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The State of the Social Safety Net in the Post–Welfare Reform Era

ABSTRACT   The 1996 welfare reform led to sweeping changes to the central cash safety net program for families with children. Along with other changes, the reform imposed lifetime time limits for receipt of cash welfare, effectively ending its entitlement nature for these families. Despite dire predictions, previous research has shown that program caseloads declined and employment increased, with no detectible increase in poverty or worsening of child well-being. We reevaluate these results in light of the severe 2007–09 recession. In particular, we examine how welfare reform has altered the cyclicality of the response of caseloads and family well-being. We find that use of food stamps and noncash safety net program participation have become significantly more responsive to the economic cycle after welfare reform, rising more when unemployment increases. By contrast, we find no evidence that cash welfare for families with children is more responsive, and some evidence that it might be less so. We find some evidence that poverty increases more with increases in the unemployment rate after reform, and none that it increases less. We find no significant effects of reform on the cyclical responsiveness of food consumption, food insecurity, health insurance, household crowding, or health.

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 made sweeping changes to the central cash safety net program in the United States. The Aid to Families with Dependent Children (AFDC) program had provided cash benefits to low-income, primarily single-parent families with children since 1935 and had come to be almost synonymous with "welfare." After 60 years with minimal changes, President Bill Clinton made good on his pledge to "end welfare as we know it," signing the 1996 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 non-compliance, and lifetime time limits for receipt of welfare. Importantly, the imposition of time limits effectively ended the entitlement nature of cash welfare for poor families with children.

In the wake of this landmark welfare reform legislation, a widespread concern was that the new policy would lead to increases in poverty and deprivation among disadvantaged families. Literally hundreds of studies evaluated the impacts of welfare reform on family and child well-being. A broad summary of that voluminous literature is that the reform led to a significant reduction in welfare participation and an increase in female employment, with little consistent evidence that it also led to an increase (or a decrease) in poverty or contributed materially to the observed decline in child poverty.[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 (EITC), may have softened the initial 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, to levels not seen since 1970. Between 1992 and 2000, the employment rate of single women with children increased by 15.3 percentage points, from 69.4 percent to 84.7 percent, and the child poverty rate declined by 6.1 percentage points, from 22.3 percent to 16.2 percent.

Of course, the expansion of the 1990s eventually ended. The nation entered a short recession in 2001, followed by a relatively weak expansion. Then, in December 2007, what has been called the Great Recession began, which was deeper and longer than any other postwar downturn to date. In this contraction and its aftermath, the national unemployment rate increased by more than 5 percentage points, from 5.0 percent in December 2007 to 10.1 percent in October 2009, exceeding the largest increase previously seen in the postwar era, that during the deep, back-to-back 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. It is well known

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1. Comprehensive reviews can be found in Blank (2002) and Grogger and Karoly (2005). The research summarized there focuses on the effects of reform on program participation, income and earnings, consumption, child outcomes, and a host of other measures.

that economic downturns adversely affect employment, income, and family well-being, and that they have larger negative impacts on those with less education and skill (Hoynes 2000, Hines, Hoynes, and Krueger 2001). Here we ask whether the impact of the economic cycle on disadvantaged families has changed with welfare reform. With welfare today providing less protection than before, are economic shocks causing more-adverse outcomes? We focus on the nonelderly and in particular on families with children. This is a natural choice given that our paper studies the effects of reform of the cash assistance system that is exclusively targeted to families with children.[2] In an effort to broadly capture the possible effects of reform, we look not only at use of cash welfare but also at family well-being measures and other aspects of the safety net. Outcomes we examine include poverty (both official and alternative measures), 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 live in public housing or get a rent subsidy, food consumption, food insecurity, health insurance coverage, health status, measures of crowding (such as "doubling up"), and the presence of single female-headed family units. We use both administrative data and household survey data to assemble a comprehensive picture of family well-being in the wake of welfare reform.

We begin in section I 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), in spending on the EITC, in family employment and poverty, in measures of housing stress, in health insurance coverage and access, and in family consumption. In so doing, we pay particular attention to how the changes during the recent recession compare with those during the early-1980s recessions. In section II we step back and provide a brief description of welfare and the safety net for low-income families more broadly, with a focus on recent important changes.

The descriptive approach of the paper's first two sections, although informative about the basic facts, does not allow us to identify the role that welfare reform has played in causing the observed changes in outcomes. We turn to this question in section III, where we present our core findings about how welfare reform has affected the relationship between the economic cycle and family well-being among the disadvantaged. To identify the impact of welfare, we take advantage of the rich variation across states

2. The effect of the Great Recession on the operation of the safety net for the elderly is also an important topic, but not one within the scope of this paper.

in the 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 unemployment rate, a measure of welfare reform, and the interaction between the two. The estimated coefficient on the inter-action term identifies how welfare reform has affected the impact of the cycle on family well-being.

This approach allows us to estimate how an increase in a state's unem-ployment rate affects outcomes among the disadvantaged, and how those impacts changed with the dramatic reform to welfare. We believe ours to be the first paper to address this issue. We utilize data from many sources in order to provide a comprehensive evaluation. We start with adminis-trative data on participation in AFDC and TANF and on food stamp caseloads, to document the "first stage" of the policies. We then analyze data from 30 years of the March Current Population Survey Supplement (CPS), which allow us to examine impacts on various family and house-hold measures of well-being, including earnings and income, poverty, liv-ing arrangements and housing stress, program participation beyond AFDC/TANF and food stamps, health insurance coverage, and health sta-tus. Finally, we present results for food consumption, using data from the Panel Study of Income Dynamics, and for food insecurity, using data from the food security supplements to the CPS.

In section IV we reexamine the effects of welfare reform and how wel-fare participation 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, and in particular whether they have been driven by changes in eligibility (that is, by reduced access) or changes in take-up. We then go on to explore what is known about those single, nonworking women who before reform were at risk of being on welfare but are no longer on welfare (known as "disconnected women" in a growing litera-ture). Section V concludes.
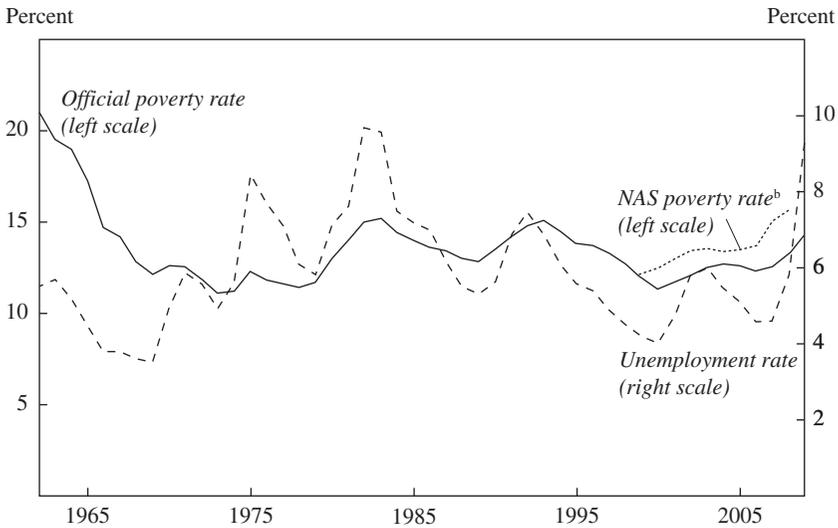
Using both administrative and survey data, we find that both food stamps and a broader measure of safety net participation (one that excludes cash welfare for families with children and Medicaid) have become more respon-sive to the economic cycle after welfare reform. Although always counter-cyclical, both of these measures increase more with unemployment after welfare reform. All measures of poverty (official and our own alternative measure) are also countercyclical, and the likelihood of having an income under 150 percent of the official poverty threshold is significantly more countercyclical after reform. By contrast, there is no evidence that cash wel-

fare for families with children is more responsive after reform, and some evidence that it might be less so. We find that reform has had no significant effects on the cyclical responsiveness of food consumption, food insecurity, receipt of child support or alimony, receipt of SSI or disability insurance benefits, health insurance coverage, household crowding, or health.

I. The Business Cycle, 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 United States. Figure 1 traces our measure of the economic cycle—the unemployment rate—annually from 1962 to 2009. During the recent recession, which officially began in December 2007, the unemployment rate rose from 5 percent to a peak of 10.1 percent in October 2009. Although the recession officially ended in June 2009, the unemployment rate remains high, at 9.6 percent in September 2010 (seasonally adjusted). In terms of the annual averages shown in figure 1, unemployment in that recession increased from 4.6 percent in 2007 to 9.3 percent in 2009. In our analysis we compare results for the recent recession with those for the early 1980s, when two recessions in quick succession led to an increase in the annual unemployment rate from 5.8 percent in 1979 to 9.7 percent in 1982.

Figure 1 also depicts two measures of the poverty rate (the share of the population living in poverty), also on an annual basis. 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 United States is determined by comparing total pre-tax family cash income with a poverty threshold, which varies by family size, number of children, and the presence or absence 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 threshold, despite wide variation in costs and wages across regions, and the thresholds are based on outdated household budgeting rules of thumb, which fail to adjust for changes in many categories of expenses (such as shelter, clothing, work-related expenses, medical expenses, and utilities) and thus do not currently reflect actual needs. Also, the thresholds are updated annually by the consumer price index for all urban consumers (CPI-U), a measure of inflation that may not well capture changes in prices paid by disadvantaged families caused by changes in the basket of goods they consume. Further, family cash income is not a complete measure of

Figure 1. Unemployment Rate and Overall Poverty Rates, 1962–2009[a]

Percent   Percent

Sources: See the appendix.

a. Rates are annual averages. Poverty rates are calculated as the share of all persons living in families with income below the official or the NAS alternative poverty line.

b. Measure uses the MSI-NGA-CE version of NAS tabulations. See the appendix for details.

family resources. It excludes noncash government transfers (such as food stamps, housing subsidies, and housing vouchers), certain subtractions from income (such as income and payroll taxes), and certain additions to income (such as the EITC) 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 noncash benefits, the EITC, and taxes.[3]

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3. The official poverty thresholds were developed in 1963 and 1964 and 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. The Census Bureau is developing a supplemental poverty measure to be published in addition to the official measure. The supplemental measure is intended to incorporate many of the suggestions of the NAS report on the poverty measure. The Census Bureau and the Bureau of Labor Statistics have long examined various alternative measures of both income and thresholds and have published various experimental series (for example, Dalaker 2005); they have also explored whether the NAS recommendations could be implemented (for example, Garner and Short 2008).
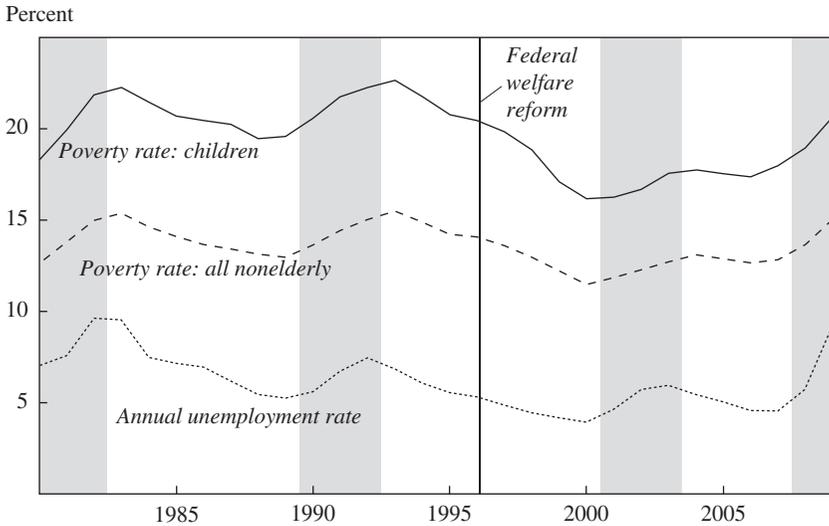
Figure 1 shows that poverty in the population as a whole declined substantially between the early 1960s and the mid-1970s, with shorter periods of increases and decreases since that time. In the recent recession the official poverty rate increased by 1.8 percentage points, from 12.5 percent in 2007 to 14.3 percent in 2009. The fact that unemployment did not improve in late 2009 and early 2010 suggests that poverty will likely increase further before it declines. The figure also plots, for the years for which data are available (1999–2008), an alternative poverty measure suggested by the NAS, which incorporates noncash transfers, taxes, out-of-pocket medical expenditure, and work-related deductions in income and includes consumption-based measures in the thresholds. Poverty by this measure is higher than by the official measure but follows a very similar trend.[4]

Given our focus on the effects of welfare reform on the nonelderly, we show in figure 2 the official poverty rate for children, as well as that for all nonelderly persons, from 1980 to 2009. In 2009, 15.1 percent of nonelderly persons, and 20.7 percent of children, were poor. The figure also plots the unemployment rate, with shading for years when contractions occurred,[5] and 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 than before. One can, however, see that the strong expansion of the late 1990s was associated with decreases in both the unemployment rate and poverty.

