benefits were structured in a manner typical for income support programs: if a family had no income, they received the maximum benefit or “guarantee.” As their earnings (or allowable income) increased, their benefit was reduced by the benefit reduction rate or claw-back rate, leading to an implicit tax rate on earned income. Historically, this rate has varied between 67% or 100%, providing strong disincentives for work (Moffitt 1983). With the roots of the program in the 1930s, when very few mothers participated in the labor market, it attracted little attention that the structure of the program discouraged work. Over time, however, concerns about the work disincentives (and about the disincentives to form two-parent families) grew, and interest in reforming the program followed.

The modern era of welfare reform began in the early 1990s, when many states were granted

¹⁶ Other cash or near cash programs of relevance for families with children include public housing and vouchers/rent subsidies, other nutrition programs (National School Lunch and Breakfast programs, WIC), energy assistance, and state general assistance programs. In addition, Medicaid provides health insurance for poor children and families, and higher income (but still low income) children are also eligible for the State Children’s Health Insurance Program.

¹⁷ To be more precise, a family had to show that the children were deprived of parental support due to the absence, incapacitation, or (in some states and some periods) unemployment of one parent. In practice, throughout its history more than 90 percent of the caseloads consisted of single mothers. There were large changes in the mid 1960s which expanded the program considerably for unmarried mothers.

waivers to modify their AFDC programs.¹⁸ About half of the states implemented some sort of welfare waiver between 1992 and 1995. On the heels of this state experimentation, the Personal Responsibility and Work Opportunity Act (PRWORA) was enacted in 1996, replacing AFDC with TANF. The key elements of reform in the state waivers and TANF legislation include: work requirements, lifetime time limits on the duration of welfare receipt, financial sanctions for failing to adhere to work requirements or other rules, and enhanced earnings disregards.¹⁹ These changes were designed to facilitate the transition from welfare to work and to reduce dependence on cash welfare. Importantly, time limits removed the entitlement nature of the program. States have considerable discretion in setting TANF policies, but by federal law, programs must include work requirements and *lifetime time limits* of 5 years or less. Federal funding also changed from the (uncapped) matching formula under AFDC to a (capped) block grant under TANF.

An advantage for identifying the effects of these recent reforms, and one that we will make use of in our empirical model, is that there was considerable variation across states in both the timing and types of welfare reforms they implemented in the 1990s. Some states reformed their programs through waivers, in advance of the 1996 law. Other states reformed their programs later, when required by PRWORA, with the last state implementing TANF in January 1998. States vary in their length of time limits, the type of sanctions, and so on. For example, Crouse (1999) reports that 15 states had waivers approved with time limits on receipt, 19 had waivers approved which enhanced their earnings disregards, and 28 had waivers approved which included sanctions for not adhering to program rules. This state variation in the timing and severity of reform has been widely used in the welfare reform literature (see reviews in Blank, 2002; Grogger and Karoly, 2005) and we also use this variation.

¹⁸ The 1990s reforms are by no means the first reforms of AFDC. Without a doubt, however, the 1990s reforms are the farthest reaching and today “welfare reform” generally refers to those changes.

¹⁹ Other changes adopted by some states include: expanding eligibility for two-parent families, “family caps” (freezing benefits at the level associated with current family size), and imposing residency and schooling requirements for unmarried teen recipients. For a detailed discussion of the policy changes see Blank and Haskins (2001) and Grogger and Karoly (2005).

It is important to point out that this cash welfare provides benefits only to quite low income families, and eligibility cutoffs and benefit levels are substantially below the poverty line. Prior to welfare reform under AFDC, the median state provided benefits to families with income up to 68 percent of poverty and the median state's benefit level for a family of three was about 36% of the 1996 poverty guideline (U.S. House of Representatives 1996).²⁰ State benefits varied widely across states; for example in 1996 maximum benefits for a family of three were \$120 per month in Mississippi and \$607 per month in California. As part of their welfare reforms, to improve financial incentives to transition from welfare to work, many states decreased the implicit tax rate on earned income within the TANF program, allowing individuals to have much higher earnings before losing all their welfare benefits. Despite these expansions in the amount of earned income families could keep while on welfare, total benefits remain low.

B. Food Stamps (Supplemental Nutrition Assistance Program)

Food Stamps is also a means tested program (whereby eligible families and individuals must satisfy income and asset tests) and benefits are also assigned using maximum benefits and tax rates on earned income. The similarities with AFDC/TANF end there. First, food stamps is a federal program with all funding (except for 50 percent of administrative costs) provided by the federal government. Second, unlike virtually all other cash programs in the U.S., food stamps is not limited to certain *targeted* groups such as families with children, aged, and the disabled. Third, the benefit reduction rate is relatively low (30%) and the income eligibility threshold is relatively high (130 percent of the poverty guideline). The lower benefit reduction rate means that the food stamp program serves not only the nonworking poor (those receiving cash welfare) but also the working poor. Recipients are allowed to use their benefits to buy a wide array of food items (although not prepared foods) and studies show that the behavioral response to food stamps is similar to the

²⁰ Note that eligibility for many federal safety net programs is based on poverty guidelines which are different from but partially based on the Census poverty thresholds. Poverty guidelines do not vary by number of children or presence of the elderly but are different for Alaska, Hawaii, and the rest of the states and DC.

response to cash (Fraker et al., 1992, Hoynes and Schanzenbach, 2009; Ohls et al., 1992). Food stamp benefits today are dispersed with debit cards, while in the past there were paper vouchers.

Unlike cash welfare, the food stamp program has remained relatively unchanged over time. The income eligibility threshold and benefits are adjusted for changes in prices each year and the actual benefit formula (implicit tax rate and so on) has changed very little over time. However, an important change was contained in the PRWORA legislation (creating TANF) which imposed limitations to the food stamp program: legal immigrants were deemed ineligible for the program and most childless jobless adults between 18 and 50 could only receive three months of food stamps in any three-year period.²¹ The 2002 Farm Bill reinstated benefits for legal immigrants and the 2009 federal stimulus temporarily suspended the three-month limit for childless jobless adults. The federal stimulus bill also provided a temporary increase in maximum benefits (benefits were increased by about \$25 per month at a cost of \$6 billion in fiscal year 2009, Pavetti and Rosenbaum 2010).

Post-welfare reform (and perhaps even pre-welfare reform), food stamps is unambiguously the key safety net program in the U.S., and the only one that is “universal” (based only on economic need) and that has a fully funded entitlement. Caseloads and benefits adjust automatically with demand (recessions) and costs are uncapped.

C. Unemployment Insurance (UI)

Unemployment insurance is a social insurance program which provides temporary and partial earnings replacement for involuntary unemployed individuals with recent employment. UI, being a social insurance program, is not means tested (limited to those with low income) and eligibility is a function of earnings history. States administer their programs and set payroll taxes and benefit levels. Workers pay taxes while employed and receive benefits for a fixed duration, with replacement rates

²¹ Technically, PRWORA limited receipt of food stamps to 3 months in a 3-year period for able bodied adults aged 18-49 with no dependents who are not working, in a work program, or doing workfare. Individuals are exempt if they care for a child, are unable to work or are pregnant. States can exempt 15% of individuals, and can get this provision waived if the unemployment rate was above 10% or the state was eligible for state extended unemployment benefits or there were not enough jobs.

averaging 47 percent (U.S. Department of Labor 2010). The extended benefit program extends receipt of unemployment compensation beyond the 26 week maximum when state unemployment rates and/or the share of the insured who are claiming benefits are high. Funding for the extended program is shared by the states and the federal government. Lastly, in most major downturns, Congress has enacted emergency extensions to unemployment, such as the current program which in most states extends benefits up to 99 weeks. Recently, these emergency extensions are fully federally funded.

While unemployment compensation plays a central role in recessions, it is often not considered part of the “safety net” because it is primarily providing insurance and is funded through worker contributions. We mention it here, in our interest in welfare reform and the safety net, for three reasons. First, given the increase in employment among the potentially welfare-eligible population (see Figure 6 discussed below), unemployment compensation may be increasing in importance for low income families. Second, while not means tested, replacement rates fall with earnings, providing greater protection for lower wage workers. Third, the emergency federal benefit extensions such as the recent ones increasing maximum UI benefit spells to 99 weeks tend to be explicitly countercyclical, and are passed by Congress in response to bad economic times. While these emergency programs are typically short lived, they are a large share of dollars when in place (for example, Table 3 shows that in 2009, emergency benefits were about \$44 billion compared to a combined \$88 billion for regular and extended benefits).

D. The transition from out-of-work to in-work assistance for the poor

As discussed above, the EITC is one of the most costly cash or near cash assistance programs. The EITC functions as an earnings subsidy and as such is only extended to working families. The expansion of the EITC, facilitated through tax acts in 1986, 1990 and 1993, has featured prominently in the movement toward more ‘in-work’ assistance in the U.S. safety net. However, the emergence of TANF has also been an important part of this transition. Virtually all

TANF policies are designed to increase work: work requirements, time limits, and a lowering of the benefit reduction rate. In addition, under TANF, states have the flexibility to use their federal block grant funding toward assistance other than cash benefits: examples include child care subsidies, transportation, training, and diversion payments. To illustrate the importance of these trends, Figure 5 shows per capita real (2009 \$) spending from 1980-2009 for families receiving cash grants through AFDC/TANF as well as total TANF expenditures and the EITC. (We also show food stamps because it too serves the working poor.) The expansion of the EITC between 1986 and 1999, coupled with the decline in cash welfare expenditures beginning with waivers in the early 1990s, represents a tremendous change in the incentives faced by low income families with children. Importantly, the post-welfare reform trend in total TANF expenditures gives a somewhat different picture concerning welfare funding—in fact total funding has been pretty constant (in real terms) over the last 10 or more years. Unfortunately, the state reporting requirements for non-cash TANF expenditures are minimal, and thus we know very little about who receives this funding and what it is spent on.²² Nonetheless, these changes illustrate an important transition in the U.S. from out-of-work aid to in-work aid for low income families with children.

The result of these policy changes, coupled with the strong labor market of the late 1990s, was a historic increase in employment for single women with children. Figure 6 presents the percent of women ages 20-58 with any weeks of work last year for single women heading families with children, married women with children in their families, and single women without children in their families between 1980 and 2009. Between 1992 and 2000 the employment of single women with

²² In the March CPS from 2001 to 2009, individuals were asked about whether they obtained transportation assistance or child care assistance so they could work or go to school or training as well as whether they obtained job readiness training or attended a job search class or job club or participated in GED classes or a community service job to receive cash assistance. We combined these into two household level variables (transportation or child care and job readiness/job search/GED/community service). While these need not all be funded by TANF, surely some are. From 2000-2008, 2.5% of households contained someone getting child care assistance or transportation assistance; 3.4% of households had someone in job readiness/job search/GED/community service, compared to 3.8% of households with someone who got public assistance income. Furthermore, most of the households with cash welfare didn't get either of the two other supports and vice versa; for households with a child under 18, of those in households getting cash welfare, only 30% had someone getting one of these other non-cash benefits, while of those getting the non-cash benefits, only 21% got public assistance income.

kids rose by 15 percentage points, while there were minimal changes for the other groups of women. This trend suggests that outcomes for these families will be more procyclical given their greater connection to the labor market.

