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Chloe N. East
David Simon

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ABSTRACT

An extensive literature in economics documents large and persistent declines in earnings following involuntary job loss. We study whether the public safety net mitigates this loss in resources using the Survey of Income and Program Participation in 1996-2013. With an individual fixed effects model, we document which public safety net programs provide the most insurance, and how this varies by pre-job-loss characteristics. We find that Unemployment Insurance provides the largest buffer against lost income, but that due to the structure of the program, the neediest are less-well insured (in terms of dollars transferred and percentage of lost earnings replaced), compared to middle and higher income job losers. This has important implications for the progressivity of the safety net, and how best to support displaced workers, which is crucial to understand for job losers at any time, and especially now, in light of the historic number of job losses during the COVID-19 pandemic.

Chloe N. East
University of Colorado Denver
chloe.east@ucdenver.edu

David Simon
Department of Economics
University of Connecticut
365 Fairfield Way, Unit 1063
Storrs, CT 06269
and NBER
david.simon@uconn.edu

1 Introduction

In an average year, 1.5% of the U.S. workforce experiences a job displacement (Fernández Campbell, 2019). This number is even higher in recessions, and during the first few months of the COVID-19 pandemic, an estimated 22 million people (13% of the workforce) lost their job in the US (Bartash, 2020). Workers who lose their job experience a decrease in earnings of 14-66% in the first year after job loss, and these losses often persist for years after displacement (Couch and Placzek, 2010). Moreover, the median displaced worker does not have enough in liquid savings to cover even a month's worth of expenses (Rothstein and Valletta, 2017), suggesting that self insurance is unlikely to be a viable option for many of those displaced. Therefore, workers may rely on the public safety net for insurance against lost earnings after displacement. The structure and generosity of the public safety net for displaced workers has been highly debated, especially during the COVID-19 pandemic (e.g. Snell (2020); Palmer and Sherman (2020)). The initial federal relief packages have already expired or will soon, and more aid remains stalled in Congress.

This paper explores the efficacy of the public safety net in mitigating negative economic shocks on displaced workers' resources. We refer to both safety net programs–which are means-tested–and social insurance programs–that workers pay into, and can claim benefits from if an adverse event happens–as the "safety net". We document which programs provide the largest buffering effects in terms of replacing lost income, and how this varies by demographics.[1] We also look at the dynamics of these buffering effects over several years following the job loss. We take a comprehensive view of the safety net, looking at many programs beyond just Unemployment Insurance (UI), including Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF), Social Security (SS), Supplemental Security Income (SSI), WIC, Free and Reduced Price Lunch (FRPL), energy assistance, and public health insurance. Our findings reveal which job losers benefit from the safety net, the degree to which they benefit, from which programs those benefits are derived, and when those benefits occur.

We use the Survey of Income and Program Participation (SIPP) from 1996-2013. The SIPP is ideally suited for our study because it collects information about the duration of each job and the reason each job ends. Additionally, the SIPP collects detailed, monthly information about earned income, and receipt and benefit amount of many cash and in-kind safety net programs. Finally, the SIPP follows individuals in the initial sample for 3-4 years, so we can examine how these sources and amounts of income change around job loss in event

[1] Changes in consumption are also important, however, we do not focus on consumption in this paper.

study and difference-in-difference models with individual fixed effects.

We start by documenting large earnings losses following displacement, with magnitudes consistent with the prior literature. We then go on to explore the potential buffering effects of the safety net. Our first finding is that UI is the most important program for providing income replacement for displaced workers, both because it is the most commonly used program for job losers, and because it provides the largest benefit amounts. This is consistent with the prior state-level literature on safety net caseloads and expenditures in response to downturns (Bitler and Hoynes, 2016; Bitler et al., 2017a), as well as findings in Leung and O'leary (2020). Extending this analysis, we show several other important facts. We find that UI payments are regressive at the lower part of the income distribution. Workers with pre-job-loss household income below the poverty line have only 21% of their lost earnings replaced by the safety net. In contrast, workers with household income between 100-499% of the poverty line, have 26-28% of their lost earnings replaced. This is likely due to the fact that UI eligibility is conditional on meeting minimum work history and earnings requirements, and is not available to self-employed and gig workers, so it is less available for lower income workers overall.[2] Because of the structure of the program, UI benefits mostly run out by two years after the job loss, even though earnings losses remain significant after two years.