Table 1 provides more detail on economic circumstances and well-being in contractions and expansions, both before and after welfare reform. The contractions and expansions are the same as those depicted in figure 2. The first column reports changes during 1979–82, a period that includes the two back-to-back recessions. The next four columns report changes for the contractions of 1989–92, 2000–03, and 2007–09; in the last of these, a few measures (EITC spending, NAS alternative poverty,

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4. In our own empirical analysis of the March CPS data below, we are able to construct a consistent alternative poverty measure for calendar years 1980–86, 1988–90, and 1991–2008. Because of Census data limitations at the time of writing, the Census tabulations for the NAS measure as well as our own tabulations of alternative poverty are not yet available for 2009.

5. The official NBER recession dating is monthly, whereas most of our analyses in the paper rely on annual data. Therefore we constructed an annual series for contractions based on the official monthly dates, augmented by examination of the peaks and troughs in the national unemployment rate. See the appendix for a comparison of NBER monthly recession dating and our annual contraction dating.

Figure 2. Unemployment Rate and Child and Nonelderly Poverty Rates, 1980–2009[a]

Percent

Sources: See the appendix.

a. Rates are annual averages. Poverty rates are calculated as the share of children or of nonelderly persons living in families with income below the official poverty line. Shading indicates years of labor market contraction as defined in the appendix.

and food insecurity) are available only through 2008. The final three columns present changes during the three expansions depicted in figure 2: 1982–89, 1992–2000, and 2003–07. We view these tabulations as interesting and descriptive, but again it is difficult to reach conclusions about how cyclicality has changed because one cannot distinguish the cycle from the aggregate trend.

The first row of table 1 reports the change in the annual unemployment rate in each contraction and expansion. During the 2007–09 recession, the unemployment rate increased by 4.7 percentage points, compared with an increase of 3.9 percentage points between 1979 and 1982 and even smaller increases during the 1989–92 and 2000–03 contractions. The next panel documents how spending on the key cash and near-cash government assistance programs (the latter comprising food stamps, unemployment insurance, and the EITC) changed across cycles. Both food stamps and (especially) unemployment insurance show countercyclical spending. Of particular interest is the 68 percent increase in real food stamp spending per capita between 2007 and 2009. Expenditure for the EITC does not appear to follow a countercyclical pattern, although with major expan-

Table 1. Changes in Unemployment, Safety Net Program Expenditure, and Family Well-Being across Contractions and Expansions[a]

Percentage points except where stated otherwise

Statistic	Contractions				Expansions		
	1979–82	1989–92	2000–03	2007–09	1982–89	1992–2000	2003–07
Change in unemployment rate (annual average)	3.9	2.2	2.0	4.7[b]	−4.4	−3.5	−1.4
Changes in real safety net expenditure per capita (in percent)							
AFDC/TANF assistance payments	−14	10	−17	−2	−2	−63	−24
AFDC/TANF total expenditure	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	n.a.	52	84	150	−56	−41	−33
Unemployment insurance, all	n.a.	132	132	277	n.a.	−61	−47
EITC	−37	68	9	−0.4[c]	171	84	7
Changes in family well-being: employment and poverty							
Official poverty rate, all persons	3.3	2.0	1.2	1.8	−2.2	−3.5	0.0
Official poverty rate, children	5.5	2.7	1.4	2.7	−2.3	−6.1	0.4
Official extreme poverty rate, children	n.a.	2.1	1.2	1.5	−1.7	−3.4	−0.1
NAS alternative poverty rate, all persons	n.a.	n.a.	1.0	0.6[c]	n.a.	n.a.	1.6
Share of single women with children with job last week	−1.9	−1.4	−3.3	−3.9	3.0	14.6	0.5
Share of single women with children out of labor force last week	−0.8	0.7	0.6	0.4	−0.8	−11.9	1.8
Share of children receiving any non-AFDC/TANF, non-Medicaid safety net benefit	n.a.	4.3	1.3	4.5	−2.2	−3.9	−1.1

(*continued*)

Table 1. Changes in Unemployment, Safety Net Program Expenditure, and Family Well-Being across Contractions and Expansions[a] (*Continued*)

Percentage points except where stated otherwise

Statistic	Contractions				Expansions		
	1979–82	1989–92	2000–03	2007–09	1982–89	1992–2000	2003–07
Changes in family well-being: consumption and food insecurity							
Real consumption by lowest income quintile (percent)							
Total consumption	n.a.	–7.8	–3.5	2.0	n.a.	15.6	–1.8
Food consumption	n.a.	–9.3	11.3	11.5	n.a.	–3.9	–15.3
Share of households experiencing food insecurity	n.a.	n.a.	n.a.	3.2[c]	n.a.	n.a.	0.2
Changes in family well-being: demographic and housing stress							
Share of children living in female-headed family	2.9	1.7	0.4	0.2	1.4	–0.7	0.8
Share of children living in household with more than one family	2.9	1.0	–0.1	0.2	0.3	0.0	1.0
Changes in health insurance and access							
Share of nonelderly persons uninsured	1.9	1.2	–0.3	1.0	1.7	0.0	0.1
Share of persons who delayed care or had no care because of cost	n.a.	n.a.	1.4	3.4	n.a.	n.a.	0.8
Homelessness (change in number of persons)							
Persons on the street at a given point in time	n.a.	n.a.	n.a.	–41,000	n.a.	n.a.	n.a.
Persons ever using shelter or transitional housing over past year	n.a.	n.a.	n.a.	–30,000	n.a.	n.a.	n.a.
Families ever using shelter or transitional housing over past year	n.a.	n.a.	n.a.	62,000	n.a.	n.a.	n.a.

Sources: Various published sources and authors' calculations from March Current Population Survey data. For details on sources and methods, see the appendix.

a. n.a. = not available.

b. Change from 2007 to 2008 is 1.2 percentage points.

c. Change from 2007 to 2008.

sions in the program in 1986, 1990, and 1993, it is hard to distinguish any impact of the cycle (Eissa and Hoynes 2006).

Perhaps surprisingly, the data on cash welfare expenditure (AFDC and TANF) do not show a clear countercyclical pattern. Cash welfare payments per capita increased during the 1989–92 contraction (by 10 percent) but *decreased* during the contractions of 1979–82 (by 14 percent), 2000–03 (17 percent), and 2007–09 (2 percent). However, the more comprehensive TANF total assistance measure, which includes cash and noncash assistance, increased by 8 percent in the 2007–09 recession.[6] Less surprisingly, cash payments decreased during each of the three expansions. Previous research shows that some of the decreases in periods of contraction are the result of structural, policy-driven declines in expenditure (for example, expenditure was lower because of rules cutting eligibility in 1981 and because of welfare reform in the late 1990s) in excess of countercyclical increases in expenditure. This illustrates the limitations of this exercise: simple descriptive comparisons of expenditure 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 presented in the remaining panels of table 1, here we present a demographic profile of cash welfare recipients. In particular, table 2 reports 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 the same characteristics for all families with children in 1995 and for families receiving cash welfare at the end of the period, in 2009.[7] In 1995 almost 70 percent of heads of

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

7. These calculations are based on the 1996 and 2010 March CPS, which collects information on current living arrangements and on income, transfers, and health insurance coverage for the preceding calendar year. Like all sample surveys, the CPS relies on self-reports, and as in many such surveys, income is underreported. The degree of underreporting varies both over time and across types of income as well as by recipiency and total dollar amounts. (Weinberg 2004 summarizes some of the issues; see also 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.

Table 2. Characteristics of Families Receiving Public Assistance Income in 1995 and 2009, and of All Families in 1995[a]

Percent except where stated otherwise

Characteristic	Families with children receiving cash welfare, 1995[b]	All families with children, 1995[c]	Families with children receiving cash welfare, 2009[b]
Heads of family			
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 with <12 years education	40.5	15.8	33.8
Percent with exactly 12 years education	34.0	31.8	33.4
Percent with >12 years education	25.5	52.4	32.8
Percent never married	37.6	8.8	45.1
Percent divorced, separated, or widowed	34.7	18.4	27.4
Percent married	27.7	72.9	27.6
Average age (years)	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
Families			
Percent in household receiving food stamps	86.5	14.4	82.1
Percent in household in public or subsidized housing	32.8	6.0	32.1
Percent in household owning home	16.6	64.3	19.9
Percent with child insured	98.9	87.4	99.1

Sources: Authors' tabulations of 1996 and 2010 March CPS data.

a. Demographics and living arrangements are as of the time of the survey (March 1996 or 2010); income and program receipt refer to calendar year 1995 or 2009.

b. Families with at least one child and receiving public assistance income (AFDC, TANF, or general assistance).

c. All families with at least one child.

families with cash welfare income were unmarried single women, about 40 percent were non-Hispanic whites, 34 percent were non-Hispanic blacks, and 22 percent were Hispanic.[8] These figures changed little between 1995 and 2009. Compared with all families with children, the welfare population is more likely to be black or Hispanic, less educated, unmarried, and 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, 87 percent of these families received food stamps, and 33 percent lived in government-subsidized housing. (Not shown in the table is that 90 percent of the heads and 97 percent of the children were on Medicaid—or, for the children only, the State Children's Health Insurance Program—13 percent received cash assistance through the SSI program, and 65 percent participated in the free and reduced-price school meals program.)

Historically, families do not mix welfare and work (31 percent of recipients were working at the time of the 1995 survey, and 56 percent were out of the labor force), but 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). Also worth noting is that among a given entry cohort into welfare, a large share will be on welfare for a short time, but a large share of the current welfare caseload is made up of long-term recipients, who tend to be even less attached to the labor force than other recipients (see, for example, Bane and Ellwood 1994). Ellwood (1986) reports that 34 percent of first-time AFDC recipients had not worked in the previous 2 years, and 18.4 percent of these new recipients had a disability that limited work.

8. It may seem surprising that we find just over a quarter of families receiving welfare to have married heads. However, under AFDC, states could offer benefits to support children in two-parent families where the primary earner was unemployed (in 1995, these families accounted for 7 percent of cases; U.S. House of Representatives 1996), and under TANF, many of the eligibility rules distinguished far less between two- and one-parent families. Further, because family structure is measured as of March whereas income is measured for the preceding calendar year, some share of individuals may have gotten married after having been on cash assistance.

9. In these tabulations, a family is identified as a welfare recipient if it received any public assistance income (AFDC/TANF or other) 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 whether people had earnings when they were also receiving cash assistance, the CPS does not allow for identification of simultaneous welfare and work status.

With these facts in mind, we return to table 1, which also presents changes across contractions and expansions for a broad array of outcomes relevant for the welfare population. Data on most outcomes are not available for all time periods, and many are available only after welfare reform. All of the poverty measures are strongly countercyclical. For example, the official poverty rate for children increased by 5.5 percentage points in the 1979–82 recession, and by 2.7 percentage points between 2007 and 2009. Poverty declined in two of the three periods of expansion, the exception being the 2003–07 expansion, when child poverty increased by 0.4 percentage point. Extreme child poverty, defined as the share of children in families with income below 50 percent of the official poverty threshold, declined across all expansions. The NAS alternative poverty measure seems to fluctuate less with the cycle. (As noted above, the NAS alternative poverty measure is not yet available for 2009, so the statistic for the recent recession is of limited value.)