Cycles and Participation in Safety Net Programs

Figure 7 presents cash welfare and food stamp caseloads from 1980 to 2009. These data come from administrative sources rather than self reports from household surveys (see data appendix for details). To account for changes in population over this period, we show the ratio of the caseload to the total population.²³ We also provide shading to indicate the annual contractions and a vertical line to indicate 1996 welfare reform. Several observations can be made from Figure 7. First, throughout the pre- and post-welfare reform periods, many more families receive food stamps compared to cash welfare. Second, cash welfare caseloads dramatically declined in the period around welfare reform, and have remained low since that time. Third, compared to cash welfare, the food stamp caseload shows a stronger countercyclical tendency, at least during the early part of the period.²⁴ Fourth, since 2000 the trend in the TANF caseload bears little relationship to the national business cycle. Notably, there has been only a very small increase in the TANF caseload in the current recession, despite unemployment rates reaching over 10 percent in many states.²⁵

In Figure 8, we also return to our measure from table 1 for “any non-Medicaid, non-TANF/AFDC/other cash assistance safety net receipt” in the household, which we construct from the 1982-2010 March CPS data. Other than an increase in the early 1990s followed by a decline, this

²³ The caseload is essentially a count of families or households while the denominator is the number of persons, nationally. While it might be more intuitive to plot the number of recipients over the population, the caseload measure is more commonly used to abstract away from changes in the size of families receiving benefits. In practice, however, the recipient/population trends look quite similar to those presented here.

²⁴ Over the early 2000s, and culminating in provisions included in the 2002 farm bill, USDA implemented a number of provisions to expand food stamp access by allowing more state policy choices in recertification and reporting and funding some outreach. Danielson and Klerman (2009) look at the effects of these changes and changes in the labor market on food stamp caseloads through 2004.

²⁵ Towards the end of our period, in order to remain in compliance with various TANF requirements, some states have moved portions of their caseloads off TANF and on to new “solely state-funded” programs. Data collected by LaDonna Pavetti of the Center for Budget and Policy Priorities suggests that these solely state funded programs are relatively small and show small increases in this recession.

more comprehensive measure of participation in the safety net also shows a fair amount of cyclical variation.²⁶

Why might it make sense that the food stamp program and our broader measure of the non cash assistance safety net are more countercyclical than is cash welfare? As mentioned above, the implicit tax rates in cash welfare are high, much higher than those in the food stamp program. It is much more common for families with food stamps to also have earned income, while this is relatively uncommon for cash welfare recipients (see Table 2).

One should be cautious about drawing conclusions from such national trends, however. The problem, as already noted in Section 2, is that it is difficult to distinguish between changes due to labor market fluctuations and changes due to reforms in the programs themselves. For example, the fall in the cash welfare caseload in the late 1990s has been shown to be a function of both the strong economy as well as welfare reform (for example, see Council of Economic Advisors 1997, Blank 2001, and Ziliak et al. 2000). To separate out the impact of welfare reform from labor market fluctuations, our empirical model (below) uses disaggregated data and takes advantage of rich variation in cycles and reform across states and time.

4. WELFARE REFORM AND THE IMPACT OF CYCLES ON FAMILY WELL BEING

In this section, we present our central empirical results for the impact of welfare reform on family well-being over the business cycle. We present new results that build on the models used in two separate literatures. The first related literature examines the impact of business cycles on family economic outcomes and explores how cycles differentially impact demographic groups (for example see Hoynes 2000, and Hines, Hoynes and Krueger 2001). The second related literature evaluates the impacts of welfare reform (for example see reviews by Blank 2002 and Grogger and Karoly 2005).

²⁶ We also include household participation in cash welfare and food stamps, as measured in the CPS, in Figure 8. We find it very encouraging that the trends in participation are so similar to the administrative data.

Clearly, the lack of perfect insurance and cushioning from the safety net implies that a recession will lead to reductions in family well being (e.g., increases in poverty, reductions in consumption, increases in doubling up, and so on). What we want to examine is how welfare reform has affected that tendency.

A standard approach in both of these sets of studies is to use variation across states to identify the impact of labor market cycles from policy changes. We adopt that approach here as well. In particular, we estimate the following model:

$$(1) \quad y_{st} = \alpha + \phi UR_{st} + \theta REFORM_{st} + \delta UR_{st} * REFORM_{st} + \gamma_s + \lambda_t + \eta_s t + \varepsilon_{st}$$

where s indexes state, t indexes year, UR is the state unemployment rate in year t and $REFORM$ is a measure of welfare reform for state s in year t .²⁷ Our equation controls for state fixed effects (γ_s), year fixed effects (λ_t), and linear time trends for each state ($\eta_s t$). When we use household survey data, we also control for demographics X_{ist} . Standard errors allow for arbitrary correlation within state. The main specifications for administrative caseloads are at the monthly level, and for them t denotes month rather than year.

We use this model to examine outcomes beginning with administrative caseload data on AFDC/TANF and food stamps and then move on to wide range of family well-being measures based on the March Current Population Survey. Using the CPS, we examine impacts on: official poverty, our own measure of alternative poverty, program participation (single programs as well as multiple programs), living arrangements (female headed families), employment among female heads of family units, measures of housing stress (“doubling up”-- households containing more than one family, household containing subfamilies, and others), health insurance coverage, receipt of child support and alimony, and general health. Finally, we present estimates for food insecurity and, using the

²⁷ We have also explored other measures of the cycle, including other labor market measures (employment to population ratios or employment growth), and alternatively GDP growth (which has a more natural mapping to the official recession dating). While the specific magnitudes differ, the qualitative conclusions are similar to those reported here.

Panel Study of Income Dynamics, family food consumption. Caseload models are weighted by the total population and the survey data models are weighted using the survey-provided weights.

The model controls for a main effect for welfare reform and a main effect for labor markets (the unemployment rate). The parameter of interest is δ , the interaction between the reform variable and the unemployment rate, and measures how the impact of cycles on the outcome y changes with welfare reform. With controls for fixed state effects and fixed time (year or month) effects, our estimates are identified off of changes within states over time. This method is commonly known as a difference-in-difference model.²⁸

This model, by controlling for an unrestricted time trend (λ_t), captures any elements that are common to all states in a given year. A downside of this approach is that the time effects absorb some features of the national cycle. However, the benefit of this approach is that it allows us to separately identify the impacts of welfare reform from labor market fluctuations. To illustrate the variation we are using, Figure 9 presents a series of scatter plots of state data, with the size of each state's population represented by the size of the circle representing the data point. On the x-axis is the change in state unemployment rates (in percentage points) over a contraction and on the y-axis is a change in a state outcome in percent terms over the same period. Panels (a)-(c) of Figure 9 show changes in annual unemployment rates and annual outcomes for 2007-2009 and panels (d)-(f) show changes in the same outcomes for 1979-1982. For each cycle, we show the percent change in cash welfare caseloads per capita (top graphs), the percent change in food stamp caseloads per capita (middle graphs),²⁹ and the percent change in official child poverty rates (bottom graphs). We have forced the scales to be similar between the two cycles for each outcome to provide better comparisons across the cycles. These figures show that there is considerable variation in the

²⁸Our central parameter, on the interaction between the unemployment rate and welfare reform, would still be identified if reform was captured by a national pre-post 1996 variable (because the unemployment rate still varies by state). However, we use state variation in reform, which we view as a more credible source of identification.

²⁹ Because our data on food stamp caseloads begins in 1980, panel (d) measures the percent change in food stamp caseloads between 1980 and 1982, but the change in unemployment rates from 1979 to 1982.

magnitude of the recessions across states. For example, between 2007 and 2009, state changes in the unemployment rate ranged from about 1 to 7 percentage points, and the change in child poverty varied from a reduction of 25 percent to an increase of nearly 100 percent. Further, they show a positive correlation between the severity of the recession(s) and the increase in official child poverty and program caseloads per capita.

We explore the effects of three measures of welfare reform. First, we use a state “pre post” design where *REFORM* equals 1 if the state has implemented a waiver or has implemented TANF.³⁰ Second, we use an explicit categorization of states based on their TANF and waiver policies. We focus on two dimensions of state policies: the length of time limits and the severity of their sanction policies. We adopt definitions and data from Danielson and Klerman (2008) in constructing these variables.³¹ For time limits, we define *short time limits* (less than 48 months), *long time limits* (48 months or longer), *adult time limits* (time limits only remove adults from aid), with the omitted group being state-year cells with no time limits (either pre-PRWORA AFDC rules or no time limit in TANF). For financial sanctions, we define *full sanctions* (immediate, full family sanction), *gradual sanctions* (gradual, full family sanction), with the omitted group being weak sanctions (either AFDC sanctions or no more stringent than AFDC sanctions in TANF).

With the administrative monthly caseload data, we use the policies in place that month. For CPS outcomes measured over the last calendar year such as program participation, income, poverty, and health insurance coverage, the main reform variable is measured as the share of the past calendar year that reform was in place and the time limit and sanction policies were coded according to what was in place in December of the prior year. For the other outcomes measured at the time of the CPS survey (living arrangements, health status), welfare reform is measured by whether the policy was in place as of March of the survey year.

³⁰ There is considerable variation in the timing and presence of waivers across states although there is minimal variation in TANF implementation, as all states implemented in late 1996, 1997, or 1998. See Table 1 of Bitler, Gelbach and Hoynes (2006) for implementation dates and an example of a paper using this identification strategy.

³¹ We thank Caroline Danielson for generously providing us with their data and coding.

Safety net caseloads

Table 4 presents estimates of the model using administrative data on participation in cash welfare and food stamp programs. The dependent variable is per capita caseloads at the state-month-year level for 1980 through 2009. State monthly unemployment rates are seasonally adjusted (although results are very similar if we use non-seasonally adjusted unemployment). We view the results here as a sort of “first stage;” they are useful to establish the basic relationship between welfare reform and the cyclical nature of safety net programs for low income families. Additionally, these caseloads are measures from administrative data and do not suffer from underreporting. Thus, they will provide us with a valuable benchmark for understanding whether the underreporting documented by Meyer and Sullivan and others has implications for analysis using state-year panels with state and year fixed effects (a host of such studies related to underreporting in the CPS and other Census surveys are discussed in Weinberg 2004 while Wheaton 2007 documents underreporting of receipt in the CPS). Finally, there has been considerable attention to the rising food stamp caseloads in the current recession (DeParle and Gebeloff, 2009) yet no prior research has identified whether welfare reform has contributed in any way to that rise.

Table 4 reports the coefficients on the state unemployment rate and the interaction between the unemployment rate and welfare reform. We present three specifications, one for each of the reform variables we discuss above. The dependent variable is the ratio of the caseload to the population (multiplied by 100) and unemployment rate is measured in percent. For cash welfare caseloads (column 1) the coefficient of 0.06 implies that a one percentage point increase in the unemployment rate leads to an increase in the scaled caseload/population by 0.06, which relative to the mean of 1.2 implies an effect size of 4.7 percent. Interestingly, food stamp caseloads show a similar effect size—a coefficient of 0.17 scaled by the mean of 3.5 implies an effect size of 4.9 percent.

