

Changes in Safety Net Use During the Great Recession[†]

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The Great Recession (GR) is widely characterized as the worst economic downturn since the Great Depression. As might be expected in a period of such dire economic circumstances, participation in safety net programs increased. Here, we are interested in understanding not only this increase, but also in how these programs affect households at different parts of the income distribution. We examine at which points in the income-to-poverty distribution different programs find purchase, both in terms of participation and in terms of the fraction of a household's resources that these transfers comprise. In addition, we calculate how much of the change during the GR is due to falling income-to-poverty levels and other changes in household characteristics that directly affect program eligibility, and how much is due to changes in participation conditional on these factors.

We find that program participation and benefits vary greatly across the income distribution by program, and that these differences carry over to the changes we see during the GR. For example, participation in the Supplemental Nutrition Assistance Program (SNAP, formerly food stamps) is especially high for households below the poverty line, with increases over the GR distributed mainly to not just those households, but also those above the poverty threshold. For the Earned Income Tax Credit (EITC), participation is highest for households that are right around

the poverty line, with the largest increases seen for those with incomes between about 80 and 160 percent of the threshold. By contrast, while public assistance (cash welfare) has the highest participation rate below the poverty line, during the GR there was no increase in participation or share of income from the program.

I. Data and Methods

We use Current Population Survey (CPS) data from 2001 through 2011. To obtain the best information on program receipt and income, we use March CPS data. We limit the sample to households that can be matched across two years of March data so that we can observe two years' worth of program and income data. Additionally, in order to include information on food insecurity, a measure of material hardship collected in the December CPS supplements, we match households that appear in both the December and March CPS data four months apart. The result of these matching processes gives us a sample of about 4,500 households per year that do not change residence across the two-year period and participate in all four surveys.¹

For each household in each year, we use the March CPS report of income to create an income-to-poverty threshold measure. Household income in the CPS includes income from wages and salary, self-employment, and retirement (including Social Security), as well as from interest, dividends, and rent. Cash benefits, such as workers' compensation, unemployment insurance, supplemental security, public assistance, veterans' benefits, survivors' benefits, and educational assistance are included as well. Finally, income from child support or

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¹Note, however, that because of a change in the household identifier between 2003 and 2004, we do not match across those years.

alimony payments is also captured. Notably excluded are non-cash benefits such as SNAP and programs administered via the tax system, such as the EITC. There is a fair amount of measurement error and volatility in the year-to-year reports of income-to-poverty thresholds. As a result, there is only about a 60 percent correlation between this year's income-to-poverty percentage and the following year's. We create an average across the two years to reduce the transitory noise in our measure of a household's position in the income distribution and thus focus on program participation as it varies with this relatively more stable measure of income.

The programs we examine are SNAP, EITC, Unemployment Insurance (UI), and cash welfare from the Temporary Assistance for Needy Families (TANF) program.² We first perform Oaxaca-style decompositions to separate the increase in program participation into the fraction that is attributable to changes in household characteristics and the fraction that is attributable to changes in receipt among households with given characteristics. The characteristics we control for in the decompositions capture the broad determinants of eligibility across the programs: income-to-poverty ratio, weeks worked and weeks looking for work (with separate indicator variables for no work or no weeks looking), female head of household, indicators for 1, 2, or 3+ children, and interactions between these characteristics and income-to-poverty.³

We then limit our attention to households for which the two-year average income-to-poverty percentage is below 300, and measure program characteristics in the second year of the two-year panel. We plot locally weighted polynomial regressions to examine the relationship between average income-to-poverty percentages and program receipt. In addition to receipt, we examine the fraction of a household's total resources that are comprised of the benefits from each of the different programs. We show plots of these regressions to see how the impact of these programs varies across the income-to-poverty distribution before and during the GR.

²The TANF measure also includes other, smaller cash welfare programs such as General Assistance.

³We either control for an indicator for income-to-poverty percentage below 100, or a quadratic in income-to-poverty. The findings are robust to either specification.

II. Results

The increase in safety net program participation is not surprising given that incomes fell during the GR, and that these programs are intended to buffer households in bad times. In our sample, SNAP receipt increases from 7.0 percent in 2007 to 9.9 percent in 2011.⁴ Receipt of EITC and UI benefits also both increased by about 3 percentage points over this period, while receipt of TANF remained essentially flat. The fraction of households with low incomes in our sample increased over this period; for example the fraction of households with income-to-poverty ratios less than 3.0 rose from about 37.9 to 39.7 percent, and the fraction with income-to-poverty less than 1.0 increased from 6.8 to 7.5 percent. However, we find that very little of the rise in program receipt can be explained by changes in income-to-poverty alone. If we also control for household characteristics that matter for program eligibility, and interact these characteristics with income-to-poverty, using a Oaxaca-style decomposition we can explain about 20 and 30 percent of the increase in participation in SNAP and UI, respectively. None of the substantial increase in EITC can be explained by changes in these household characteristics, but all of the 0.1 percentage point change in TANF can be.