Employment of single mothers exhibits a procyclical pattern, declining by 3.9 percentage points in the recent recession, compared with 1.9 percentage points in the 1979–82 contraction. This suggests a greater sensitivity to the cycle after welfare reform, which is consistent with an increase in rates of attachment to the labor market among potential welfare recipients. We also consider a more comprehensive measure of receipt of safety net benefits that includes a broad array of public assistance programs (but excludes AFDC/TANF, general assistance, and Medicaid). This broad safety net participation measure is very strongly countercyclical, increasing by a striking 4.5 percentage points in the recent contraction after declining in the 1992–2000 expansion by a similar amount.[10]

Mindful of the importance of looking at measures that capture well-being rather than resources, in the remainder of the table we present changes in consumption expenditure (in real 2009 dollars 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 are for individuals in the lowest 20 percent of consumer units by pre-tax income, and notably, changes in these measures do not show a consistent pattern across the contractions and expansions. Food insecurity, data for which are available only for the later period, shows an

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10. This measure takes a value of 1 for any household where a member is reported as participating in food stamps, SSI, public housing or rental subsidies, free or reduced-price school lunches, or energy assistance during the calendar year before the survey.

increase of 3.2 percentage points in the recent contraction; this is particularly striking given that the data are available only through 2008.[11]

The share of children living in a female-headed household and the share "doubling up" (living in households with two or more families, a measure of housing stress) also do not exhibit strong patterns across cycles. Curiously, homelessness, data for which are available only for the most recent period and for a sample of shelters, seems to have declined in the recent recession, although the number of homeless *families* increased. Delay of or failure to get medical care due to cost, a measure of health care access, rises in both contractions for which data are available; health insurance coverage, however, shows no clear cyclical trend.
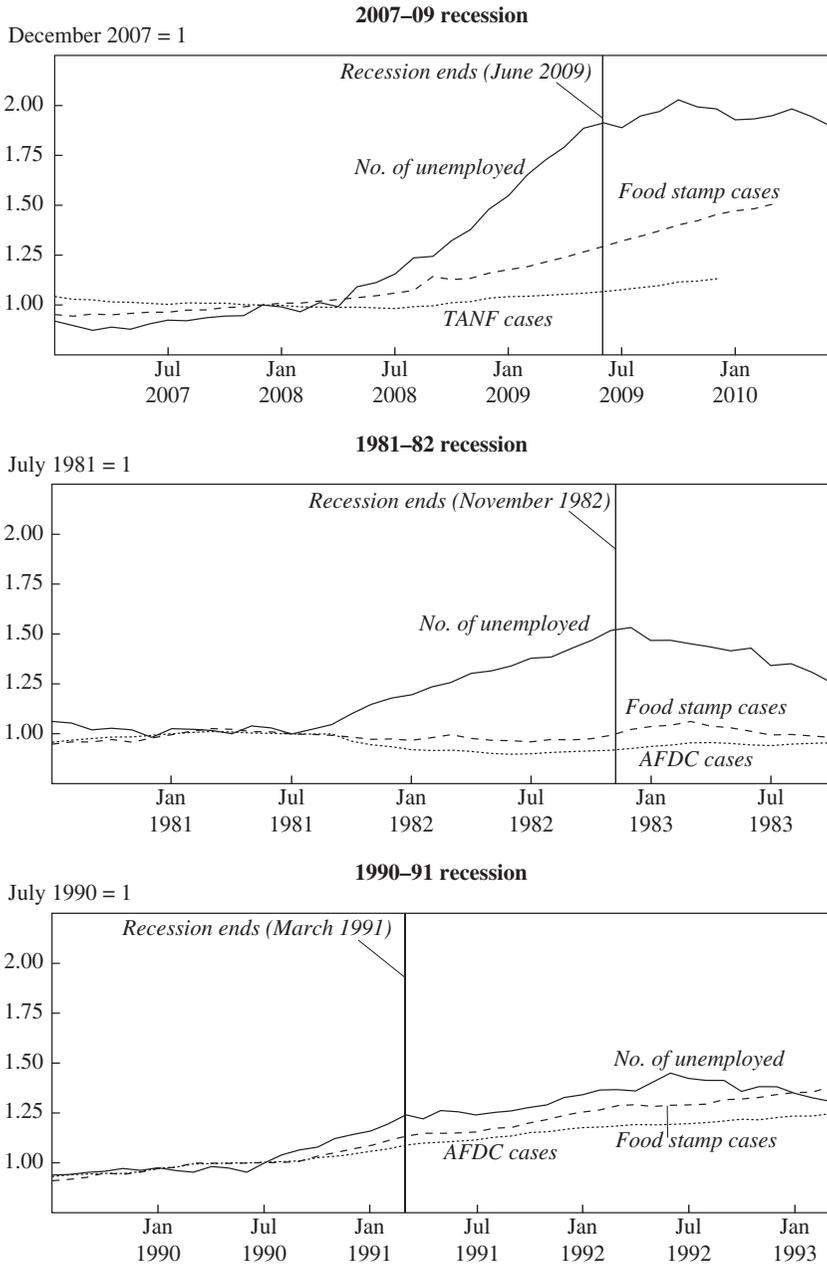
To illustrate in more detail the degree of protection that cash welfare and food stamps provide in recessions, the top panel of figure 3 shows the total number of unemployed persons, the cash welfare (TANF) caseload, and the food stamp caseload by month from January 2007 to the present. We normalize all series to 1 in December 2007, the official start of the recent recession, and demarcate the official end of the recession in June 2009.[12] The figure shows that food stamp caseloads have expanded significantly with the recession whereas TANF caseloads have changed very little. The middle panel of figure 3 depicts the same three series (substituting AFDC for TANF) for the second of the two early-1980s recessions, which officially began in July 1981, and the bottom panel does the same for the recession that began in July 1990. These graphs suggest that cash welfare caseloads are less responsive to the economic cycle than are food stamp caseloads and that neither program responded much during the 1981–82 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. The top panel of figure 4 shows the share of total income (which here includes both cash income and the value of food stamps) by source for all households in poverty in 1982 and 2008; the bottom panel provides the same information for households in extreme poverty (income below 50 percent of the official

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 (for example, not through emergency food supplies or scavenging). Haider (2006) describes advantages and disadvantages of this measure of well-being, which contains a psychological component.

12. These figures update earlier graphs from a presentation by LaDonna Pavetti, "Responding to Increasing Need: Assessing TANF's Responsiveness during Hard Economic Times," Center for Budget and Policy Priorities, June 3, 2010.
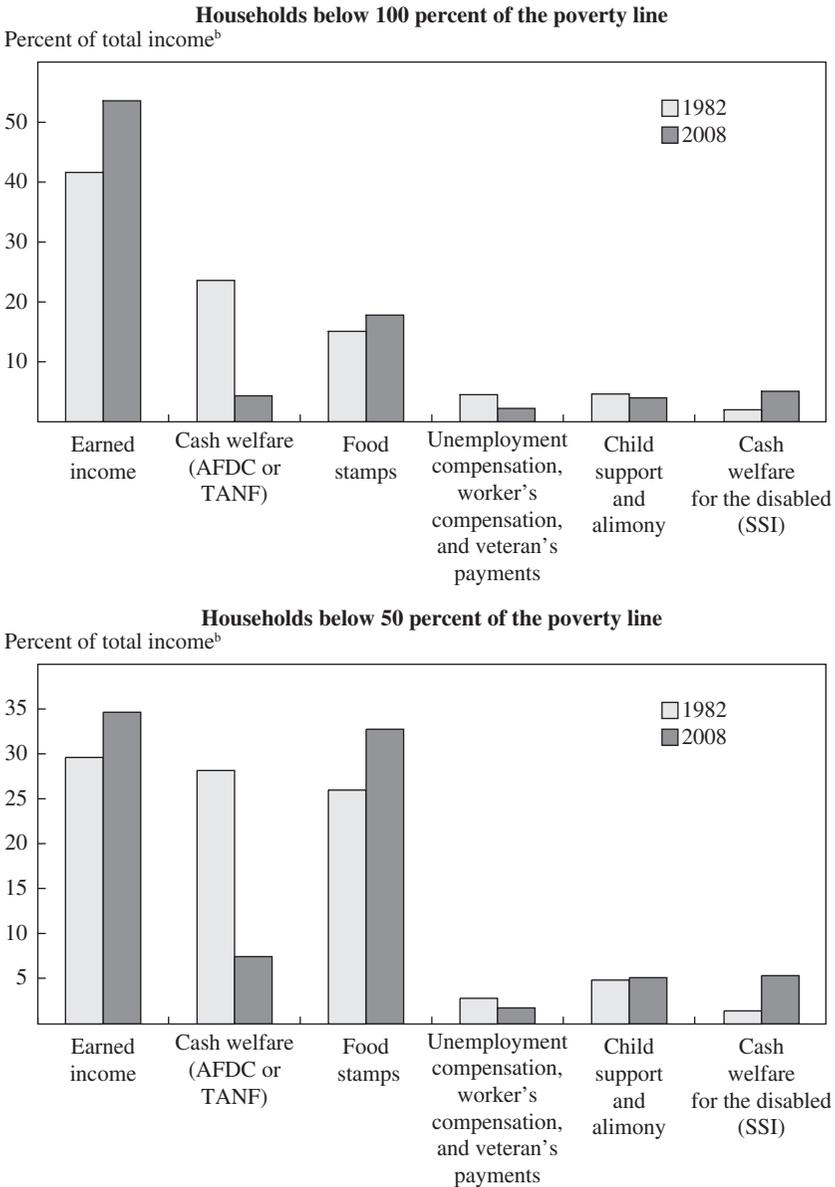
Figure 3. Unemployment, Cash Welfare Caseloads, and Food Stamp Caseloads in Three Recessions[a]

2007–09 recession

December 2007 = 1

Recession ends (June 2009)

No. of unemployed

Food stamp cases

TANF cases

Jul 2007   Jan 2008   Jul 2008   Jan 2009   Jul 2009   Jan 2010

1981–82 recession

July 1981 = 1

Recession ends (November 1982)

No. of unemployed

Food stamp cases

AFDC cases

Jan 1981   Jul 1981   Jan 1982   Jul 1982   Jan 1983   Jul 1983

1990–91 recession

July 1990 = 1

Recession ends (March 1991)

No. of unemployed

AFDC cases

Food stamp cases

Jan 1990   Jul 1990   Jan 1991   Jul 1991   Jan 1992   Jul 1992   Jan 1993

Sources: See the appendix.
a. All series are normalized relative to their level at the beginning of the recession.

Figure 4. Composition of Income by Source for Households below the Official Poverty Line, 1982 and 2008[a]

Households below 100 percent of the poverty line

Percent of total income[b]

Households below 50 percent of the poverty line

Percent of total income[b]

　Source: Authors' calculations from 1983 and 2009 March CPS data.
　a. Data refer to 1982 and 2008 calendar-year income. Samples include only households with children, and poverty is evaluated at the household level. Percentages do not sum to 100 because some income sources are excluded.
　b. Total income includes the value of food stamps received.

poverty threshold).[13] This figure clearly shows the declining role of cash welfare as a countercyclical income source for the poor and the increasing roles played by food stamps, earnings, and SSI.[14]

Several important points emerge from this analysis. Overall, use of a broad measure of the safety net (excluding Medicaid and cash assistance for families with children), poverty, food insecurity, and health care access show strong countercyclical patterns. The nature of changes in demographic stress, homelessness, and consumption across the cycle is less clear. Unfortunately, many of the outcomes of interest exhibit either secular trends (for example, children living with single female family heads, percent uninsured) or policy-driven structural changes (for example, expansions in the EITC, welfare reform–induced reductions in use of cash welfare), or both. 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. To take just one example, it is well understood that, as alluded to above, AFDC caseloads declined in 1981 as a result of changes in the benefit reduction rate that reduced eligibility for many 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 caseloads, but this was quickly aborted when legislative changes in Reagan's first term ended AFDC eligibility for about 15 percent of the caseload. . . . 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, p. 87)

In sum, the data in table 1 provide a useful description of changes in well-being in the recent recession. However, to make more definitive conclusions about how the cyclicality of outcomes has changed after welfare reform, we defer to our regression results below, where we are able to separate out secular trends from the cycle.

II. The Elements of the Safety Net before and after Reform

Before discussing our regression results, we step back and provide some more background on welfare and welfare reform. Cash welfare is not the only government assistance program for low-income families with chil-

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13. We are unable to update this figure to 2009 because the amount of food stamps per household has not yet been released by the Census Bureau as of this writing.

14. The share of income provided by food stamps might increase mechanically if families leave welfare and do not replace all of their welfare income, because the food stamp program reduces benefits by 30 cents for each dollar of other income.

Table 3. Expenditure on and Participation in Cash or Near-Cash Safety Net Programs, 2009, and Children Removed from Poverty, by Program, 2009[a]

Program	Thousands	Total benefit payments (millions of dollars)	Average monthly benefit (dollars)	Estimated no. of children removed from poverty (millions)
Cash welfare (TANF)[b] (cases)	1,796	9,324	397	0.8
Food stamps (cases)	15,232	50,360	276	2.2
EITC[c] (tax filing units)	24,757	50,669	171	2.6
Cash welfare (SSI, nonaged caseload)	6,407	41,023	517	1.0
Unemployment compensation (persons)				
Regular state benefits	n.a.	79,600	1,335	n.a.
Extended benefits	n.a.	7,574	n.a.	n.a.
Emergency benefits	n.a.	44,246	n.a.	n.a.
Total	5,757	131,420	n.a.	n.a.