A negative (positive) coefficient on the interaction between the unemployment rate and

reform implies that welfare reform led to a reduction (increase) in the cyclicalness of program participation (since program participation is both expected to be and is countercyclical). We expect that the impact of short time limits on cyclicalness should exceed (in magnitude) that of long time limits (and both should be larger in magnitude than the effect of the omitted group of no time limits). Adult time limits are generally the least stringent of the three—except this measure ignores the length of the time limit which also might be important. We expect the impact of full sanctions on cyclicalness to be greater in magnitude than the impact of gradual sanctions (and both should be larger in magnitude than the effect of the omitted group of no sanctions).

With the exception of the “any reform” specification, the results for AFDC/TANF caseloads imply that welfare reform is associated with a *decrease* in the cyclicalness of cash welfare. With the exception of the adult time limit, the results for food stamp caseloads imply that welfare reform led to an *increase* in the cyclicalness of food stamp receipt. However, only 4 of the 12 interaction coefficients reach statistical significance at the 10 % level, and 3 at the 5% level. Clearly, there is no evidence that welfare reform led to cash assistance caseloads being significantly more cyclically responsive.

Although not shown here, our results are highly robust to several alternative specifications. We find similar results if we use lagged unemployment rates, and if we allow a more flexible state trend (quadratic compared to the state linear trends in the main specification). Further, we find no evidence of nonlinear impacts of unemployment rates (we thought perhaps that an increase of unemployment from a higher base would lead to larger effects). Results are very similar if we restrict ourselves to the 1989-2010 period. Finally, both the food stamps and cash welfare results are robust to adding controls for the state maximum real AFDC/TANF benefits for a family of 3 (benefit levels are an important state cash welfare policy variable that changes throughout the pre and post welfare

reform period).³²

We conclude from these results that there is a positive, significant, and robust effect of the unemployment rate on cash welfare and food stamp caseloads. Further, welfare reform is generally associated with reductions in the cyclicalities of cash welfare participation and increases in the cyclicalities of food stamp participation, although not all interactions reach statistical significance.³³

Household and single female family head outcomes using the March Current Population Survey

We next move on to our analysis using the March CPS using data from the pooled 1980-2010 surveys. Our primary focus is on outcomes for single female headed families with children (Table 5) or for households containing at least one child under 18 (Tables 6 and 7). We estimate equation (1) above and we also include controls for the race/ethnicity, gender (where appropriate), age, and education of the woman or the household head. We also examine impacts on subsamples including single female family heads with 12 or fewer years of education, households whose head has 12 years of education or fewer, and households with at least one family unit with a single female head and a child. These alternate subsamples are intended to select groups which are relatively more disadvantaged and also more likely than the general population to have been at risk of participating in the safety net in general and cash welfare in particular.

We start by examining impacts on earnings, income, and cash welfare income for a sample of single mothers with children. This is a useful starting place because many prior studies have shown that welfare reform has led to increases in employment for this group (see Blank 2002 for a review). These results (in Table 5) show robust and statistically significant evidence that cash welfare income is countercyclical and earnings and income are procyclical. A 1 percentage point increase in the

³² We thank Rebecca Blank for suggesting we control for this variable especially since our time period 1980-2009 contains a long period prior to welfare reform. Our results are also unchanged if we incorporate the state solely funded program caseload (obtained from Donna Pavetti and starting in 2006) into our measure of state cash welfare caseloads.

³³ We also examined similar models for unemployment insurance finding stronger countercyclical responses of UI than of cash welfare or food stamps to the unemployment rate (not surprisingly) but finding no evidence that use of unemployment insurance over the business cycle has been affected by welfare reform.

unemployment rate leads to a \$78 (in real 2009\$) increase in public assistance income in the any reform specification, about a 6% increase. The same 1 percentage point increase in unemployment leads to about a 1 percent decline in wage and salary income and a 1 percent decline in total (nuclear) family income in the any reform specifications. Further, the interactions between welfare reform and unemployment are consistently negative and 8 of the 12 interactions are statistically significant at the 10% level while 7 are significant at the 5% level. A negative coefficient implies that welfare reform led to a *decrease* in the cyclicalities for cash welfare income (since the main effect on unemployment is positive showing cash welfare receipt is countercyclical) and an *increase* in the cyclicalities for earnings and income (since the main effect is negative showing earnings and total income are procyclical). This is important because if earnings are more procyclical after reform—falling more in the current recession than they would have pre-welfare reform—then greater counter-cyclicalities in the safety net is necessary to maintain the same level of well-being. This combination (less insurance through cash welfare and more vulnerability in recessions) suggests a bad combination of effects. To get a sense of the magnitudes of the interaction coefficients for the any reform specifications, a one percentage point increase in the unemployment rate post reform would lead to an additional decrease in public assistance income of -\$4 or about -0.3 percent (95% confidence interval of -4.9% to 4.3%), an additional decrease in wage and salary income of -\$498 or about -2.8% (95% confidence interval of -4.2% to 0.3%), and a decrease in total family income of -\$423 or about -1.6% (95% confidence interval of -3.3% to 0.1%). These suggest increases in unemployment such as those during the recent recession could lead to economically meaningful decreases in earnings and income post-reform. In results not shown, coefficients on the unemployment rate and the interaction with reform are larger in magnitude (more negative) for wage and salary and total income for the sample of low education single female heads.

We go on to present our central family well being measure—poverty—in Table 6 for all households with children. We present official poverty and alternative poverty, and we measure

poverty at the household level. We construct alternative poverty based on the existing official thresholds and an expanded measure of household income which adds the following to money income: the cash value of food stamps, school lunch, and housing subsidies; and subtracts from income payroll taxes, and net federal and state taxes (including the EITC).³⁴ To explore outcomes across the distribution, we look at the fraction of families below 50% (“extreme poverty”), 100%, and 150% of the poverty threshold, using total household cash income and our alternative measure of resources including some transfers and taxes. Here we present results for our pre-post measure of welfare reform: *any reform*. For each specification, we present the coefficients on the main effect for the unemployment rate and its interaction with welfare reform variable.

Table 6 shows that higher unemployment rates lead to statistically significant increases in official and alternative poverty as well as being below 50% and 150% of poverty using either measure. The any reform results consistently show that the countercyclicality of poverty increased post-welfare reform (positive interaction added to positive main effect). This is true for our preferred alternative poverty measure, it holds across all cuts of poverty, and the effects sizes are fairly similar across rows (all between 1 and 2 percent as a share of the mean of the dependent variable). Interestingly, it only reaches statistical significance for 150% of official poverty.³⁵ For the low education household head sample (not shown in table), findings are similar, magnitudes are about the same as a share of the mean, and the positive interaction coefficient is statistically significant at the 5% level for 150% of official poverty, and at the 10% level for 150% of alternative poverty.

We present our final set of results for CPS outcomes in Table 7. The top panel shows any household participation in the safety net (cash welfare, food stamps, SSI, and any non-Medicaid non-AFDC/TANF safety net). The bottom panel shows the household measures for “anyone uninsured

³⁴ We constructed this alternative measure ourselves, making every effort to maintain consistency over time while including as many components of CPS experimental poverty measures as possible (e.g., Dakaker, 2005). This measure is only available for a subset of survey years: 1980-1987, 1989-1990, and 1992-2008 (2009 calendar year data have not yet been released).

³⁵ Results using time limit or sanction severity are less consistent.

last year,” demographic stress (more than one family in the household and at least one has a child), presence of any female head in the household, and presence of any woman in the household who is “disconnected” based on Blank and Kovak (2008) (a disconnected woman is a single female family head aged 18-58 living with a child with no income from public assistance or earnings³⁶). To identify a group with higher likelihood of being affected by welfare, all of the outcomes in this table are estimated on the sample of households with children with a low educated head (twelve years of education or less).

To begin, we use our CPS sample to examine participation in cash welfare and food stamps. We present this for two reasons. First, given concerns about underreporting in the CPS, it is informative to compare these results to those from the administrative data. If they are similar, it lessens our concerns about the importance of the underreporting in a pooled cross-section analysis with demographic controls and state and year fixed effects.³⁷ The qualitative conclusions using the CPS sample match the administrative results well: cash welfare and food stamps are both countercyclical (positive main effect on unemployment) and the magnitudes are ball park similar to those for the administrative data. For cash assistance, a 1 percentage point increase in unemployment leading to about a 0.4 percentage point increase in the probability someone in the household had cash assistance income last year (this is about a 3.3 percent increase). For food stamps, a 1 percentage point increase in the unemployment rate leads to a 1.0 percentage point increase in the probability someone in the household got food stamps last year (or about a 5 percent increase). The coefficients on the interaction of reform and the unemployment rate are also both positive, and the pattern of significance is similar to that in the administrative data (the p-value for the interaction for welfare is

³⁶ More precisely, we use something like Blank and Kovak’s definition 1. We also explored 2 other definitions: being a single female family head aged 18-58 living with a child whose real earnings is less than \$2000 (real 2009\$) and real income from public assistance is less than \$1000; and adding to the previous restriction that real income from SSI is less than \$1000. Results were similar across the measures.

³⁷For another approach to dealing with underreporting in a recent analysis of trends in poverty see Scholz et al. 2009.

0.105, while that for food stamps is 0.023).³⁸ The effect of a 1 percentage point increase in the unemployment rate on food stamp receipt increases by about 4% post-reform. Our conclusion from these specifications is unchanged from the administrative caseloads—both programs are cyclically responsive, while only the food stamp program has become significantly more so after reform.

Moving on, we find that SSI (cash welfare for disabled which includes some families) bears little relationship to the business cycle, nor does this change with welfare reform. The final column in the top panel shows our comprehensive measure of any non-Medicaid, non-AFDC/TANF safety net participation. The results here are very clear—overall safety net participation is strongly countercyclical (main effect is positive and significant, and a 1 percentage point increase in unemployment leads to about a 2.1% increase in receipt) and the cyclicity significantly increases after welfare reform (interaction is positive significant, and again, a 1 percentage point increase in unemployment after reform leads to an additional 2.1% increase in receipt). Thus a picture is emerging that while AFDC/TANF protection is falling or staying the same post-reform, protection through other safety net programs is increasing.

The bottom panel of Table 7 presents other family outcomes. The propensity to be uninsured and “doubling up” increases with unemployment, yet the propensity for the household to contain a female head or a disconnected woman does not vary significantly over the cycle. Interestingly, all of the interactions are positive implying that welfare reform is associated with an increase in the cyclicity of these adverse outcomes. However, these results are only suggestive as none reaches statistical significance. We also considered a host of other outcomes, none of which showed significant changes in their cyclicity after reform, including presence of disability income in the

³⁸ They should not be identical for the following reasons. First, the administrative data are monthly, and define the main reform variable as a dummy for implementation by a particular month while the CPS data is annual, with the reform variable being the share of the calendar year reform was in place. Second, the sample in the administrative regressions is everyone (with the dependent variable being total caseload in the numerator and total population in the denominator) while the CPS sample is households with children and a low educated head (with the dependent variable being presence of someone getting the benefit in the household). Third, the CPS welfare variable includes other forms of public assistance such as general assistance.

household, presence of any related subfamily with a child, presence of more than one family with a child, health, or the other measures of disconnected women.