For workers with pre-job-loss household income below 200% of the poverty line, means-tested safety net benefits are also important–particularly the Supplemental Nutrition Assistance Program (SNAP), and Free and Reduced Price Lunch (FRPL). However, these benefits replace a much smaller fraction of lost income than UI, because they are less generous on average in terms of eligibility rules and benefit amounts. We find no evidence that TANF, WIC, FRPL, or energy assistance acts as a meaningful safety net for job losers.[3]

In terms of the means tested health safety net: public health insurance helps offset the loss of private insurance after a job loss. Households with pre-job-loss income below the poverty line benefit from the buffering effects of public insurance, particularly children in those households. However, public health insurance only modestly mitigates losses to private insurance after job loss for middle income families (those who fall between 200% - 500 % of the poverty line in pre-job-loss income).

Finally, we look at employer-provided cash insurance in the form of severance pay to see if this fills in any gaps in public insurance. On average this is relatively rare, and it is also

[2]In future work, we will explore this possibility directly by modelling UI eligibility.

[3]This is consistent with findings looking at more aggregate analyses on TANF, that finds little cyclicality in TANF expenditures after welfare reform (Bitler and Hoynes, 2016; Bitler et al., 2017a).

less generous for the lowest income compared to the highest income. Taken together, our results demonstrate that overall the public safety net for job losers is less protective for the most economically vulnerable. Those in poverty receive the smallest increase in the dollar value of public benefits, and also have a smaller fraction of their lost income replaced, when compared to higher incomes.[4]

Our work contributes to three related literatures. First, we build on the work examining the effect of displacement on own earnings. These papers consistently find large and persistent earnings losses for displaced workers, as summarized by Couch and Placzek (2010). However, no papers exist that study the buffering effects of the safety net in a comprehensive way for all job losers in the US in recent decades, or examines heterogeneous impacts. As we show, differences in impacts across pre-displacement income are particularly important because safety net programs are often targeted based on income.[5] Second, the moral hazard costs and, to a lesser extent, consumption smoothing benefits of Unemployment Insurance (UI) have been extensively studied by economists (e.g. Chetty (2008); Rothstein (2011); East and Kuka (2015); Farber and Valletta (2015); Ganong and Noel (2019)), and we contribute to this literature by examining *which* workers receive UI, and how UI fits into the broader safety net landscape. Finally, our work relates to the literature on the cyclicality of safety net and social insurance program expenditures and caseloads in the US (e.g. Bitler and Hoynes (2016); Bitler et al. (2017a)). This past work has studied the aggregate (state-level) responsiveness of these programs to the business cycle, whereas we instead take an individual-level approach and look at income receipt for the individual and their household following a job loss. Our approach allows us to understand which types of individuals (e.g. high vs. low income) benefit from which programs, as well as the dynamics of program receipt over time. We show that these new dimensions of heterogeneity are important to getting a full picture of the insurance value of the safety net, as well as understand important gaps in our current safety net structure.

Section 2 describes the data and estimation sample, Section 3 describes our estimation strategy. Section 4 describes program participation and household resources effects. Section 5 concludes.

[4]This same result holds true if we instead split the sample by individual's earnings measured before job loss.

[5]The closest paper to ours is Rothstein and Valletta (2017) who study the impacts UI benefit exhaustion (and in some cases job loss) on household income sources. Our paper builds upon this prior work in several ways: 1) we do not condition the sample of job losers who receive UI, or who lost their job during a recession, and instead focus on no-fault job losers in all recent years in order to understand these effects on a representative sample of most job losers, 2) we look at longer-run effects and dynamics around job loss, and 3) we examine in more detail heterogeneous impacts.

2 Sample and Program Description

2.1 SIPP Data and Sample Definition

We use the 1996, 2001, 2004, and 2008 SIPP panels for our analysis. We define job losers as those that lost their job through no fault of their own–due to a layoff, business closure, or transfer of ownership of the business. We focus on the first job loss we observe after the SIPP panel began. Following the literature, our sample is working-aged (24-60 at time of job loss), heads of households or the spouse/unmarried partner of a household head.[6] We further condition on the displaced worker having at least 1 year of job tenure. This job tenure restriction is common in the job loss literature and has several advantages (Oreopoulos et al., 2008; Rege et al., 2011; Schaller and Zerpa, 2019): first, individuals who were more attached to their job may experience a larger shock when they lose their job (Stevens, 1997); second, since we examine income dynamics up to 12 months prior to job loss, this means that changes prior to the job loss were less likely due to job transitions.[7] We explore heterogeneous results by pre-job-loss demographics, which is another advantage of our panel data.