Sources: For children removed from poverty see Sherman (2009). For all other sources see the appendix.
a. Data refer to calendar 2009 and are in 2009 dollars except where noted otherwise.
b. Data refer to fiscal 2009.
c. Data refer to 2008 and are in 2008 dollars.

dren. In our analysis of the impact of the cycle on disadvantaged families, we seek to understand how both cash welfare and the other elements of the safety net may have affected family well-being. Therefore, here we describe not only cash welfare and welfare reform but also, briefly, the other safety net programs and their recent reforms.

Table 3 presents an overview of participation and spending in the central cash and near-cash safety net programs for low-income families with children. The two primary programs are TANF (the cash welfare program that replaced AFDC as described above) and the food stamp program (now called the Supplemental Nutrition Assistance Program). The food stamp program is by far the larger of the two, especially since welfare reform: in 2009, 15 million families or single individuals received food stamps, at a cost of $50 billion (all dollar figures in this paragraph are in current dollars), compared with fewer than 2 million families receiving cash welfare, at a cost of $9 billion. The EITC 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 total tax cost of $51 billion. SSI is another cash welfare program, one that primarily serves poor elderly and disabled adults but is also received by disabled children in some poor families. Finally, unemployment compensation

is obviously a critical element of the safety net and is *the* central income replacement program in recessions. This program differs from the others in that it is a social insurance program, with eligibility determined by work history and not conditioned on current income. Unemployment compensation consists of several different programs, including regular state benefits, state extended benefits (which generally kick in when a state's unemployment rate exceeds a preset 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 in a given week received some form of unemployment compensation, at a cost of over $131 billion for the year).

Average monthly payments per recipient family in 2009 were $397 for TANF and $276 for food stamps. EITC credits in 2008 averaged $2,046 per year, or $171 per month. By contrast, regular state weekly unemployment compensation payments in the fourth quarter of 2009 averaged $308 per week ($1,335 per month). The final column in table 3 reports results from a recent Center for Budget and Policy Priorities study (Sherman 2009) on the number of children that each of 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]

Our analysis focuses 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 listed in table 3 as well as broader measures of any safety net use that encompass other programs, such as the free and reduced-price school lunch program and public housing and rental vouchers.[16]

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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.

16. Other cash or near-cash programs of relevance for families with children include public housing and vouchers and rent subsidies, other nutrition programs (the 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 eligible for SCHIP.

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

CASH WELFARE. At the national level, cash welfare for low-income families started with the AFDC 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, but the federal government dictated most of the remaining eligibility and benefit rules. A family was eligible if it 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, it received the maximum benefit or "guarantee." As the family's earnings (or allowable income) increased, the benefit was reduced by the benefit reduction rate or clawback rate, which created an implicit tax rate on earned income. Historically, this rate has varied between 67 and 100 percent, providing a strong disincentive for work (Moffitt 1983). This fact attracted little attention in the program's early decades, when very few mothers participated in the labor market. Over time, however, concerns about the work disincentive (and about the disincentive 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 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 Reconciliation Act (PRWORA) was enacted in 1996, replacing AFDC with TANF. The key elements of reform in the state waivers and the TANF legislation included work requirements, lifetime time limits on the duration of welfare receipt, financial sanctions for failing to adhere to the work requirements or other rules, and enhanced

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17. More precisely, a family had to show that the children were deprived of parental support by 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 AFDC caseload consisted of single mothers (see U.S. Department of Health and Human Services 2008, appendix A, table TANF-1). Large changes in the mid-1960s expanded the program considerably for unmarried mothers.

18. The 1990s reforms were by no means the first reforms of AFDC. Without a doubt, however, they were the furthest reaching, and today "welfare reform" generally refers to those changes.

earnings disregards.[19] These changes were designed to facilitate the transition from welfare to work and to reduce dependence on cash welfare. The time limits were an important provision in that they eliminated the entitlement nature of the program. States have considerable discretion in setting policies under TANF, but by federal law, programs must include work requirements and lifetime time limits of 5 years or less for the vast majority of recipients.[20] The character of federal funding also changed from an (uncapped) matching formula under AFDC to a (capped) block grant under TANF.

An advantage for identifying the effects of these recent reforms is that both the timing and the type of welfare reform varied considerably across states 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. Under PRWORA, states continue to vary in their length of time limits, types of sanctions, and so on. For example, Gilbert Crouse (1999) reports that before PRWORA, 15 states had waivers approved with time limits on receipt, 19 had waivers approved that enhanced their earnings disregards, and 28 had waivers approved that included sanctions for noncompliance. Although PRWORA imposed time limits for federally funded welfare on all states, some states use their own funds to pay benefits beyond the federal time limit. This state variation in the timing and severity of reform has been widely exploited in empirical studies of welfare reform (see reviews in Blank 2002 and Grogger and Karoly 2005), and we will make use of this variation as well.

TANF provides benefits only to families with quite low incomes, and eligibility cutoffs and benefit levels leave recipients substantially below the poverty line. Before welfare reform, under AFDC, the median state provided benefits to families with income up to 70 percent of the poverty guideline, and the median state's benefit level for a family of three was

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19. Enhanced earnings disregards refer to changes in the benefit formula to reduce the rate at which earnings are "taxed" by the welfare system and thus increase incentives to work. 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).

20. The 5-year lifetime limit on receipt of federal TANF assistance applies to adult-headed families, but the law allowed states to exempt from this limit for hardship reasons up to 20 percent of their total caseload.

about 36 percent of the 1996 poverty guideline (U.S. House of Representatives 1996).[21] 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 make the 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 that families could keep while on welfare, total benefits remain low.

FOOD STAMPS. The Supplemental Nutrition Assistance Program, like TANF, is a means-tested program (eligible families and individuals must satisfy income and asset tests) in which benefits are subject to a ceiling and reduced with earned income. The similarities end there, however. First, the food stamp program 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 assistance programs, food stamps are not limited to certain targeted groups such as families with children, the elderly, and the disabled. Third, the benefit reduction rate is relatively low (30 cents per dollar earned), 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 response to cash (Fraker and others 1992, Hoynes and Schanzenbach 2009, Ohls and others 1992). Food stamp benefits today are disbursed with debit cards rather than paper vouchers as in the past.

Unlike cash welfare, the food stamp program has remained relatively unchanged over time. The income eligibility cutoff and benefits are adjusted for changes in prices each year, and the actual benefit formula (and thus the implicit tax rate) has changed very little over time. However, important limitations to the program were introduced under PRWORA: legal immigrants

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21. Note that eligibility for many federal safety net programs is based on poverty guidelines, which are simplified versions of the Census poverty thresholds, varying by fewer dimensions and made available earlier in the year. Poverty guidelines vary by number of persons and are different for Alaska and Hawaii than for the rest of the states and the District of Columbia. See aspe.hhs.gov/poverty/figures-fed-reg.shtml.

were deemed ineligible, and most childless, jobless adults between 18 and 50 could receive only 3 months of food stamps in any 3-year period.[22] The 2002 farm bill reinstated benefits for legal immigrants, and the 2009 federal stimulus bill temporarily suspended the 3-month limit for childless, jobless adults. The stimulus bill also provided a temporary increase in maximum benefits of roughly $25 per month, at a cost of $6 billion in 2009 (Pavetti and Rosenbaum 2010).

Since welfare reform (and perhaps even before it), the food stamp program is unambiguously the key safety net program and the only one that is "universal" (that is, based only on economic need) and that has a fully funded entitlement. Caseloads and benefits adjust automatically with demand (increasing in recessions), and costs are uncapped.

UNEMPLOYMENT INSURANCE. As already noted, unemployment insurance is a social insurance program that provides temporary and partial earnings replacement for involuntarily unemployed individuals with a recent employment history. As a social insurance program, unemployment insurance is not means tested, and eligibility is a function of earnings history. States administer their programs and set payroll taxes and benefit levels. Workers' wages are subject to tax while employed, and unemployed workers receive benefits for a fixed duration, with replacement rates (the ratio of benefits to most recent earnings) averaging 47 percent since 1995 (U.S. Department of Labor 2010). The extended benefit program extends receipt of unemployment compensation beyond the 26-week maximum when state unemployment rates or the share of the insured population claiming benefits is high. Funding for the extended program is shared by the states and the federal government. In most major downturns, Congress has enacted emergency extensions to unemployment insurance, such as the current program, which in most states extends benefits up to 99 weeks. Recently, these emergency extensions have been fully federally funded.

Although unemployment compensation plays a central role in recessions, it is often not considered part of the safety net because it primarily provides insurance and is funded through worker contributions. We mention it here for three reasons. First, given the increase in employment
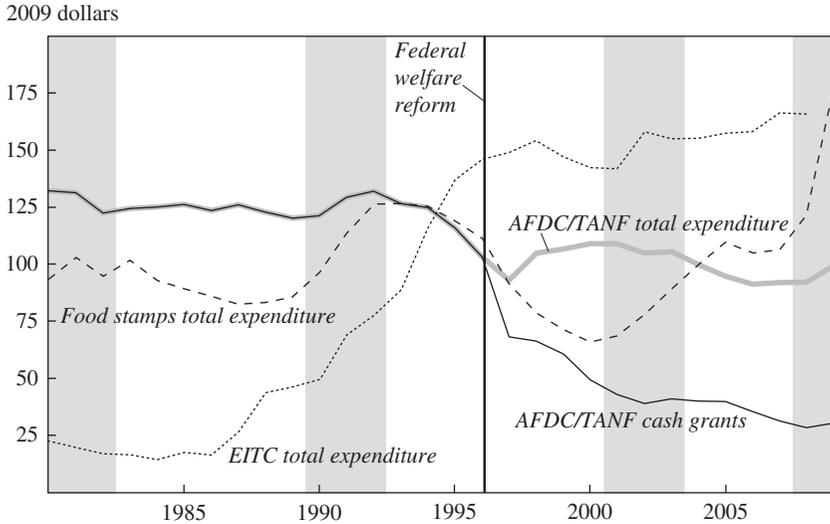
22. Technically, the 3-months-in-3-years limitation applied to able-bodied adults aged 18–49 with no dependents who were not working, in a work program, or doing workfare. Individuals are exempt if they are caring for a child, are unable to work, or are pregnant. States can exempt 15 percent of individuals and can get this provision waived if the state unemployment rate is above 10 percent or if the state is eligible for state extended unemployment benefits or there are not enough jobs.

among the potentially welfare-eligible population since TANF's passage (see the discussion of figure 6 below), unemployment compensation may be increasing in importance for low-income families. Second, although the insurance is not means tested, replacement rates fall as earnings rise, providing greater protection for lower-wage workers. Third, the emergency federal benefit extensions tend to be explicitly countercyclical and are passed by Congress in response to bad economic times. Although these emergency programs are typically short lived, when in effect they account for a large share of total spending on unemployment compensation. Table 3 shows that in 2009, emergency benefits were about $44 billion, compared with a combined $87 billion for regular and extended benefits.

THE TRANSITION FROM OUT-OF-WORK TO IN-WORK ASSISTANCE. As discussed above, the EITC is one of the most costly cash or near-cash assistance programs. It functions as an earnings subsidy and as such is extended only 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 safety net. However, the emergence of TANF has also been an important part of this transition. Virtually all TANF policies—the work requirements, the time limits, and the lowering of the benefit reduction rate—are designed to increase work. In addition, under TANF, states have the flexibility to use their federal block grant funding toward assistance other than periodic cash benefits: examples include child care subsidies as well as transportation, training, and diversion payments.[23] To illustrate the importance of these trends, figure 5 shows real spending per capita from 1980 to 2009 for families receiving cash grants through AFDC/TANF as well as total TANF expenditure per capita and total EITC tax cost per capita. (We also show spending on food stamps per capita because this program, too, serves the working poor.) The expansion of the EITC between 1986 and 1998, coupled with the decline in cash welfare expenditure beginning with the waivers of 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 expenditure presents a somewhat different picture concerning welfare funding than the trend for cash grants only—in fact, total funding has been more or less constant (in real terms) over the last 10 or more years. Unfortunately, the state reporting requirements for noncash TANF expenditure are minimal,

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23. Diversion payments are one-time payments made in lieu of monthly benefit payments at the recipient's request.