Other Outcomes

The CPS income and poverty measures that we describe above are important for capturing the economic well being of families affected by welfare reform while some of the other outcomes matter for capturing other dimensions such as health insurance coverage or doubling up. A limitation of the income and poverty results is that it is well known that welfare and other government transfers are underreported in the CPS and other household surveys (Meyer, Mok, and Sullivan 2008). This is what motivated our use of both administrative data and an alternative measure of poverty in the micro data. Furthermore, households may save or borrow and may receive private transfers that are not well measured in household survey data.

One common alternative measure of well-being considered in the development literature is consumption, which may be easier to measure in some contexts. Meyer and Sullivan (2008) have used expenditures and time use as alternative measures of well being. They have shown that for single woman headed families, families low in the income distribution and low in the expenditure distribution experienced different changes from the 1990s to the 2000s. The public use version of the Consumer Expenditure Survey does not contain state identifiers, and only covers the first quarter of 2009, thus we leave it for future work.

We have estimated models for food expenditures using data from the Panel Study of Income Dynamics (available only through 2005). We estimated equation (1) on a sample of female heads of household aged 25-61 living with children from 1980-2005. The PSID results, not shown here, show that increases in unemployment rates lead to reductions in food consumption, with no evidence that the cyclical change changed with reform (although these estimates had large standard errors relative to the estimated coefficients). We also estimated models for food insecurity, which come from the

December CPS supplements.³⁹ The drawback of the food insecurity measures is because that they are only consistently available beginning in 2001 (our sample goes through 2008), nearly all variation with which reform's effects on cyclicity are identified are cross-sectional, and thus we do not focus on them.

5. DISCUSSION

Prior work indicates that participation in cash welfare has decreased with the transition from AFDC to TANF (CEA 1997, Ziliak et al 2000, or more recently Danielson and Klerman 2008). It is not fully understood why, but possibilities include an interest in “banking” benefits for future periods (e.g., Grogger and Michalopoulos, 2003), the “hassle” with complying with work requirements, individuals being removed from the roles by reaching time limits, changes in what the state spends TANF money on, and so on. This might lead one to anticipate that the cyclical response of cash welfare would be less strong after welfare reform.

Our view of the results is that cash welfare has become less cyclical after reform or at least not become more cyclical, although we caution that coefficients do not uniformly support this view and few reach statistical significance. By contrast, our findings for food stamps and “any safety net participation” suggest an increased sensitivity to the business cycle after reform; for both, participation is countercyclical (rises when unemployment rates rise), and becomes more so after reform.

The descriptive evidence about the role eligibility and take-up play in informing these findings is informative. Our own descriptive work and the descriptive work of others (e.g., Zedlewski 2008) suggest that use of cash assistance has not increased with either the mild recession of 2001 or the current recession (with the caveat that unemployment may not have peaked yet). The available evidence suggests that the decline in caseloads post-welfare reform (and the lack of increase in the

³⁹ Craig Gundersen and Feeding America have generously provided us with tabulations on state-year rates of food insecurity.

post-welfare reform recessions) is explained almost completely by declines in *take-up*, rather than declines in *eligibility* (e.g., being timed out). For example, U.S. Department of Health and Human Services (2008) estimates that eligibility for AFDC/TANF has gone from 5.7 million families in 1995 (all are for fiscal years), to 5.1 million in 1999, 4.6 million in 2001, 4.8 million in 2003, and 5.3 million in 2005 (the most recent year available).⁴⁰ By contrast, take-up rates have fallen steeply, from 84% in 1994, to 48% in 2001, to 46% in 2003 and 40% in 2005. At the same time, the number of eligible households for food stamps went up from 15 million in 1995 to 15.2 million in 2001, 17.9 million in 2003, and 18.1 million in 2005, while take up declined from 69% in 1995 to a low of 48% in 2001, before rising to 59% in FY 2005. This suggests that the cyclical response in caseloads post-welfare reform is driven primarily by changes in take-up.

It is of interest to know about the effects of the great recession on the outcomes of the groups who are no longer participating in welfare as well as those that are. Unfortunately, not only is it hard to statistically identify groups who would have been at high risk of participating but are no longer doing so, but many of the outcomes of interest are not well-measured or only measured in small samples. Thus, we again turn to descriptive evidence.

To the extent that women were able to leave welfare through employment, have they been able to stay employed through recessions? Lerman (2005) tells us that single mothers lost some ground during the 2001 recession, but still were more likely to be employed or in the labor force than before welfare reform. For workers who might end up unemployed, are they able to access other parts of the safety net such as Unemployment Compensation? O'Leary (2010) presents findings from administrative data about experiences of welfare leavers from four states who left for work and subsequently became unemployed. 79% of the leavers experienced a new spell of unemployment within 3 years, yet only 24% of these applied for unemployment insurance (far below application

⁴⁰Estimated are based on the Urban Institute's TRIM3 microsimulation model, which uses March CPS data (adjusted for non-response) and simulates eligibility for AFDC/TANF. The report also reports results from a Mathematica microsimulation model of food stamp eligibility (Cunyngham et al., 2010).

rates in the general population) and only 50% of the applicants eventually received UI benefits (again low). In our pooled March CPS data, about 11% of households with children who had some public assistance income from 1979-2009 also had income from workers compensation, unemployment compensation, or veteran's payments. This ranged from 7.3% of households in 2007 to 16% of households in 2009. What about the most disadvantaged? There has been a growing concern about the part of the pre-reform welfare caseload that was least ready to work. Several recent studies have addressed a group known as the disconnected, single female headed families with children who are neither participating in cash welfare (TANF or SSI) nor have substantial earnings. Some share of this group is undoubtedly made up of welfare leavers, and some of the leaver studies can inform us about this group. Blank and Kovak (2008) find that 20% of single female headed families with children under 200% of poverty are "disconnected". How these families are surviving is puzzling. More data and research is needed in order to know how to address this issue.

6. CONCLUSION

The passage of the 1996 welfare reform bill led to sweeping changes to the central U.S. cash safety net program for families with children replacing the AFDC program with TANF. The key provisions of that law included imposing work requirements, financial sanctions and a lifetime time limit for receipt of cash welfare. The imposition of lifetime time limits are particularly noteworthy because they overturn more than 60 years of entitlement to cash welfare for low income families with children in the United States. Despite dire predictions about poverty and deprivation, existing research shows that with reform, caseloads declined and employment increased, with no detectible increase in poverty or reduction in child-wellbeing.

Several important factors likely contributed to "why the experts were wrong." It turns out that as welfare reform hit, earnings subsidies for low income families with children grew through expansions in the Earned Income Tax Credit. Further, the labor market of the late 1990s (in the five

years post welfare reform) offered the most favorable conditions for low skill workers in many decades. Finally, it seems that these new and stringently applied pro-work policies—time limits and work requirements—led to larger behavioral responses than was expected based on models of the pre-welfare reform period (a period which of course did not include these policy instruments).

We re-evaluate welfare reform in light of the severe recession which began in December 2007. In particular, we examine how the cyclical response of program caseloads and family well-being has been altered by the implementation of welfare reform. We find that post-welfare reform, AFDC/TANF is providing less protection or certainly no more protection in an economic downturn, but the non-cash welfare safety net (and especially food stamps) is providing significantly more protection. Using both official and our own alternative measures poverty, the point estimates imply that post-welfare reform, the increase in poverty in an economic downturn is greater than it would have been pre-welfare reform. These results are suggestive, however, given that few are statistically significant, although the findings are statistically significant and robust for being under 150% of official poverty. We find no significant effects for the effect of reform on the cyclical responsiveness of food consumption, food insecurity, or health, or on a number of other measures including doubling up, lack of health insurance, and presence of a single female family head.

Overall, we find no evidence that the prevalence of negative family or household well-being in an economic downturn has improved post-welfare reform; and some weak evidence that it has worsened. Further, it appears that food stamp benefits are playing an important role in mitigating adverse impacts on income in the post-welfare reform recession. This suggests a policy recommendation for continued current funding of the food stamp program, should these results hold up with more data and for a broader range of outcomes.

A limitation to our work derives from the fact that we (and others) find a portion of children to be living in families that are “disconnected”—with limited income and use of public support. Ideally, we would zero in on this particularly fragile group. However, doing this requires data on

family consumption, child and family well-being and other child outcomes as well as family history of welfare and other public assistance and employment and income for large samples of families with children by state and year, but this data is not available.

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Appendix: Data and Sources

Contractions/Expansions: We identified annual periods of contractions as the range of years from lowest to highest annual unemployment and the expansions as the range of years from highest to lowest annual unemployment rates that are near the beginning and end points of the various NBER recessions. We pooled the 2 early 1980s recessions and stop in 2009. The contraction periods are 1979-1982 (NBER recessions: 1/1980-7/1980, 7/1981-11/1982), 1989-1992 (NBER recession: 7/1990-3/1991), 2000-2003 (NBER recession: 3/2001-11/2001), and 2007-2009 (NBER recession 12/2007-6/2009). The expansion periods are thus 1982-1989, 1992-2000, and 2003-2007. The end period of 2009 for the most recent contraction may end up not being the peak annual unemployment period, but is the last year for which the bulk of our data are available.

AFDC/TANF administrative data on caseloads and expenditures: AFDC caseloads were downloaded from http://www.acf.hhs.gov/programs/ofa/data-reports/caseload/caseload_archive.html and TANF caseloads (which beginning in 2000 include Separate State Program/Maintenance of Effort) are from <http://www.acf.hhs.gov/programs/ofa/data-reports/index.htm>. Unpublished data on AFDC cash expenditures (and combined AFDC/TANF expenditures) for 1980-2000 provided by Don Oellerich at ASPE/HHS. TANF expenditures are from <http://www.acf.hhs.gov/programs/ofs/data/index.html>. TANF cash expenditures are defined as "Column B of Table F-3, combined spending of federal and state funds with ARRA expended in Fiscal Year 2009, line 5a, basic assistance." TANF total expenditures includes all expenditures (maintenance of effort from the state and federal sources, including separate state programs, combined federal and state expenditures on assistance, non-assistance, and both together, "Table F - Combined Spending of Federal and State Funds Expended in FY XXXX"). Federal stimulus ARRA is included in the 2009 data. 1979 AFDC cash assistance numbers came from the Green Book (House Ways and Means Committee). The average monthly TANF benefit (used in Table 3) is the average family benefit for 2006, inflated to be in 2009 real \$ from http://www.acf.hhs.gov/programs/ofa/data-reports/annualreport8/TANF_8th_Report_111908.pdf, DHHS (2009). All AFDC and TANF data are for the month or the Fiscal Year (year ending Sept 30).

Food Stamp administrative data on caseloads and expenditures: Caseload and expenditures by month for calendar years 1980-2009, and for 1/2010-3/2010 come from unpublished USDA data generously provided by Katie Fitzpatrick and John Kirlin, of the Economic Research Service, USDA.