Since changes in household income and characteristics leave most of the increase in program receipt unexplained, we now turn to an examination of the changes in receipt conditional on income-to-poverty. Figure 1 shows the relationship between income-to-poverty percentage and receipt of SNAP, EITC, UI, and TANF, for the pre- and post-GR years, for households with average income-to-poverty percentages less than 300.⁵ Note that SNAP participation is relative to the higher scale on the left axis, while all other programs are relative to the lower scale on the right axis. The relationships are quite different across the programs. Program receipt falls with

⁴Our matching procedure (discussed above) yields a sample of (more) stable households with lower SNAP receipt than the national average. In national data, 7.7 percent of households reported SNAP receipt in 2007, and 11.3 percent participated in 2009.

⁵While here we group 2008–2011 together, splitting these four years into two groups shows that over time the effects of the GR deepened.

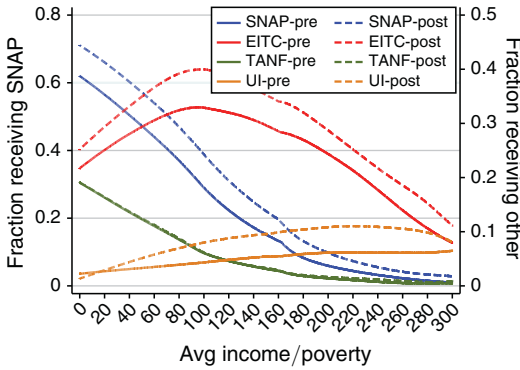


FIGURE 1. PARTICIPATION RATES IN SAFETY NET PROGRAMS BY INCOME-TO-POVERTY PERCENTAGE, BEFORE AND AFTER THE GREAT RECESSION

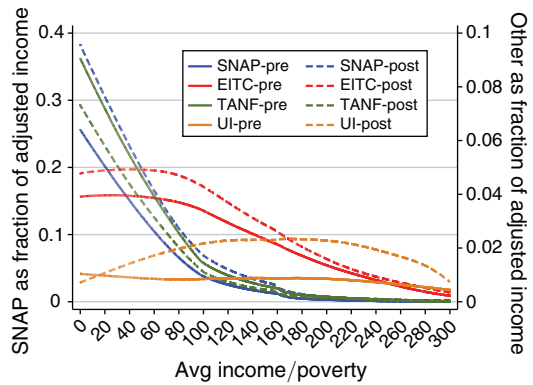


FIGURE 2. SHARE OF HOUSEHOLD RESOURCES FROM SAFETY NET PROGRAMS BY INCOME-TO-POVERTY PERCENTAGE, BEFORE AND AFTER THE GREAT RECESSION

increases in income-to-poverty percentages for SNAP and TANF, with participation levels substantially higher in SNAP than TANF. In contrast, receipt of UI rises with income-to-poverty, while receipt of EITC is hump-shaped, with the highest participation rates just above the poverty line.

The changes in program receipt during the GR are striking. TANF is the only program for which there is not an upward shift in participation during the GR. Participation in SNAP, EITC, and UI all shift up for each income-to-poverty level. For example, during the GR, a household with an income-to-poverty percentage of 200 was as likely to receive EITC as a household at an income-to-poverty percentage of 160 in the years preceding the GR. For income levels below the poverty line, the shift up in SNAP participation is almost 10 percentage points. For two-year averaged income levels above 200 percent of the poverty level, the shift up is about half as large (and the base participation is much lower). While Figure 1 does not display standard errors, we note that if we treat the change as a parallel shift, we can reject that the lines are the same for the GR and non-GR years at all conventional levels of statistical significance.

Figure 2 shows the shift in the fraction of total resources these programs provide to households. As in Figure 1, the horizontal axis includes only CPS income in the income-to-poverty percentage. The vertical axis measures the value of a household's program benefits as a fraction of total disposable resources, where the denominator is an augmented income measure including not only

cash income but also the dollar value of SNAP, school lunch, and energy assistance and the value of the EITC. The figure shows that for households below the poverty line, SNAP benefits dominate the other programs. Note that again SNAP uses the higher scale on the left axis, while all other programs use the lower scale on the right. There is a steep decline in the fraction of resources from SNAP up to incomes just above the poverty line. In addition, there is a large increase in the fraction of resources from SNAP during the GR for households with incomes below the poverty line. Turning to the other programs, the contributions of TANF drop very steeply up to the poverty line, and make up a smaller share of total household resources in the post-GR years. This is consistent with previous research that found little counter-cyclical role for the TANF program during the GR (Bitler and Hoynes 2014).

At the same time, the fraction of total resources coming from the other safety net programs rose during the GR. There is a shift up in resources from the EITC during the GR years. The difference narrows for households with incomes above the poverty line, but the curve is decidedly higher at most income-to-poverty levels. UI, on the other hand, in the years prior to the GR, was responsible for a flat 1 percent of household resources regardless of income-to-poverty level. In the GR years, however, the fraction shifted up, with the largest increase for households with incomes between 100 and 240 percent of the poverty threshold and smaller increases for households at the tails of the income-to-poverty distribution.