Figure 5. Real Expenditure per Capita on Cash and Near-Cash Safety Net Programs, 1980–2009[a]

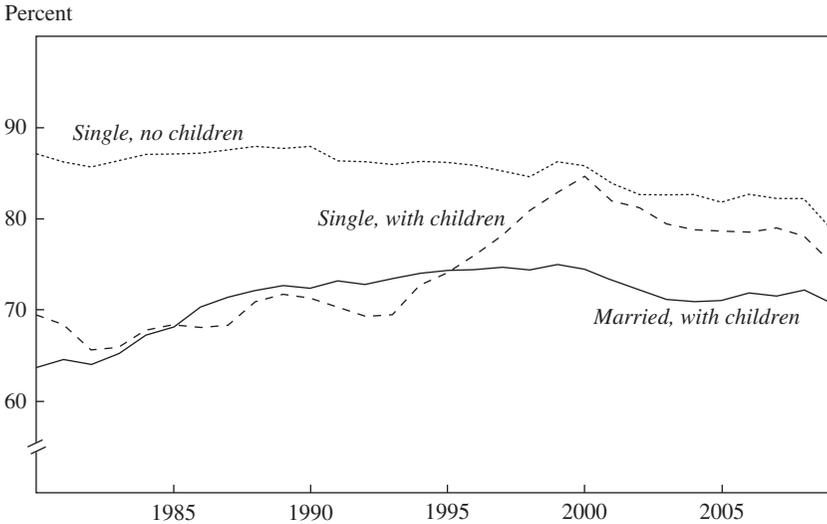2009 dollars

Sources: See the appendix.
a. Shading indicates years of labor market contraction as defined in the appendix.

and thus very little is known about who receives this funding and what it is spent on.[24] Nonetheless, these changes illustrate an important transition 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, for 1980–2009, the percentages of three groups of women aged 20–58 with any weeks of work in the last year: sin-

24. In the March CPS from 2001 to 2009, individuals were asked whether they had obtained transportation assistance or child care assistance so that they could work or go to school or training; they were also asked whether they had obtained job readiness training or attended a job search class or job club or participated in GED classes or a community service job as a condition of receiving cash assistance. We combined these into two household-level variables. Although these activities need not all be funded by TANF, surely some are. From 2000 to 2008, 2.5 percent of households included someone getting child care assistance or transportation assistance; 3.4 percent of households had someone in job readiness, job search, GED classes, or community service, compared with 3.8 percent of households in which one or more members received public assistance income. Furthermore, most of the households with cash welfare did not get either of the two other supports, and vice versa; among households with a child under 18, only 30 percent of those getting cash welfare had someone getting one of these other noncash benefits, while of those getting the noncash benefits, only 21 percent got public assistance income.

Figure 6. Female Employment Rate by Marital Status and Presence of Children, 1980–2009[a]

Percent

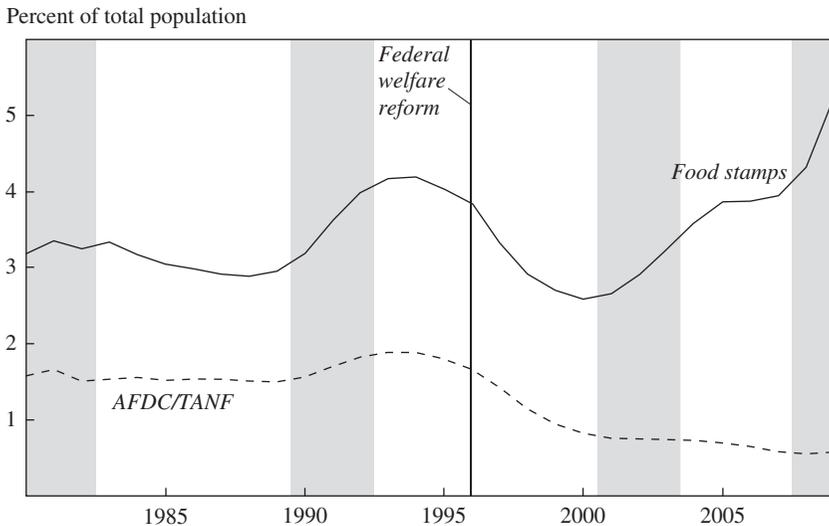Source: Authors' calculations from 1981–2010 March CPS data.
  a. Employment is measured annually and defined as having worked any weeks during the calendar year before the survey year. The sample includes women aged 20–58.

gle women heading families with children, married women with children in the family, and single women without children in the family. Between 1992 and 2000 the employment rate of single women with kids rose by 15 percentage points; the other groups saw minimal changes. This trend suggests that outcomes for these single-woman-headed families will be more procyclical, given their increased connection to the labor market.

II.B. 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 the data appendix for details). To account for changes in population over this period, we show the ratio of the caseload to the total population.[25] Several observations can be made. First, throughout

25. The caseload is essentially a count of families or households, whereas the denominator is a count of persons. Although it might be more intuitive to put the number of recipients in the numerator, the caseload measure is more commonly used to abstract away from changes in the size of families receiving benefits. In practice, trends in the ratio of recipients to population look quite similar to those presented here.

Figure 7. Cash Welfare and Food Stamp Caseloads, Administrative Data, 1980–2009[a]

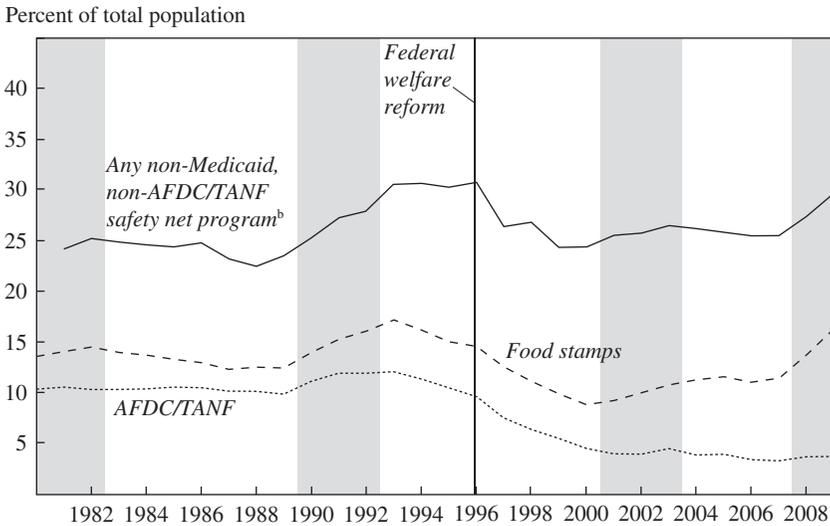Percent of total population

Sources: See the appendix.
a. Shading indicates years of labor market contraction as defined in the appendix.

the pre– and post–welfare reform periods, many more families received food stamps than received cash welfare. Second, cash welfare caseloads dramatically declined in the period around welfare reform and have remained low since. Third, compared with cash welfare, the food stamp caseload shows a stronger countercyclical tendency, at least during the early part of the period.[26] Fourth, since 2000 the trend in the TANF caseload bears little relationship to the national business cycle. Notably, the TANF caseload increased by very little in the recent recession, as figure 3 showed, despite unemployment rates reaching over 10 percent in many states.[27]

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

27. Toward the end of the period depicted in figure 7, in order to remain in compliance with various TANF requirements, many states moved portions of their caseloads off TANF and into new, "solely state-funded" programs. Data collected by LaDonna Pavetti of the Center for Budget and Policy Priorities suggest that these programs are relatively small and show small increases in the recent recession.

Figure 8. Multiple Safety Net Program Participation, 1980–2009[a]

Percent of total population

Source: Authors' calculations from 1981–2010 March CPS data.
   a. Samples include only households with children, and program participation is evaluated at the household level. Shading indicates years of labor market contraction as defined in the appendix.
   b. Households in which someone participated in food stamps, the free or reduced-price school lunch program, or SSI or received public housing or a government rental subsidy or energy assistance.

In figure 8 we return to our broader measure of safety net benefits (excluding Medicaid and cash welfare for families with children; see table 1), which we construct from the 1981–2010 March CPS data. Other than an increase in the early 1990s, followed by a decline, this more comprehensive measure of safety net participation also shows a fair amount of cyclical variation.[28]

Why might it make sense that the food stamp program and our broader measure of the non-AFDC/TANF, non-Medicaid safety net are more countercyclical than 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, whereas this is relatively uncommon for cash welfare recipients (see table 2).

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

One should be cautious about drawing conclusions from national trends, however. The problem, as noted in section I, 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 and welfare reform (for example, see Council of Economic Advisers 1997, Blank 2001, and Ziliak and others 2000). To separate out the impact of welfare reform from labor market fluctuations, our empirical model will use disaggregated data and take advantage of rich variation in cycles and reform across states and time.

III. Welfare Reform and the Impact of the Business Cycle on Family Well-Being

In this section we present our central empirical results on the impact of welfare reform on family well-being over the business cycle. These are new results that build on the models used in two separate literatures: the first examines the impact of the cycle on family economic outcomes and on different demographic groups (for examples, see Hoynes 2000 and Hines, Hoynes, and Krueger 2001), and the second the impacts of welfare reform (see reviews by Blank 2002 and Grogger and Karoly 2005). Clearly, the fact that the safety net provides less than perfect insurance implies that a recession will lead to reductions in family well-being, as measured by 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 literatures is to use variation across states to distinguish the impact of labor market cycles from that of policy changes. We adopt that approach here as well. In particular, we estimate the following model:

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

where s indexes states, t indexes years, UR is the unemployment rate, and $REFORM$ is a measure of welfare reform.[29] Our equation controls for state

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29. 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 maps more naturally onto the official recession dating. Although the magnitudes differ, the qualitative conclusions are similar to those reported here.

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}, where i indexes households). Standard errors allow for arbitrary correlation within states. The main specifications for administrative caseloads are at the monthly level, and for them t denotes months rather than years.

We begin by analyzing the administrative caseload data on AFDC/ TANF and food stamps and then move on to a wide range of family well-being measures based on the March CPS. Using the CPS, we examine impacts on official poverty, our own alternative measure of 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 subfamilies, and others), health insurance coverage, receipt of child support or alimony, and general health. Finally, we present estimates for food insecurity and, using data from the 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, which measures how the impact of the cycle on 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 type of model is commonly known as a difference-in-differences model.[30]

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 identify the impacts of welfare reform separately from labor market fluctuations. To illustrate the variation we are using, figure 9 presents a series of scatterplots of state data in which each state's population is represented by the size of the circle centered on the data point for that state. The horizontal

30. Our central parameter, on the interaction between the unemployment rate and welfare reform, would still be identified if reform were captured by a national pre-versus-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.
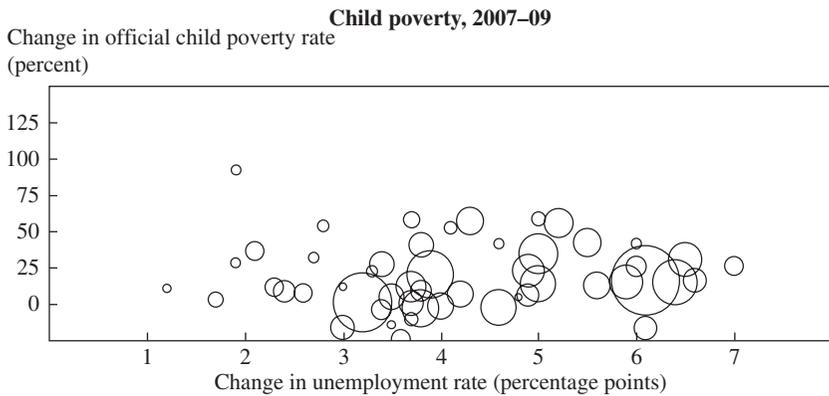
Figure 9. Change in Unemployment Rate, Change in Welfare Caseloads, and Change in Child Poverty during Labor Market Contractions, by State[a]
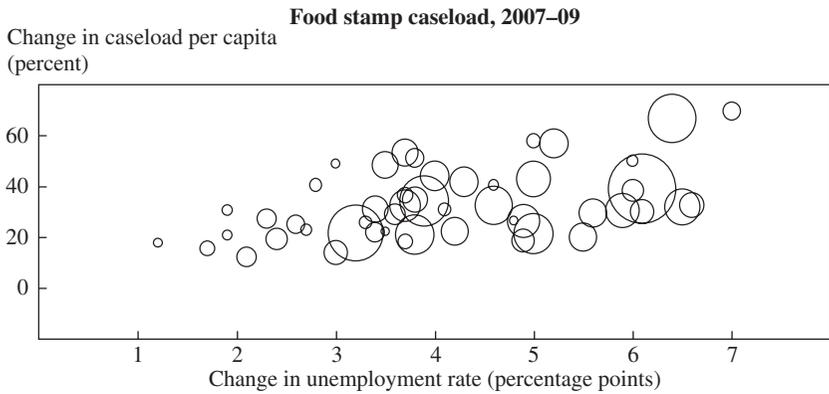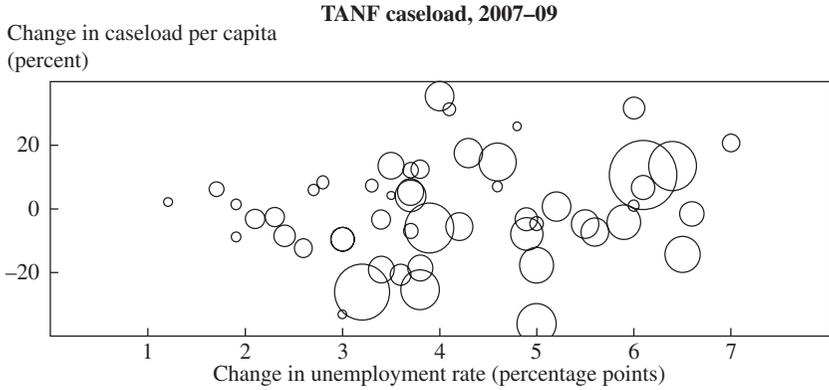
TANF caseload, 2007–09