Unemployment Insurance administrative data on caseloads and expenditures: Data for calendar years 1980 (or in some cases, a later starting date) through 2009 come from unpublished data provided by the Office of the Chief Economist at the Department of Labor. The average benefit is the weekly average benefit amount for 2009, quarter 4 from http://workforcesecurity.doleta.gov/unemploy/content/data_stats/datasum09/DataSum_2009_4.pdf.

Unemployment for U.S. and by state: Number of unemployed and unemployment rate for U.S. and states, annually and by month, come from the Bureau of Labor Statistics' Current Population Survey, accessed from: <http://www.bls.gov/lau/>. The monthly numbers are seasonally adjusted.

Population for U.S. and by state: U.S. population from the Economic Report of the President, <http://www.gpoaccess.gov/eop/2010/B34.xls>. State population is from National Cancer Institute SEER data (<http://seer.cancer.gov/popdata/download.html>) for 1980-2007, and from US Census for 2008 on.

Deflator: The CPI-U is from the Economic Report of the President, <http://www.gpoaccess.gov/eop/tables10.html>.

Census poverty rates: Official poverty all persons, and official poverty children come from the US Census Bureau Report “Income, Poverty, and Health Insurance Coverage in the United States: 2009”, report P60-238, Tables B-1 and Table B-2. NAS alternative poverty numbers come from tabulations provided by the US Census Bureau at <http://www.census.gov/hhes/www/povmeas/tables.html>, the spreadsheet labeled “Official and National Academy of Sciences NAS Based Poverty Rates; 1999 to 2008”, downloaded from http://www.census.gov/hhes/www/povmeas/web_tab4_nas_measures_historical.xls. We report “MSI-NGA-CE”, which means imputed medical out of pocket expenses are subtracted from income (MSI), no geographic adjustments are made (NGA), and the thresholds are based on consumption data from the Consumer Expenditure Survey (CE).

EITC: Data on recipients and the total tax cost of the EITC for 1980-2008 is from Tax Policy Center’s Tax Facts on Historical EITC, for Fiscal Years 1976-2010, downloaded from <http://www.taxpolicycenter.org/taxfacts/displayafact.cfm?Docid=37>.

Other sources for Tables 1 and 3:

- *Consumption:* Published statistics for expenditures by “Quantiles of income before taxes” available at www.bls.gov/cex/csxstnd.htm.
- *Food insecurity:* Based on Food Security Supplements to the December Current Population Survey for 2001-2008, compiled by Craig Gundersen and Feeding America, and graciously shared with us by Gundersen.
- *Health insurance and delayed/didn’t get care because of cost:* Published data contained in Health Insurance Coverage Trends, 1959–2007 (<http://www.cdc.gov/nchs/data/nhsr/nhsr017.pdf>) as well as annual reports based on National Health Insurance Survey (“Summary Health Statistics for the U.S. Population: National Health Interview Survey” for various years).
- *Homeless:* From US Department of Housing and Human Development, Office of Community Planning and Development, annual reports on homelessness (“Annual Homeless Assessment Report to Congress”) for 2007 and 2009.

Table 1
Unemployment, Safety Net Program Expenditures and Family Well-Being, Changes Across
Contractions and Expansions

	Contractions					Expansions		
	1979-1982	1989-1992	2000-2003	2007 recession		1982-1989	1992-2000	2003-2007
				2007-2008	2007-2009			
Unemployment rate (percentage point change in annual average)	3.9	2.2	2.0	1.2	4.7	-4.4	-3.5	-1.4
Safety net (percent change in per capita real expenditures)								
AFDC/TANF (assistance payments)	-14%	10%	-17%		-2%	-2%	-63%	-24%
AFDC/TANF (total expenditures)	n/a	n/a	-3%		8%	n/a	-17%	-13%
Food Stamps	11%	48%	36%		68%	-10%	-48%	19%
Unemployment Insurance, state regular plus extended benefits	n/a	52%	84%		150%	-56%	-41%	-33%
Unemployment Insurance, All	n/a	132%	132%		277%	n/a	-61%	-47%
Earned Income Tax Credit	-37%	68%	9%	-0.4%		171%	84%	7%
Family well being, employment and poverty (percentage point change)								
Official poverty, all persons	3.3	2.0	1.2		1.8	-2.2	-3.5	0.0
Official poverty, children	5.5	2.7	1.4		2.7	-2.3	-6.1	0.4
Official extreme poverty, children	n/a	2.1	1.2		1.5	-1.7	-3.4	-0.1
NAS alternative poverty, all persons	n/a	n/a	0.5	0.6		n/a	n/a	1.6
With job last week, single women w/children	-1.9	-1.4	-3.3		-3.9	3.0	14.6	0.5
Out of the labor force last week, single women w/children	-0.8	0.7	0.6		0.4	-0.8	-11.9	1.8
Any safety net benefit (non-Medicaid, non-cash assistance), children	n/a	4.3	1.3		4.5	-2.2	-3.9	-1.1
Family well being, consumption (percent change in real expenditures) and food insecurity (percentage point change)								
Total consumption, lowest income quintile	n/a	-7.8%	-3.5%		2.0%	n/a	15.6%	-1.8%
Food consumption, lowest income quintile	n/a	-9.2%	11.3%		11.5%	n/a	-3.9%	-15.2%
Food insecurity	n/a	n/a	n/a	3.2		n/a	n/a	0.2
Family well being, demographic and housing stress (percentage point change)								
Child in female headed family	2.9	1.7	0.4		0.2	1.4	-0.7	0.8
Child in household with more than one family	2.9	1.0	-0.1		0.2	0.3	0.0	1.0
Health insurance and access (percentage point change)								
Uninsured, persons<65	1.9	1.2	-0.3		1.0	1.7	0.0	0.1
Delayed or had no care because of cost	n/a	n/a	1.4		3.4	n/a	n/a	0.8
Homeless (change in number of persons)								
On the street (point in time)	n/a	n/a	n/a		-44,000	n/a	n/a	n/a
Used shelter/transitional housing (ever over year)	n/a	n/a	n/a		-30,000	n/a	n/a	n/a
Used shelter/transitional housing, in family (ever over year)	n/a	n/a	n/a		62,000	n/a	n/a	n/a

Notes: For the current recession, changes are reported between 2007 and 2008 (rather than 2007 and 2009) when 2009 data are unavailable. Unemployment, program expenditures, official poverty, consumption, food insecurity, and homelessness are directly available from published sources. Alternative poverty (inclusive of non-medical transfers, net of taxes), employment, any safety net participation, and living arrangements are authors' calculations from March Current Population Survey data. For details on sources and methods, see data appendix.

Table 2
 Characteristics of families receiving public assistance income in 1995 and 2009, and all families in 1995

	Families with children receiving cash welfare, 1995	All families with children, 1995	Families with children receiving cash welfare, 2009
<u>Characteristics of head</u>			
Percent white, non-Hispanic	39.0%	69.7%	37.5%
Percent black, non-Hispanic	33.9%	13.6%	34.4%
Percent Hispanic	21.5%	12.0%	23.9%
Percent female	78.4%	36.7%	82.2%
Percent education <12 years	40.5%	15.8%	33.8%
Percent education = 12 years	34.0%	31.8%	33.4%
Percent education > 12 years	25.5%	52.4%	32.8%
Percent never married	37.6%	8.8%	45.1%
Percent divorced/deparated/widowed	34.7%	18.4%	27.4%
Percent married	27.7%	72.9%	27.6%
Average age	33.9	38.2	35.4
Percent insured	96.6%	85.6%	94.4%
Percent working, last week	30.6%	80.3%	34.1%
Percent out of the labor force, last week	56.0%	14.3%	49.1%
<u>Characteristics of family/household</u>			
Household received food stamps	86.5%	14.4%	82.1%
Household received public/subsidized housing	32.8%	6.0%	32.1%
Household owns home	16.6%	64.3%	19.9%
Child insured, percent	98.9%	87.4%	99.1%

Notes: Authors' tabulations of 1996 March Current Population Survey data for households with at least one child and receiving public assistance income (AFDC or general assistance) in calendar year 1995, households with at least one child in calendar year 1995, and households with at least one child and receiving public assistance income (AFDC or general assistance) in calendar year 2010. Demographics and living arrangements refer to the time of the survey (March 1996/2010) and income and program receipt refer to calendar year 1995/2009.

Table 3
Expenditures and Participation in Cash or Near-Cash Safety Net Programs

	Number of recipients (thousands)	Total benefit payments (millions of 2009\$)	Average monthly benefit	Estimated number of children removed from poverty (millions, in 2005)
Cash welfare, Temporary Assistance for Needy Families	1,796	\$9,324	\$397	0.8
Food assistance, Food Stamp Program	15,232	\$50,360	\$276	2.2
Federal Earned Income Tax Credit	24,757	\$50,669	\$171	2.6
Cash welfare for disabled, Supplemental Security Income, nonaged caseload	6,407	\$39,578	\$517	1.0
Unemployment Compensation - Regular State Benefits	n/a	\$79,600	\$1,335	n/a
Unemployment Compensation - Extended Benefits	n/a	\$7,574	n/a	n/a
Unemployment Compensation - Emergency Benefits	n/a	\$44,246	n/a	n/a
Unemployment Compensation - Total	5,757	\$131,420	n/a	n/a

Notes: Data for all programs refers to calendar year 2009 and are in 2009\$ except the EITC which refers to 2008 (and amounts are in 2008\$) and TANF which is for fiscal year 2009 (year ending 9/30/09). For TANF, Food Stamps, and Unemployment Compensation program data sources, see the data appendix. EITC data are from the Tax Policy Center (2010) and SSI data are from Social Security Administration (2010). Counts of number of children removed from poverty are from Sherman (2009). SSI includes federal and state supplement, EITC includes total tax cost (not just refundable portion).

Table 4
Impacts of Cycles and Welfare Reform on Cash Welfare and Food Assistance Caseloads

	AFDC/TANF Caseload/Population * 100			Food Stamp Caseload/Population * 100		
State unemployment rate	0.058***	0.066***	0.065***	0.171***	0.187***	0.159***
	(0.010)	(0.011)	(0.013)	(0.027)	(0.024)	(0.020)
Unemp. rate * any reform	0.012			0.051		
	(0.023)			(0.042)		
Unemp. rate * short time limit		-0.026			0.020	
		(0.022)			(0.059)	
Unemp. rate * long time limit		-0.039*			0.000	
		(0.020)			(0.045)	
Unemp. rate * adult time limit		-0.046***			-0.173***	
		(0.015)			(0.036)	
Unemp. rate * full sanction			-0.018			0.138**
			(0.013)			(0.056)
Unemp. rate * gradual sanction			-0.010			0.105
			(0.019)			(0.063)
Mean of dependent variable	1.239	1.239	1.239	3.475	3.475	3.475
Observations	18,360	18,360	18,360	18,417	18,417	18,417
R-squared	0.95	0.95	0.95	0.9	0.91	0.91

Notes: Regressions are based on monthly data on per capita program caseloads by state and year from January 1980 through December 2009 (for AFDC/TANF) and January 1980 through March 2010 (for food stamps). Models also include a full set of time fixed effects, state fixed effects, state specific linear time trends, and main effects for welfare reform. Welfare reform policies are state policies in place in the month prior to the caseload month. See the data appendix for details on data sources and coding of welfare reform.