III. Explanations for the Changes in Patterns of Safety Net Use

Explanations for differential patterns of participation across the income distribution and differential changes during the GR are likely to differ by program. Thus, here we will discuss each program in turn.

Because of the dramatic increase in unemployment during the GR, it is not surprising that there are increases in both the fraction of low-income households receiving UI and the fraction of total resources received from UI. Extended benefits during the GR meant an increase in potential duration of UI from 26 weeks to up to 99 weeks for some unemployed workers. Beyond making it more worthwhile to claim benefits, the extension of benefits could also increase participation by reducing the likelihood that an individual would exit unemployment by either finding a new job or dropping out of the labor force.⁶ Further, while states did not implement any systematic changes to their UI programs in this period, the 2009 American Recovery and Reinvestment Act (ARRA) included several provisions that increased the after-tax value of benefits, which has been shown to increase take up (Anderson and Meyer 1997).⁷

SNAP experienced some programmatic changes during the period. First, the ARRA temporarily increased monthly benefit levels by an average of 15 percent.⁸ The higher benefit levels likely increased take-up rates among the eligible, and certainly increased the fraction of total household resources that can be attributed to SNAP. Further, there were changes to the program's gross income limits and asset criteria that expanded eligibility. Another change to SNAP policy came from

⁶Rothstein (2011) estimates that extended UI benefits raised the unemployment rate by less than half a percentage point in early 2011.

⁷The ARRA added \$25 to weekly benefits, which on average increased benefits by 8 percent. It also provided an income tax waiver for the first \$2,400 in UI benefits. See Vroman (2009) for a summary of the UI provisions in ARRA.

⁸Given the overlap in participation between TANF and SNAP, the seemingly counterintuitive drop in the share of household resources coming from TANF during the GR shown in Figure 2 may well be explained by the increase in take up and benefit levels of SNAP.

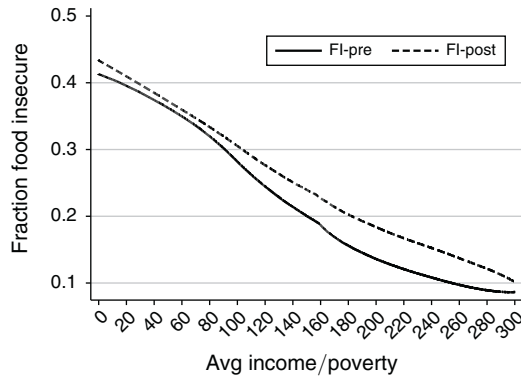


FIGURE 3. RATE OF MATERIAL HARDSHIP BY INCOME-TO-POVERTY PERCENTAGE, BEFORE AND AFTER THE GREAT RECESSION

the temporary suspension of time limits on benefit receipt among able-bodied adults without dependents (ABAWD). During normal economic conditions, the ABAWD are only permitted to receive benefits for three months during a three-year period. The time limits are temporarily suspended during periods of high unemployment like the GR. Ganong and Liebman (2013) estimate that 8 percent of the increase in program enrollment during the GR is explained by the eligibility changes, and 10 percent is explained by the temporary suspension of time limits for ABAWDs.

EITC shows both an increase in participation and in share of a household's resources coming from the program, especially for households with income-to-poverty percentages between 100 and 150. This may be explained by program changes to the EITC that were enacted with ARRA and authorized through 2017: there was a temporary increase in benefits for those with three or more qualifying children, and the beginning point for the phase-out range was increased for all married couples filing jointly.

Finally, TANF receipt behaves very differently to the other programs described above. There is a very small overall increase in TANF receipt, but unlike the other programs described above, there appear to be no changes in either eligibility criteria or take-up that increase receipt of TANF conditional on income-to-poverty during the GR. As discussed in Bitler and

Hoynes (2014), TANF no longer appears to play a counter-cyclical role.⁹

IV. Conclusions

Despite the increase in participation in various safety net programs during the GR, households were not fully insured against economic distress. Figure 3 shows that economic distress, as measured by the rate of reported food insecurity, increased during the GR for households at the same point in the income-to-poverty distribution. The increase is larger for relatively better-off households. Households with incomes below the poverty line, for whom SNAP (and to a lesser extent, TANF) make up a relatively larger portion of their available resources both before and during the GR, showed little increase in economic distress during the GR. Note, however, that the rate of economic distress is already quite high in these households—over 30 percent—even during relatively good economic times. Those households for whom EITC and UI comprise a relatively larger share of available resources appear to have seen a larger increase in hardship, with rates of food insecurity conditional on income increasing almost 5 percentage points at some points in the income-to-poverty distribution.

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⁹In previous recessions, cash welfare was counter-cyclical. The 1996 welfare reform law converted the program to a fixed-level block grant based on spending levels at the time, which is neither adjusted for inflation nor changes when the economy is weak (Falk 2013).