Change in caseload per capita (percent)

Change in unemployment rate (percentage points)

Food stamp caseload, 2007–09

Change in caseload per capita (percent)

Change in unemployment rate (percentage points)

Child poverty, 2007–09

Change in official child poverty rate (percent)

Change in unemployment rate (percentage points)

Figure 9. Change in Unemployment Rate, Change in Welfare Caseloads, and Change in Child Poverty during Labor Market Contractions, by State (*Continued*)
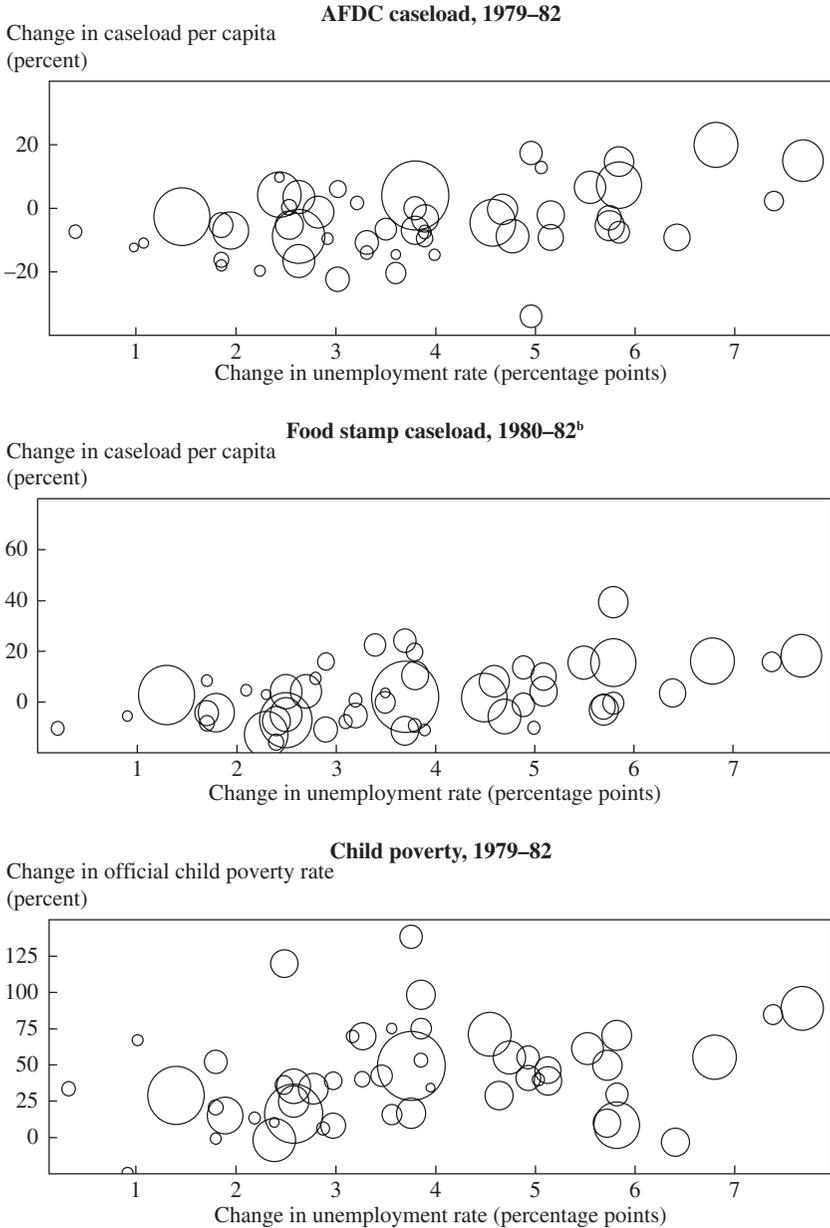
AFDC caseload, 1979–82

Change in caseload per capita
(percent)

Change in unemployment rate (percentage points)

Food stamp caseload, 1980–82[b]

Change in caseload per capita
(percent)

Change in unemployment rate (percentage points)

Child poverty, 1979–82

Change in official child poverty rate
(percent)

Change in unemployment rate (percentage points)

Sources: See the appendix.

a. The center of each circle plots the change in the unemployment rate and the percent change in caseloads or the child poverty rate for one U.S. state between the peak and the trough of the indicated contraction. Circle sizes are proportional to state populations. Official child poverty is calculated by the authors using the 1980, 1983, 2008 and 2010 March CPS and family-level poverty.

b. Food stamp caseloads are not available for 1979, so the percentage change in the caseload between 1980 and 1982 is shown instead.

axis in each panel plots the change in state annual unemployment rates (in percentage points) over a contraction, and the vertical axis a change in a state outcome (in percent) over the same period. The first three panels present data for 2007–09, and the next three panels for 1979–82. For each cycle we show the percent change in cash welfare caseloads per capita (top panels), the percent change in food stamp caseloads per capita (middle panels),[31] and the percent change in official child poverty rates (bottom panels). We have forced the scales to be the same for each of the two contractions for each outcome to provide better comparisons across contractions. The figure reveals considerable variation in the depth 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, the figure shows a positive correlation between the severity of a recession 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-versus-post design where *REFORM* equals 1 if the state has implemented a waiver or has implemented TANF, and zero otherwise.[32] Second, we use an explicit categorization of states based on their TANF and waiver policies, focusing on two policy dimensions: the length of time limits and the severity of sanctions. We adopt definitions and data from Caroline Danielson and Jacob Klerman (2004) in constructing these variables.[33] We define time limits as *short* (less than 48 months), *long* (48 months or longer), or *adult* (time limits remove only adults from aid), with the omitted group being state-year cells with no time limits (either pre-PRWORA AFDC rules or no time limit under TANF). We define financial sanctions as *full* (immediate, full family sanction) or *gradual* (gradual, full family sanction), with the omitted group being weak sanctions (either AFDC sanctions or, under TANF, sanctions no more stringent than the AFDC sanctions).

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31. Because our data on food stamp caseloads begin in 1980, the second middle panel measures the percent change in food stamp caseloads between 1980 and 1982, but the change in unemployment rates from 1979 to 1982.

32. Whereas the timing and the presence of waivers vary considerably across states, TANF implementation varies minimally, as all states implemented TANF 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.

33. We thank Caroline Danielson of the Public Policy Institute of California for generously providing us with their data and coding.

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 during which reform was in place, and the time limit and sanction policies are coded according to what was in place in December of the preceding 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.

III.A. Safety Net Caseloads

Table 4 presents estimates of the model using administrative data on participation in the cash welfare and food stamp programs. The dependent variable is caseloads per capita at the state-month-year level for 1980 through 2009. State monthly unemployment rates are seasonally adjusted (but the 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 cyclicality of safety net programs for low-income families. Additionally, these caseloads are measures from administrative data and do not suffer from underreporting. Thus, they provide us with a valuable benchmark for understanding whether the underreporting documented by Bruce Meyer, Wallace Mok, and James Sullivan (2009) and others has implications for analysis using state-year panels with state and year fixed effects.[34] Finally, considerable attention has been given to the rise in food stamp caseloads in the recent recession,[35] yet no prior research has identified whether welfare reform 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 the unemployment rate is measured in percent.

34. Weinberg (2004) discusses a host of such studies related to underreporting in CPS and other Census surveys; Wheaton (2007) documents underreporting of benefit receipt in the CPS.

35. Jason DeParle and Robert Gebeloff, "Food Stamp Use Soars, and Stigma Fades," *The New York Times,* November 29, 2009.

Table 4. Regressions Estimating Impacts of the Business Cycle and Welfare Reform on Cash Welfare and Food Assistance Caseloads[a]

	Dependent variable					
	AFDC/TANF caseload-population ratio × 100			Food stamp caseload-population ratio × 100		
Independent variable	4-1	4-2	4-3	4-4	4-5	4-6
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)
Unemployment rate × any reform	0.012			0.050		
	(0.023)			(0.042)		
Unemployment rate × short time limit		−0.026			0.020	
		(0.022)			(0.059)	
Unemployment rate × long time limit		−0.039*			0.000	
		(0.020)			(0.045)	
Unemployment rate × adult time limit		−0.046***			−0.173***	
		(0.015)			(0.036)	
Unemployment rate × full sanction			−0.018			0.138**
			(0.013)			(0.056)
Unemployment rate × gradual sanction			−0.010			0.105
			(0.019)			(0.063)
Mean of dependent variable	1.234	1.234	1.234	3.499	3.499	3.499
No. of observations	18,360	18,360	18,360	18,417	18,417	18,417
Adjusted R^2	0.95	0.95	0.95	0.9	0.91	0.91

Source: Authors' regressions. See the appendix for details on data sources and coding of welfare reforms.
a. Regressions were performed on monthly data on program caseloads per capita by state and year from January 1980 through December 2009 (for AFDC/TANF) and January 1980 through March 2010 (for food stamps). Observations for food stamp cases are missing for Vermont for October 1988 through September 1996. 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 before the caseload month. Asterisks indicate statistical significance at the ***1 percent, **5 percent, and *10 percent level.

For cash welfare caseloads (column 4-1), the coefficient of 0.06 implies that a 1-percentage-point increase in the unemployment rate leads to an increase in the scaled AFDC/TANF caseload-population ratio of 0.06, which, relative to the mean of 1.2, implies an effect size of 4.7 percent. Interestingly, food stamp caseloads (column 4-4) show a similar effect size: the coefficient of 0.17 scaled by the mean of 3.5 implies an effect size of 4.9 percent.

A negative coefficient on the interaction between the unemployment rate and reform implies that welfare reform led to a reduction in the cyclicality of program participation, and a positive coefficient implies an increase (since program participation is expected to be, and is, countercyclical). We expect that the impact of short time limits on cyclicality 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; however, this measure ignores the length of the time limit, which also might be important. We expect the impact of full sanctions on cyclicality to be greater in magnitude than the impact of gradual sanctions, and both should be larger than the effect of the omitted group of no sanctions.

With the exception of the "any reform" specification, the results for AFDC/TANF caseloads (columns 4-1 to 4-3) imply that welfare reform is associated with a *decrease* in the cyclicality of cash welfare. With the exception of the adult time limit, the results for food stamp caseloads (columns 4-4 to 4-6) imply that welfare reform led to an *increase* in the cyclicality of food stamp receipt. However, only 4 of the 12 interaction coefficients reach statistical significance at the 10 percent level or better, and only 3 do so at the 5 percent level or better. Clearly, there is no evidence that welfare reform led to cash assistance caseloads being significantly more cyclically responsive.