Table 5
Impacts of Cycles and Welfare Reform on Earnings and Income for Single Female Heads with Children

	FEMALE FAMILY HEADS WITH CHILDREN								
	Public Assistance Income			Wage and Salary Income			Total Family Income		
State unemployment rate	78***	91***	81***	-214***	-277***	-250***	-297***	-390***	-357***
	(20)	(14)	(16)	(56)	(73)	(70)	(76)	(72)	(50)
Unemp. rate * any reform	-4			-356*			-423*		
	(28)			(200)			(218)		
Unemp. rate * short time limit		-99***			-498**			-403	
		(24)			(212)			(250)	
Unemp. rate * long time limit		-63**			-245			-276	
		(28)			(255)			(251)	
Unemp. rate * adult time limit		-109***			142			47	
		(25)			(296)			(303)	
Unemp. rate * full sanction			-23			-353			-394**
			(27)			(222)			(177)
Unemp. rate * gradual sanction			13			-493**			-409**
			(26)			(191)			(194)
Mean of dependent variable	1,224	1,224	1,224	17,866	17,866	17,866	26,465	26,465	26,465
Observations	181,353	181,353	181,353	181,353	181,353	181,353	181,353	181,353	181,353
R-squared	0.19	0.19	0.19	0.19	0.19	0.19	0.23	0.23	0.23

Notes: Regressions based on the 1980-2010 March Current Population Surveys and outcomes refer to prior calendar year and thus cover 1980-2009 Observations are households and the sample include single female family heads living with a child. Models also include year fixed effects, state fixed effects, state specific linear time trends, main effects for welfare reform, and demographic controls for race/ethnicity, age, and education of the woman. The main reform variable is measured as the share of the past calendar year that reform was in place and the time limit policies were coded according to what was in place in December.

Table 6
Impacts of Cycles and Welfare Reform on Poverty

	ALL HOUSEHOLDS WITH CHILDREN					
	Official Poverty			Alternative Poverty		
	Below 50% Poverty	Below 100% Poverty	Below 150% Poverty	Below 50% Poverty	Below 100% Poverty	Below 150% Poverty
	<i>WELFARE REFORM MEASURE = ANY REFORM</i>					
State unemployment rate	0.0030*** (0.0005)	0.0064*** (0.0008)	0.0073*** (0.0011)	0.0014*** (0.0004)	0.0057*** (0.0008)	0.0075*** (0.0013)
Unemployment rate * any reform	0.0007 (0.0012)	0.0023 (0.0016)	0.0036** (0.0018)	0.0007 (0.0008)	0.0013 (0.0022)	0.0027 (0.0019)
R-squared	0.10	0.19	0.23	0.03	0.15	0.22
Mean of the dependent variable	0.059	0.150	0.249	0.029	0.123	0.263
Observations	759,990	759,990	759,990	682,762	682,762	682,762

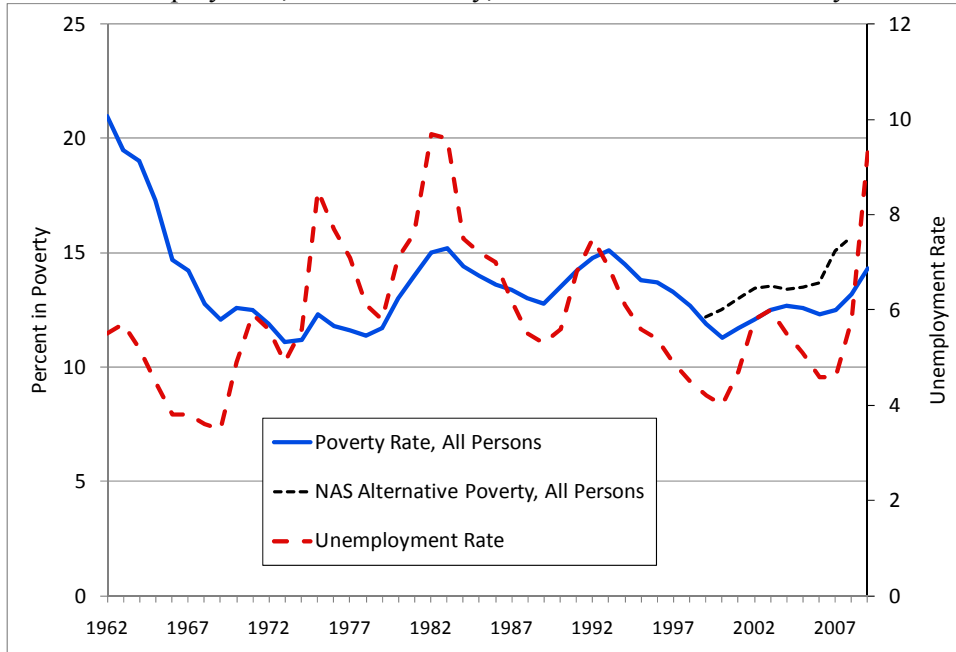
Notes: Regressions based on the 1980-2010 March Current Population Surveys and outcomes refer to prior calendar year and thus cover 1980-2009 (except for alternative poverty, which only covers 1980-1986, 1988-1989, and 1991-2008). Observations are households and the sample includes all households with a child less than 18. Models also include year fixed effects, state fixed effects, state specific linear time trends, main effects for welfare reform, and demographic controls for race/ethnicity, age, gender, and education of the household head. The main reform variable is measured as the share of the past calendar year that reform was in place and the time limit policies were coded according to what was in place in December.

Table 7
Impacts of Cycles and Welfare Reform on Safety Net Participation and Family Well-Being

ALL HOUSEHOLDS WITH CHILDREN, HEAD EDUCATION<=12				
A. SAFETY NET PARTICIPATION	Any Public Assistance	Any Food Stamps	Any SSI	Any Safety Net (Excl. Medicaid, AFDC/TANF)
State unemployment rate	0.004*** (0.001)	0.010*** (0.002)	-0.001 (0.0004)	0.008*** (0.002)
Unemployment rate * any reform	0.005 (0.003)	0.008** (0.003)	0.0004 (0.001)	0.008** (0.003)
R-squared	0.17	0.17	0.04	0.21
Mean of the dependent variable	0.122	0.199	0.044	0.387
Observations	378,067	378,067	378,067	361,340
B. HOUSEHOLD OUTCOMES	Anyone Uninsured	More than 1 Family	Any Female Family Head	Disconnected Woman
State unemployment rate	0.006** (0.003)	0.002** (0.001)	-0.0004 (0.001)	0.0003 (0.0005)
Unemployment rate * any reform	0.001 (0.003)	0.001 (0.001)	0.004 (0.003)	0.001 (0.001)
R-squared	0.09	0.13	0.46	0.05
Mean of the dependent variable	0.357	0.092	0.293	0.041
Observations	346,817	381,817	381,817	381,817

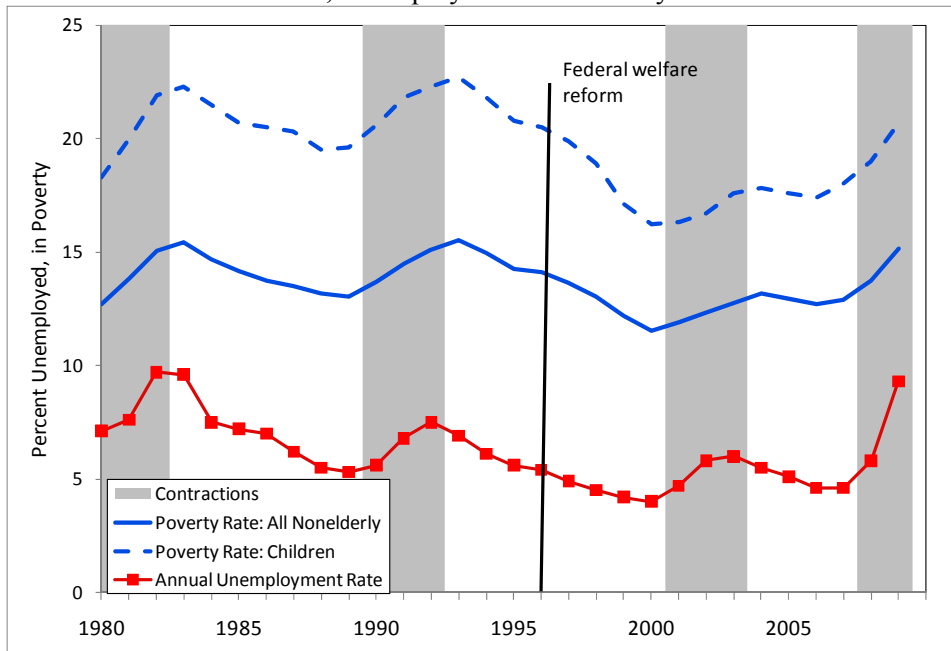
Notes: Regressions based on the 1980-2010 March Current Population Surveys. Program participation and uninsurance refer to prior calendar year and thus cover 1980-2009 and living arrangements refer to the time of the survey. Observations are households and the sample includes all households with a child less than 18 headed by someone with a high school education or less. Models also include year fixed effects, state fixed effects, state specific linear time trends, main effects for welfare reform, and demographic controls for race/ethnicity, age, gender, and education of the household head. For outcomes measured over the last calendar year the main reform variable is measured as the share of the past calendar year that reform was in place and the time limit policies were coded according to what was in place in December. For the outcomes measured at the time of the survey, welfare reform is measured by whether the policy was in place as of March of the survey year.

Figure 1
Annual Unemployment, Official Poverty, and NAS Alternative Poverty



Notes: Measures directly available from published sources; see data appendix. Poverty refers to percent of persons living in families with income below the poverty line. NAS alternative poverty measure uses MSI-NGA-CE version of NAS tabulations. For more details, see data appendix..

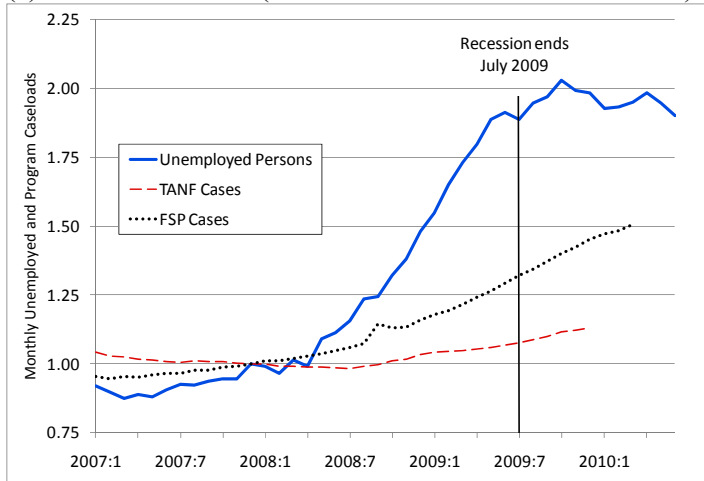
Figure 2
Labor Market Contractions, Unemployment and Poverty of Children and all Nonelderly



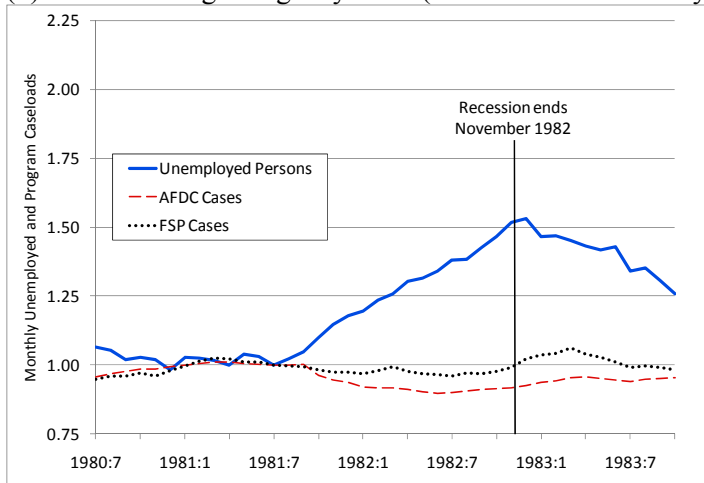
Notes: Unemployment and poverty data from published sources (see data appendix). Poverty refers to percent of persons living in families with income below the poverty line based on the official poverty measure. Contractions are annual periods of labor market contraction that closely follow NBER official recessions. Official recessions are dated monthly; we assigned our contraction periods to encompass the period of rising unemployment rates. See data appendix for details.

Figure 3: Monthly Unemployment, Cash Welfare and Food Assistance Caseloads over Recessions (Normalized relative to level at beginning of recession)

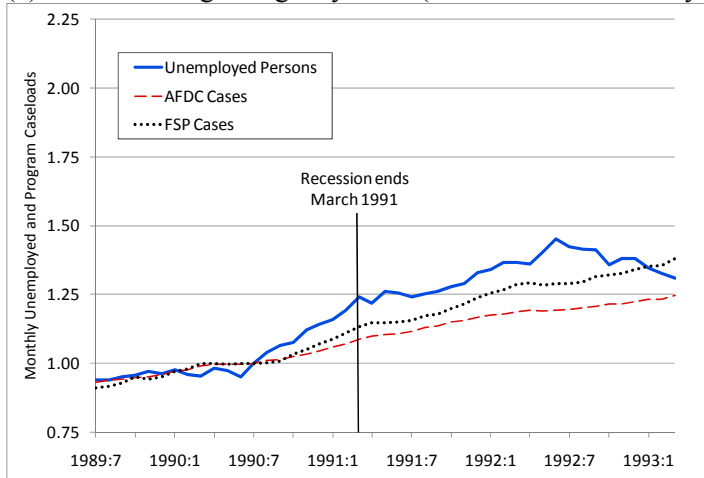
(a) Current recession (Normalized to 1 in December 2007)



(b) Recession beginning July 1981 (Normalized to 1 in July 1981)

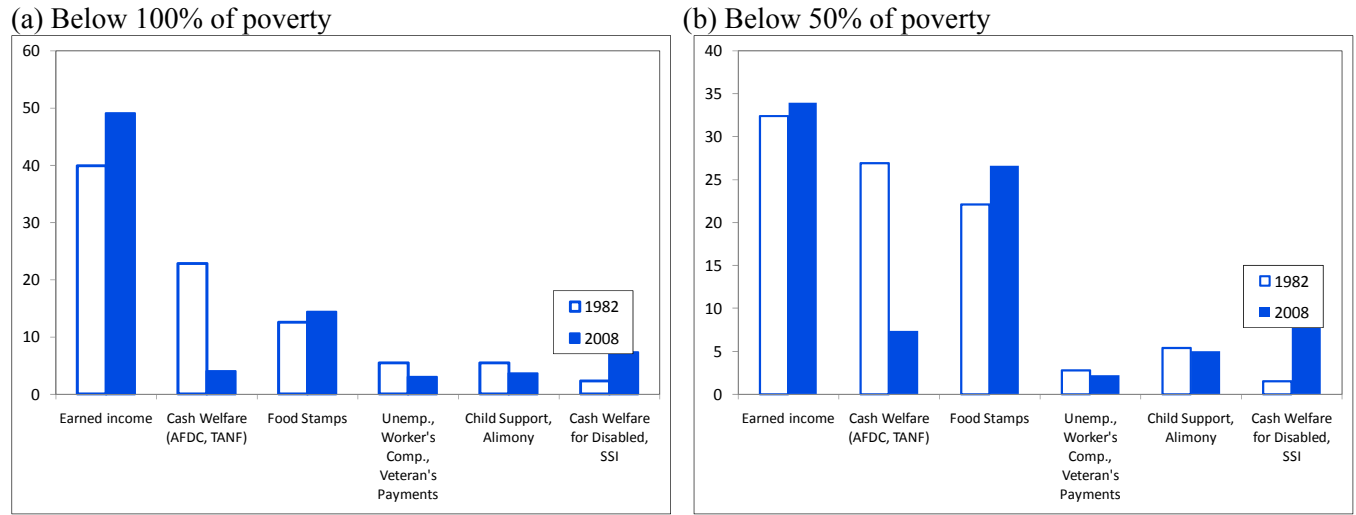


(c) Recession beginning July 1990 (normalized to 1 in July 1990)



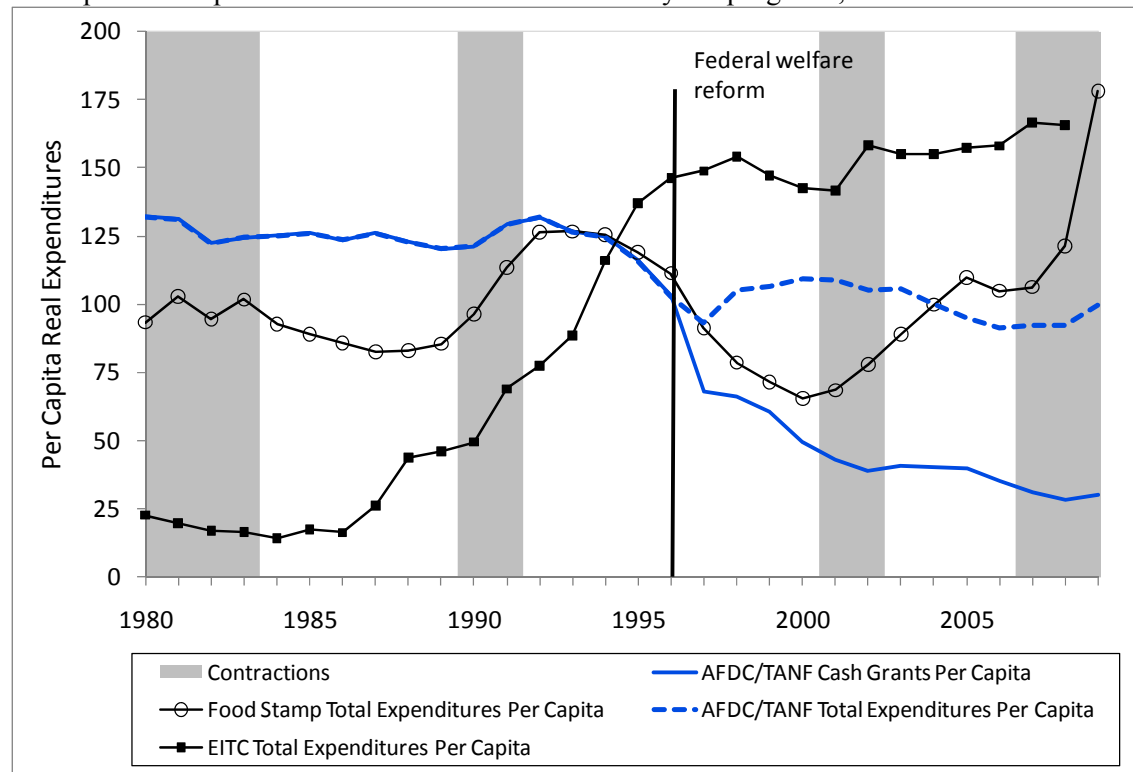
Notes: All data available from published statistics; see data appendix for details. Unemployed refers to the number of unemployed, and the program data are caseloads.

Figure 4
Share of Income by Source for Households Below Official Poverty, 1982 and 2008



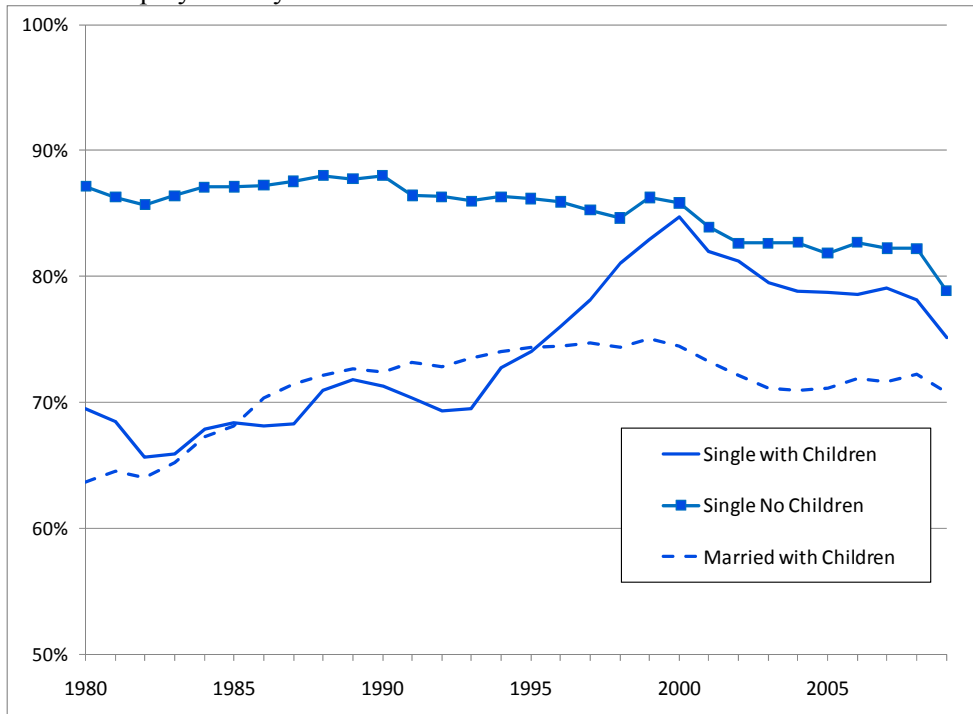
Notes: Authors' calculations from 1983 and 2009 March Current Population Survey data for 1982 and 2008 calendar year income. Sample includes households with children and poverty is assigned at the household level. Total income includes the value of food stamps. Amounts do not sum to 100% (some income sources are excluded).