Our results are highly robust to several alternative specifications not reported here. We find similar results if we use lagged unemployment rates and if we allow a more flexible state trend (quadratic rather than the linear trends in the main specification). Further, we find no evidence of nonlinear impacts of unemployment rates—we had conjectured that an increase in unemployment from a higher base might lead to larger effects. The results are very similar if we use only data from 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 three. (Benefit levels are an important state cash

welfare policy variable that changes throughout the pre– and post–welfare reform period.)[36]

We conclude from these results that the unemployment rate has a positive, significant, and robust effect on cash welfare and food stamp caseloads. Further, welfare reform is generally associated with reductions in the cyclicality of cash welfare participation and increases in the cyclicality of food stamp participation, although not all interactions reach statistical significance.[37]

III.B. *Outcomes for Households and for Single Female Family Heads Using the March CPS*

We next analyze data from the pooled 1980–2010 March CPS surveys. Our primary focus is on outcomes for single female–headed families with children (table 5) and on households containing at least one child under 18 (tables 6 and 7). We estimate equation 1 and include controls for the race or ethnicity, sex (where appropriate), age, and education of the woman or the household head. We also examine impacts on various 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 alternative subsamples are intended to select groups that are relatively more disadvantaged and 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 (reported in table 5) show robust and statistically significant evidence that cash welfare income is countercyclical and that earnings and income are procyclical. A 1-percentage-point increase in the

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

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

Table 5. Regressions Estimating Impacts of the Business Cycle and Welfare Reform on Earnings and Income for Single Female Family Heads with Children[a]

| | Dependent variable | | | | | | | | |
| | Annual public assistance income | | | Annual wage and salary income | | | Total annual family income | | |
Independent variable	5-1	5-2	5-3	5-4	5-5	5-6	5-7	5-8	5-9
State unemployment rate	78***	91***	81***	−214***	−277***	−250***	−297***	−390***	−357
	(20)	(14)	(16)	(56)	(73)	(70)	(76)	(72)	(50)
Unemployment rate × any reform	−4			−356*			−423*		
	(28)			(200)			(218)		
Unemployment rate × short time limit		−99***			−498**			−403	
		(24)			(212)			(250)	
Unemployment rate × long time limit		−63**			−245			−276	
		(28)			(255)			(251)	
Unemployment rate × adult time limit		−109***			142			47	
		(25)			(296)			(303)	
Unemployment rate × full sanction			−23			−353			−394**
			(27)			(222)			(177)
Unemployment 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
Adjusted R^2	0.19	0.19	0.19	0.19	0.19	0.19	0.23	0.23	0.23

Source: Authors' regressions.

a. Regressions are performed on data from the 1980–2010 March Current Population Surveys; outcomes refer to the preceding calendar year and thus cover 1980–2009. Observations are by family, and the sample includes 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 the reform was in place, and the time limit policies were coded according to what was in place in December. Number of observations is 181,353 in all regressions. Asterisks indicate statistical significance at the ***1 percent, **5 percent, and *10 percent level.

unemployment rate leads to a $78 (in 2009 dollars, or about 6 percent) increase in yearly public assistance income in the any-reform specification. The same 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 specification. Further, the interactions between welfare reform and unemployment are largely negative, 8 of the 12 interactions are statistically significant at the 10 percent level or better, and 7 are significant at the 5 percent level or better. A negative coefficient implies that welfare reform led to a *decrease* in the cyclicality for cash welfare income (since the main effect on unemployment is positive, showing that cash welfare receipt is countercyclical) and an *increase* in the cyclicality for earnings and total income (since the main effect is negative, showing that earnings and total income are procyclical). This is important because if earnings are more procyclical after reform—falling more in the recent recession than they would have before reform—then greater counter-cyclicality 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 1-percentage-point increase in the unemployment rate after reform would lead to an additional decrease in public assistance income of $4, or about 0.3 percent (with a 95 percent confidence interval of −4.9 to 4.3 percent), an additional decrease in wage and salary income of $356, or about 2.0 percent (95 percent confidence interval of −4.2 to 0.3 percent), and a decrease in total family income of $423, or about 1.6 percent (95 percent confidence interval of −3.3 to 0.1 percent). These findings suggest that increases in unemployment such as that during the recent recession could lead to economically meaningful decreases in earnings and income in the wake of reform. In results not shown, coefficients on the unemployment rate and its interaction with reform are larger in magnitude (more negative) for wage and salary income and for total income for the sample of low-education single female family heads.

Table 6 presents results for our central measure of family well-being, the poverty rate, for all households with children. We present results using both the official poverty measure and our alternative measure, and we measure poverty at the household level. We construct our alternative poverty measure using the existing official thresholds and an expanded measure of household income, which adds to money income the cash value of food stamps, school lunches, and housing subsidies and subtracts pay-

Table 6. Regressions Estimating Impacts of the Business Cycle and Welfare Reform on Poverty[a]

	Dependent variable: share of all households with children in indicated group					
	By official poverty measure			By alternative poverty measure		
Independent variable	Below 50% of poverty line	Below 100% of poverty line	Below 150% of poverty line	Below 50% of poverty line	Below 100% of poverty line	Below 150% of poverty line
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)
Mean of dependent variable	0.059	0.150	0.249	0.029	0.123	0.263
No. of observations	759,990	759,990	759,990	682,762	682,762	682,762
Adjusted R^2	0.10	0.19	0.23	0.03	0.15	0.22

Source: Authors' regressions.

a. Regressions are performed on data from the 1981–2010 March CPS; outcomes refer to the preceding calendar year and thus cover 1980–2009 (except for alternative poverty, which covers only 1980–86, 1988–89, and 1991–2008). Observations are by household, and the sample includes all households with a child under 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, sex, and education of the household head. The main reform variable is measured as the share of the past calendar year that the reform was in place, and the time limit policies are coded according to what was in place in December. Asterisks indicate statistical significance at the ***1 percent, **5 percent, and *10 percent level.

roll taxes and net federal and state taxes (including the EITC).[38] To explore outcomes across the distribution, we look at the fractions of households below 50 percent of the poverty threshold (extreme poverty) and below 100 and 150 percent 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-versus-post measure of welfare reform, where reform is defined as any reform. For each specification we report the coefficients on the main effect for the unemployment rate and its interaction with the welfare reform variable.

Table 6 shows that higher unemployment rates lead to statistically significant increases in official and alternative poverty as well as in the fractions of families below 50 percent and 150 percent of the poverty threshold, using either measure. The any-reform results consistently show that the countercyclicality of poverty increased after welfare reform (positive interaction added to the positive main effect). This is true for our preferred, alternative poverty measure, it holds across all levels of poverty, and the effect sizes are fairly similar across the different poverty measures (all between 1 and 2.5 percent of the mean of the dependent variable). Interestingly, the results reach statistical significance only for 150 percent of official poverty. (Results using time limits or sanction severity are less consistent.) For the low-education household head sample, the findings (not shown in the table), are similar, the magnitudes are about the same as a share of the mean, and the positive interaction coefficient is statistically significant at the 5 percent level for 150 percent of official poverty, and at the 10 percent level for 150 percent of alternative poverty.

Table 7 presents our final set of results for CPS outcomes. The top panel shows results for any household participation in AFDC/TANF, food stamps, SSI, and the broader safety net (non-Medicaid, non-AFDC/TANF safety net benefits). The bottom panel shows the household measures for "anyone uninsured last year," for demographic stress (more than one family in the household, at least one of which has a child), for the presence of any female family head in the household, and for the presence of a woman in the household who is "disconnected" by Blank and Brian Kovak's (2008)

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38. 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 (see, for example, Dalaker 2005). This measure is available only for a subset of survey years: 1980–87, 1989–90, and 1992–2008 (2009 calendar-year data had not been released at the time of this writing).

Table 7. Regressions Estimating Impact of the Business Cycle and Welfare Reform on Safety Net Participation and Household Well-Being[a]

Independent variable	*Dependent variable: probability that household received indicated assistance*[b]			
	Any public assistance	*Any food stamps*	*Any SSI*	*Any non-Medicaid, non-AFDC/ TANF safety net benefit*
State unemployment rate	0.004***	0.010***	−0.001	0.008***
	(0.001)	(0.002)	(0.0004)	(0.002)
Unemployment rate × any reform	0.005	0.008**	0.0004	0.008**
	(0.003)	(0.003)	(0.001)	(0.003)
Mean of dependent variable	0.122	0.199	0.044	0.387
No. of observations	378,067	378,067	378,067	361,340
Adjusted R^2	0.17	0.17	0.04	0.21
	Dependent variable: probability that household had indicated characteristic[b]			
	Anyone lacks health insurance	*Household contains >1 family*	*Any family head is female*	*Any family head is a disconnected woman*[c]
State unemployment rate	0.006**	0.002**	−0.0004	0.0003
	(0.003)	(0.001)	(0.001)	(0.0005)
Unemployment rate × any reform	0.001	0.001	0.004	0.001
	(0.003)	(0.001)	(0.003)	(0.001)
Mean of dependent variable	0.357	0.092	0.293	0.041
No. of observations	346,817	381,817	381,817	381,817
Adjusted R^2	0.09	0.13	0.46	0.05

Source: Authors' regressions

a. Regressions are performed on data from the 1980–2010 March CPS. Program participation and lack of insurance refer to the preceding calendar year and thus cover 1980–2009; living arrangements refer to the time of the survey. Observations are by household, and the sample includes all households with a child under 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, sex, 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 are coded according to what was in place in December of that year. For 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. Asterisks indicate statistical significance at the ***1 percent, **5 percent, and *10 percent level.

b. Sample consists of households with children whose head has less than 12 years of education.

c. Defined similarly to Blank and Kovak (2008) as a single female family head aged 18–58 living with a child, with no income from public assistance or earnings.

definition.[39] To focus on 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 where the head has 12 years of education or less.

To begin, we use our CPS sample to examine participation in cash welfare and food stamps. We present these results for two reasons. First, given concerns about underreporting in the CPS, it is informative to compare these results with those from the administrative data. If they are similar, it lessens our concern about the importance of underreporting in a pooled cross-sectional analysis with demographic controls and state and year fixed effects.[40] The qualitative conclusions using the CPS sample match those from the administrative results well: cash welfare and food stamps are both countercyclical (with a positive main effect on unemployment), and the magnitudes are in the same ballpark as those for the administrative data. A 1-percentage-point increase in unemployment leads to about a 0.4-percentage-point increase in the probability that someone in the household had cash assistance income last year (this is about a 3.3 percent increase). The same increase in the unemployment rate leads to a 1.0-percentage-point increase in the probability that someone in the household got food stamps last year (about a 5 percent increase). The coefficients on the interaction of reform and the unemployment rate are also positive in both regressions, and the pattern of significance is similar to that in the administrative data (the *p*-value for the interaction for welfare is 0.105, and that for food stamps is 0.023).[41] The effect of a 1-percentage-point increase in the unemployment rate on food stamp receipt is about a

39. More precisely, our definition approximates Blank and Kovak's definition 1, in which a disconnected woman is a single female family head aged 18–58 living with a child, with no income from public assistance or earnings. We also explored two other definitions. The first defines a disconnected woman as a single female family head aged 18–58 living with a child and earning less than $2,000 a month while receiving income from public assistance of less than $1,000 a month (both figures in 2009 dollars); the second adds the restriction that real monthly income from SSI is less than $1,000. Results were similar across measures.

40. For another approach to dealing with underreporting in a recent analysis of trends in poverty, see Scholz, Moffitt, and Cowan (2009).

41. 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, whereas the CPS data are annual and the reform variable is the share of the calendar year that reform was in place. Second, the sample in the administrative regressions is everyone (with the dependent variable having the total caseload in the numerator and total population in the denominator), whereas the CPS sample is households with children and a low-educated head (with the dependent variable being the presence or absence of someone in the household receiving the benefit). Third, the CPS welfare variable includes other forms of public assistance such as general assistance.

4 percent increase after reform. Our conclusion from these specifications is unchanged from that from the administrative caseloads: both programs are cyclically responsive, but only the food stamp program has become significantly more so after reform.

In separate analyses we find that SSI bears little relationship to the business cycle and that this does not change with welfare reform. The final column in the top panel of table 7 reports results for our comprehensive measure of safety net benefits that includes many public assistance programs (but excludes AFDC/TANF, general assistance, and Medicaid). The results here are very clear: overall safety net participation is strongly countercyclical (the main effect is positive and significant, and a 1-percentage-point increase in unemployment leads to about a 2.1 percent increase in receipt), and the cyclicality significantly increases after welfare reform (the interaction is positive and significant, and again a 1-percentage-point increase in unemployment after reform leads to an additional 2.1 percent increase in receipt). The picture that emerges is that although the effect of cash welfare protection (follow-ing increases in unemployment) has fallen or stayed the same after reform, protection through other safety net programs is increasing.