Figure 5
Per capita real expenditures on cash and near cash safety net programs, 1980-2009



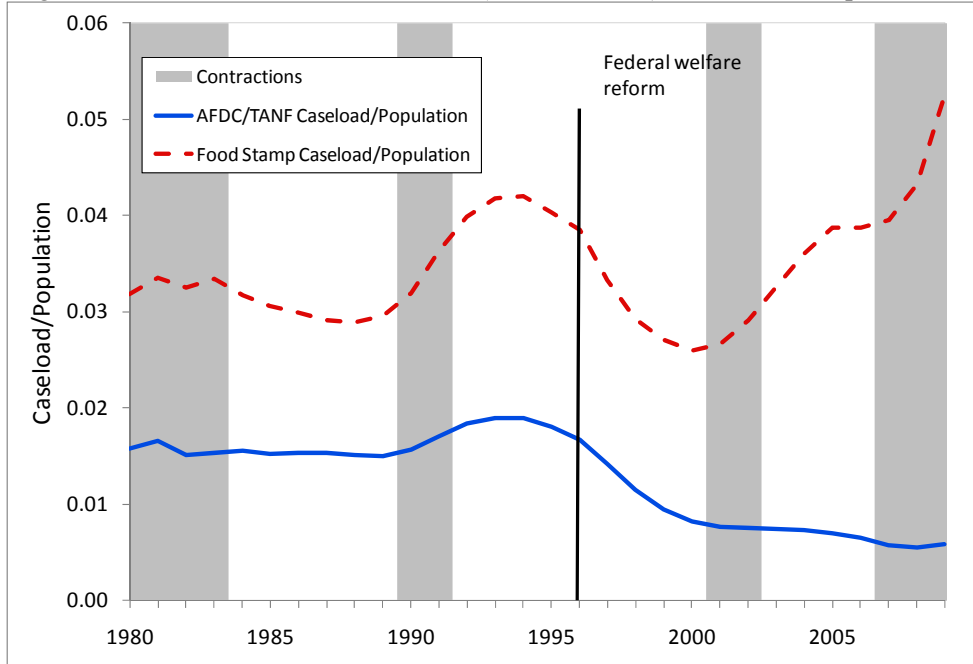
Notes: All data are available from published statistics; see data appendix for details. Contractions are annual periods of labor market contraction that closely follow NBER official recessions. Official recessions are dated monthly; we assigned our contraction periods to encompass the period of rising unemployment rates. See data appendix for details.

Figure 6
Female Employment by Marital Status and Presence of Children



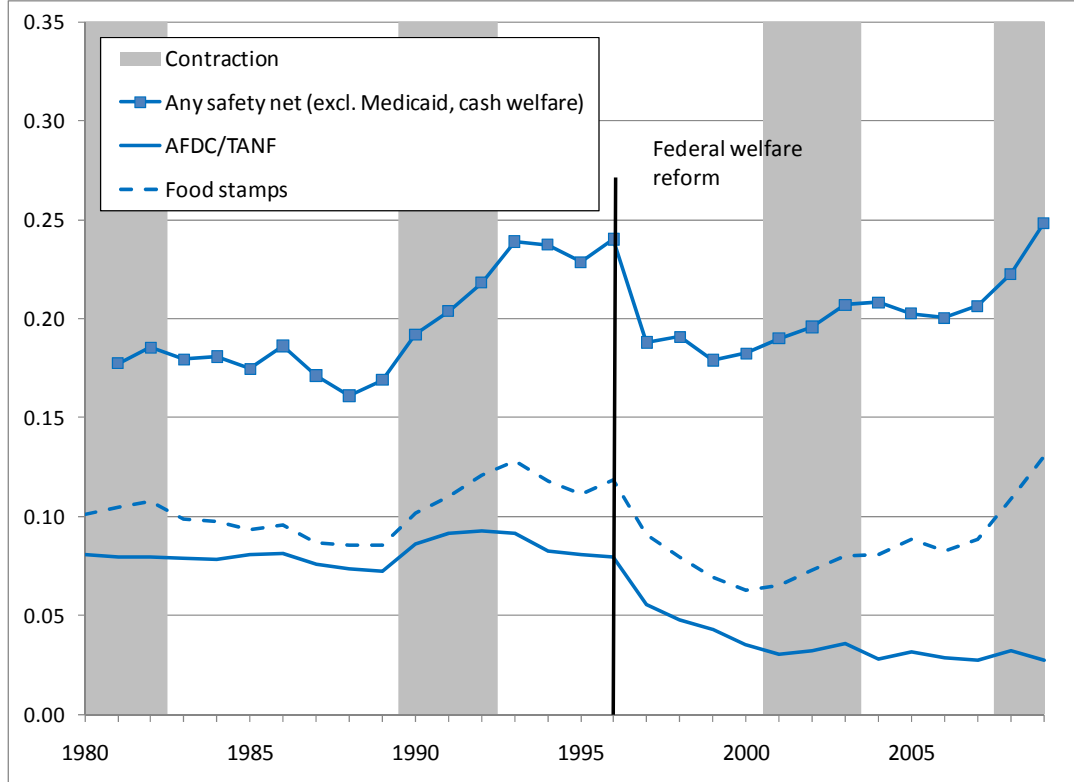
Notes: Authors' calculations from 1980-2010 March Current Population Survey data. Employment is annual, and measured as any weeks worked during the last calendar year. The sample includes women ages 20-58.

Figure 7: Administrative Cash Welfare (AFDC/TANF) and Food Stamps Caseloads



Notes: AFDC, TANF and Food stamp caseloads are available from published statistics; see data appendix for details. Contractions are annual periods of labor market contraction that closely follow NBER official recessions. Official recessions are dated monthly; we assigned our contraction periods to encompass the period of rising unemployment rates. See data appendix for details.

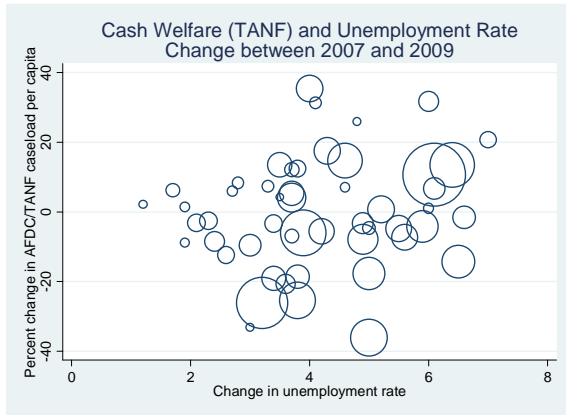
Figure 8: Multiple Program Participation in the March Current Population Survey



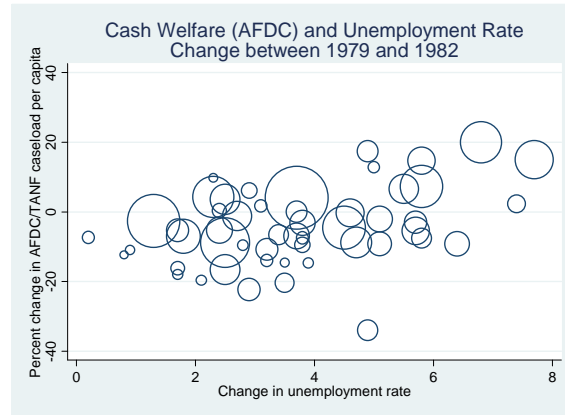
Notes: Authors' calculations from 1981-2010 March Current Population Survey data. Sample includes households with children under 18 and program participation is measured at the household level. Any non-Medicaid non-cash assistance safety net program participation means someone in the household participated in food stamps, free or reduced price School Lunch, SSI, public housing or received a rental subsidy from the government, or energy assistance.

Figure 9: Change in Unemployment Rate and Percent Change in Per Capita Caseload and Child Poverty Across Labor Market Contractions, by State

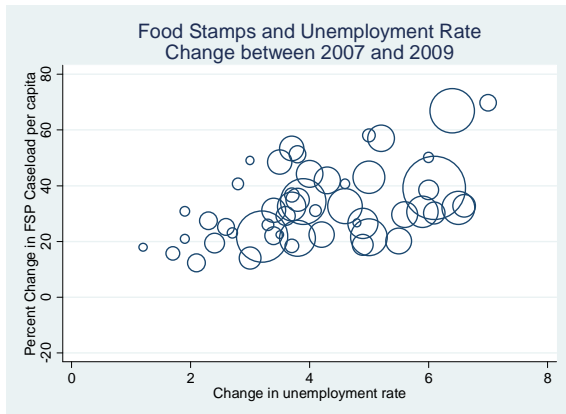
(a) TANF Caseload, 2007-2009



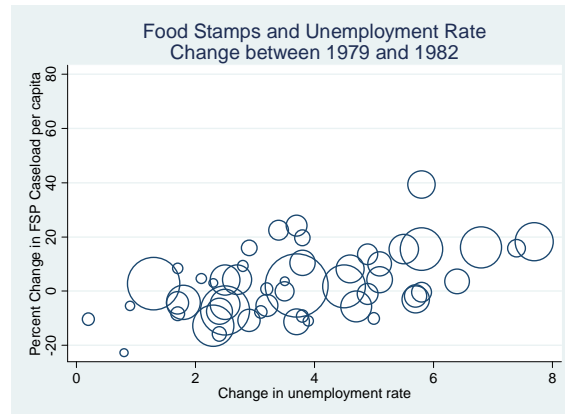
(b) AFDC Caseload, 1979-1982



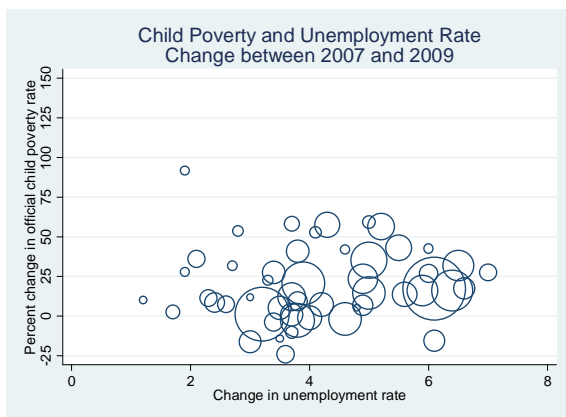
(c) Food Stamp Caseload, 2007-2009



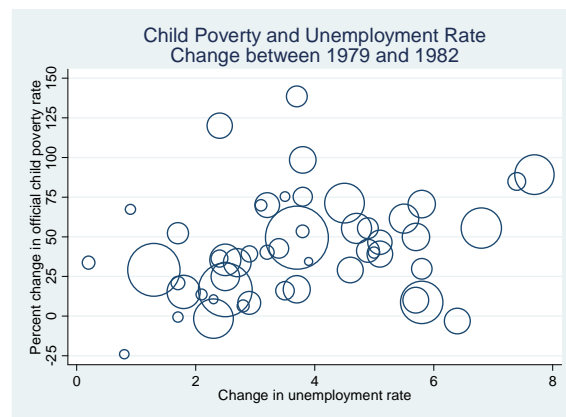
(d) Food Stamp Caseload, 1980-1982



(e) Child poverty Rates, 2007-2009



(f) Child poverty Rates, 1979-1982



Notes: State scatter plots where each point is the change (unemployment rate) or percent change (caseloads, child poverty) for a state between the peak and trough of the contraction. Sources for caseload data are provided in data appendix. Child official poverty calculated by authors using 1980, 1983, 2008 and 2009 March Current Population Surveys and family level poverty. Food stamp caseloads are not available for 1979, so panel (d) shows the percent change in food stamps between 1980 and 1982.