The bottom panel of table 7 presents other household outcomes. The propensity to be uninsured and the rate of doubling up increase 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 cyclicality 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 cyclicality after reform, including the presence of disability income in the household, the presence of any related subfamily with a child, the presence of more than one family with a child, health, and the other measures of disconnected women (results available from the authors on request).

III.C. Other Outcomes

The CPS income and poverty measures that we described above are important for capturing the economic well-being of families affected by welfare reform, whereas 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 2009). 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 than income and poverty in some contexts. Meyer and Sullivan (2008) have used expenditure and time use as alternative measures of well-being and have shown that among single woman-headed families, those 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 is available only through the first quarter of 2009, and so we leave these data to be analyzed in future work.

We estimated models for food expenditure 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, for the period 1980–2005. These results, not shown here, show that increases in the unemployment rate lead to reductions in food consumption, with no evidence that the cyclicality changed with reform (although these estimates had large standard errors relative to the estimated coefficients). We also estimated models for food insecurity, data for which come from the December CPS supplements.[42] The drawback of the food insecurity measures is that because they are consistently available only from 2001 on (our sample goes through 2008), nearly all the variation with which reform's effects on cyclicality are identified is cross-sectional, and thus we do not focus on them.

IV. Discussion

Prior work indicates that participation in cash welfare has decreased with the transition from AFDC to TANF (Council of Economic Advisers 1997, Ziliak and others 2000, and more recently Danielson and Klerman 2008). Why this is so is not fully understood, but possibilities include an interest in "banking" benefits for the future (see, for example, Grogger and Michalopoulos 2003), the burden of complying with work requirements, individuals being removed from the rolls because they reached the time limits, changes in what the state spends TANF money on, and so on. This

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

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 indeed become less cyclical after reform, or at least has not become more cyclical, although we caution that our estimated coefficients do not uniformly support this view and that few reach statistical significance. By contrast, our findings for food stamps and a broader measure of "any safety net participation except for AFDC/TANF and Medicaid" suggest an increased sensitivity to the business cycle after reform; for both of these, participation is countercyclical (rising when unemployment rates rise) and becomes more so after reform.

The descriptive evidence about the role that eligibility and take-up play in informing these findings is informative. Our own descriptive work and that of others (for example, Zedlewski 2008) suggest that use of cash assistance did not increase in either the mild recession of 2001 or the most recent recession (with the caveat that unemployment may not have peaked yet). The available evidence suggests that the decline in caseloads after welfare reform (and the lack of increase in the post–welfare reform recessions) is explained almost completely by declines in take-up rather than declines in eligibility (for example, because recipients reached their time limits). The U.S. Department of Health and Human Services (2008) estimates that eligibility for cash welfare has fluctuated within a relatively narrow range, from 5.7 million families in 1995 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; all years in this paragraph are fiscal years).[43] By contrast, take-up rates have fallen steeply, from 84 percent in 1995 to 48 percent in 2001, 46 percent in 2003, and 40 percent in 2005. At the same time, the number of households eligible 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 percent in 1995 to a low of 48 percent in 2001 before rising to 59 percent in 2005. This suggests that the cyclical response in caseloads after welfare reform is driven primarily by changes in take-up.

It would be of interest to know about the effects of the Great Recession on the outcomes of groups who are no longer participating in welfare as well as those that are. Unfortunately, not only is it hard to statistically

43. These estimates are based on the Urban Institute's TRIM3 microsimulation model, which uses March CPS data (adjusted for nonresponse) and simulates eligibility for AFDC/TANF. The report also presents results from a Mathematica microsimulation model of food stamp eligibility (Cunnyngham, Castner, and Schirm 2010).

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 are measured only 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? Robert Lerman (2005) finds 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. Are workers who might end up unemployed able to access other parts of the safety net such as unemployment compensation? Christopher O'Leary (2010) presents findings from administrative data about experiences of welfare recipients from four states who left welfare for work: 79 percent experienced a new spell of unemployment within 3 years, yet only 24 percent of these applied for unemployment insurance (far below application rates in the general population), and only 50 percent of the applicants eventually received unemployment insurance benefits (also low relative to the general population). In our pooled March CPS data, about 11 percent of households with children who had some public assistance income from 1979 to 2009 also had income from workers' compensation, unemployment compensation, or veterans' payments. This fraction ranged from 7.3 percent of households in 2007 to 16 percent in 2009.

What about the most disadvantaged? Concern has been growing about the part of the pre-reform welfare caseload that was least ready to work. Several recent studies have addressed the experience of so-called disconnected women, single female heads of families with children who neither are participating in cash welfare (TANF and sometimes SSI as well) 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 among single female-headed families with children with incomes under 200 percent of the poverty line, 20 percent are disconnected. How these families are surviving is a puzzle. More data and research are needed in order to know how to address this issue.

V. Conclusion

The passage of the 1996 welfare reform act led to sweeping changes to the central cash safety net program for families with children, replacing the AFDC program with TANF. The key provisions of that law included work requirements, financial sanctions for noncompliance, and a lifetime time

limit for receipt of cash welfare. The imposition of lifetime time limits is particularly noteworthy because it overturned more than 60 years of entitlement to cash welfare for low-income families with children. Despite dire predictions of rising poverty and deprivation, previous research has shown that with reform, caseloads declined and employment increased, with no detectable increase in poverty or reduction in child well-being.

Several important factors likely contribute to explaining "why the experts were wrong." It turns out that as welfare reform hit, earnings subsidies for low-income families with children were rising through expansions in the EITC. Further, the labor market of the first 5 years after welfare reform offered the most favorable conditions for low-skilled workers in many decades. Finally, it seems that the new and stringently applied pro-work policies led to larger behavioral responses than had been expected based on models of the pre–welfare reform period.

This paper has reevaluated welfare reform in light of the severe recession that began in December 2007. In particular, we have examined how reform has altered the cyclicality of the response of program caseloads and family well-being. We find that TANF provides less protection, or at least no more protection, in an economic downturn than the AFDC program that preceded it, but that the noncash welfare safety net (and especially food stamps) is providing significantly more protection. In our analyses using both the official measure and our own alternative measure of poverty, the point estimates imply that the increase in poverty in an economic downturn is greater after welfare reform than it would have been before reform. These results are only suggestive, given that few are statistically significant, but the findings are statistically significant and robust for the propensity to live in a household with income under 150 percent of the official poverty line. We find no significant 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 after 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 post–welfare reform recessions. 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 limited use of public support. Ideally, we would zero in on this particularly fragile group. However, doing this would require better data on family consumption, child and family well-being, and other child outcomes as well as on family histories of welfare and other public assistance and employment and income for large samples of families with children by state and year, and these data are not available.

APPENDIX

Data and Sources

Contractions and Expansions: For table 1 we identified changes over contractions as the range of years from an unemployment low (in terms of the annual unemployment rate) to an unemployment high, and expansions as the range from an unemployment high to an unemployment low. Necessarily, then, the periods of expansion and contraction overlap by one year. Each contraction corresponds to a recession (in one case to two recessions) as identified by the Business Cycle Dating Committee of the National Bureau of Economic Research. We pooled the two early-1980s recessions, and the data end in 2009. The contraction periods are 1979–82 (corresponding to the NBER recessions of January to July 1980 and July 1981 to November 1982), 1989–92 (NBER recession of July 1990 to March 1991), 2000–03 (NBER recession of March to November 2001), and 2007–09 (NBER recession of December 2007 to June 2009). The expansion periods are thus 1982–89, 1992–2000, and 2003–07. The end date of 2009 for the most recent contraction may end up not being the peak annual unemployment period, but 2009 is the last year for which the bulk of our data are available. In figures 2, 5, 7, and 8 we have shaded periods of contraction; for these we drop the first one-year period (the unemployment rate low) and thus those periods are 1980–82, 1990–92, 2001–03, and 2008–09.

AFDC/TANF Administrative Data on Caseloads and Expenditure: AFDC caseloads were downloaded from the web site of the Office of Family Assistance, U.S. Department of Health and Human Services (DHHS) at 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 cases) from www.acf.hhs.gov/ programs/ofa/data-reports/index.htm. Both measure average monthly case-

loads during the year. Unpublished data on AFDC cash expenditure (and combined AFDC/TANF expenditure) for 1980–2000 were provided by Don Oellerich in the Office of the Assistant Secretary for Planning Evaluation at DHHS. TANF expenditure data are from the DHHS website at www.acf.hhs.gov/programs/ofs/data/index.html. TANF cash expenditure is defined as the figure in the second data column (line 5a, "Basic Assistance") of table F-3, "Combined Spending of Federal and States Funds with ARRA Funds Expended . . . in FY 2009." TANF total expenditure includes all expenditure (maintenance of effort from the state and federal sources, including separate state programs, combined federal and state expenditures on assistance, nonassistance, and both together, as reported in table F, "Combined Spending of Federal and State Funds Expended in FY [year]." Federal stimulus expenditure under the American Recovery and Reinvestment Act of 2009 (ARRA) is included in the 2009 data. AFDC cash assistance numbers for 1979 came from the Green Book of the U.S. House Committee on Ways and Means (waysandmeans.house.gov/singlepages.aspx?NewsID=10490). The average monthly TANF benefit (used in table 3) is the average family benefit for 2006, expressed in 2009 dollars, from DHHS (2008), appendix A, table TANF-6. All AFDC and TANF data are for the month or the fiscal year (which ends on September 30).

Food Stamp Administrative Data on Caseloads and Expenditure: Caseloads and expenditure by month for calendar years 1980–2009 and for January through March 2010 come from unpublished U.S. Department of Agriculture (USDA) data generously provided by Katie Fitzpatrick and John Kirlin of the Economic Research Service, USDA. Table 1 presents average monthly caseload and total annual payments.

Unemployment Insurance Administrative Data on Caseloads and Expenditure: Data for calendar years 1980 (or in some cases a later starting date) through 2009 are unpublished data provided by the Office of the Chief Economist at the U.S. Department of Labor. The average benefit is the weekly average benefit amount for 2009Q4 from the website of the Employment and Training Administration at the U.S. Department of Labor, at workforcesecurity.doleta.gov/unemploy/content/data_stats/datasum09/DataSum_2009_4.pdf.

Unemployment for the United States and by State: The number of unemployed and the unemployment rate for the nation as a whole and for each state, annually and by month, come from the Bureau of Labor Statistics' Current Population Survey, accessed at www.bls.gov/cps/ and www.bls.gov/lau/. The monthly numbers are seasonally adjusted.

Population for the United States and by State: U.S. population data are from the annual *Economic Report of the President,* accessed at www.gpoaccess.gov/eop/2010/B34.xls. State population data are from the National Cancer Institute's SEER (Surveillance Epidemiology and End Results, at seer.cancer.gov/popdata/download.html) for 1980–2007, and from the U.S. Census Bureau for 2008 on.

Deflator: The CPI-U is from the *Economic Report of the President,* accessed at www.gpoaccess.gov/eop/tables10.html.

Census Poverty Rates: Official poverty, all persons, and official poverty, children, come from the U.S. Census Bureau, "Income, Poverty, and Health Insurance Coverage in the United States: 2009," report P60-238, tables B-1 and B-2. NAS alternative poverty numbers come from the U.S. Census Bureau web site, at www.census.gov/hhes/www/povmeas/web_tab4_nas_measures_historical.xls, "Official and National Academy of Sciences (NAS) Based Poverty Rates: 1999 to 2008." We report the series MSI-NGA-CE, in which imputed out-of-pocket medical 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 the annual number of recipients and the total tax cost (including refundable and nonrefundable portions) of the EITC for 1980–2008 are from the Tax Policy Center's "Tax Facts: Historical EITC Recipients" for fiscal 1976–2010, downloaded from www.taxpolicycenter.org/taxfacts/displayafact.cfm?Docid=37.

SSI: Data on number of recipients (those who received any payment during the year), total benefit payments, and average monthly benefit are from Social Security Administration (2010) and refer to federal plus state supplementation program.

Other sources for tables 1 and 3 include the following:

—*Consumption:* statistics for expenditure by "Quintiles of income before taxes," published by the Bureau of Labor Statistics and 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:* data published by the Centers for Disease Control in "Health Insurance Coverage Trends, 1959–2007" (www.cdc.gov/nchs/data/nhsr/nhsr017.pdf) as well as annual reports based on the National Health Interview Survey

("Summary Health Statistics for the U.S. Population: National Health Interview Survey," various years).

—*Homeless:* from the Office of Community Planning and Development, U.S. Department of Housing and Urban Development, "Annual Homeless Assessment Report to Congress," for 2007 and 2009.

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