In table (1), we show demographics for the full sample, workers with 1 year of job tenure, job losers with 1 year of tenure, and job losers with less than 1 year of tenure, in the first survey month. Two distinct patterns emerge that are worth noting for interpreting our results. First, job losers are less advantaged than their non-displaced counterparts, as is evident by their initial earnings and education. This finding is consistent with prior literature that shows displaced workers do not appear to be randomly selected (Hilger, 2016) and is one motivation for our choice of empirical strategy, discussed in more detail below. Second, restricting the sample to workers with at least one year of job tenure (either at the beginning of the survey or before the job loss) yields a more advantaged sample (again based on earnings and education). While we prefer this restriction for our main analysis for the reasons described above, this yields a non-random sample of 64% of all job losers, and this should be kept in mind when interpreting our results; in particular, the most disadvantaged displaced workers are not in our analysis. Future work will explore the efficacy of the safety net for these more disadvantaged workers. Additionally, we show in Figure (1) the

[6]To account for potentially endogenous effect of job-loss on marital status we link job losers to the observed spouse or unmarried partner first observed in the sample. Only 4% of our sample becomes not a head, spouse, or partner at some point in the sample window. We follow these individuals even after they are no longer a head, spouse, or partner.

[7]Note, we drop observations more than 12 months before job loss and more than 23 months after job loss. For our main analysis, we do not restrict the sample to be balanced, so some individuals we observe for less than 12 months before the job loss and less than 23 months after, as shown in Appendix Figure (B1). We test the robustness to restricting to a balanced sample in Appendix B, which limits the sample size, but yields almost identical results.

distribution of years of first job loss in our sample. While there are more job losses in the 2001 and 2009 recessions, we have a meaningful portion of our sample who is displaced in non-recessionary years as well. In future work we will explore how our results differ by business cycle conditions at the time of job loss.

We use the rich information the SIPP collects about many income sources. We examine monthly earnings to replicate the findings of the prior literature on job loss. We also use the detailed information about public safety net program receipt collected in the SIPP to understand how these programs buffer income loss after job loss. Specifically, we look at the monthly amount received of Unemployment Insurance (UI), Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF), Social Security (SS), Supplemental Security Income (SSI), WIC, Free and Reduced Price Lunch (FRPL), and energy assistance. We also examine public health insurance (PHI) take-up and its interaction with private health insurance, since the latter is often tied directly to employment, especially in the pre-ACA time frame we study. We describe each of these programs in more detail in the next subsection.

2.2 Program Details

We focus on several features of each program to provide intuition and context for the expected effects. First, whether they provide cash or in-kind benefits. Second, whether the eligibility rules include income tests (means-tested) and/or other restrictions (categorical eligibility rules). And, if there is a substantial waiting period between application time and initial benefit receipt. We focus on individual-level program receipt, except for household-level programs as noted below.

Unemployment Insurance (UI): The UI program is the only safety net program designed specifically to aid displaced workers. Cash payments from UI are available to workers who lost their job through no fault of their own, and who meet work history and minimum earnings requirements in the base period (often four out of the past five quarters), though, the exact requirements and methods for calculating eligibility range from state to state. Additionally, not all workers are covered by UI– for example, self-employed workers and gig workers are not typically covered by UI. Benefits are typically calculated as a little less than half of the pre-job-loss wages, up to a maximum benefit amount, which is again set by each state. Minimum benefits range from $5 (Hawaii) to $188 (Washington) in 2019. Similarly, maximum benefits (excluding additional benefits for dependents) range from $235 (Mississippi) to $795 (Massachusetts). UI is available to workers for 26 weeks in most states,

except during recessions, when the Extended Benefit program can provide an additional 13 or 20 weeks.[8] Additionally, it is important to note that income from UI can directly affect eligibility for the other programs described below. It is counted in household income tests for SNAP, TANF, FRPL, WIC and public health insurance. Additionally, UI income may reduce benefit amounts of SS and SSI.

Supplemental Nutrition Assistance Program (SNAP): In contrast to UI, SNAP is means-tested, rather than conditional on job loss, and it provides in-kind benefits in the form of a debit card that can be used to purchase food only. Households with net income below 130% of the federal poverty line, who meet applicable asset tests, qualify for benefits and benefit amounts are a decreasing function of total household income. SNAP is available to all income-and-asset-eligible households regardless of marital status and presence of children. For most participants, there are no time limits of benefit receipt, however, for working-aged non-disabled childless adults, there are time limits during periods of low unemployment.[9] Since SNAP eligibility and benefits amounts are determined based on household information, we examine household-level receipt of SNAP.

Temporary Assistance for Needy Families (TANF): TANF is also a means-tested program that provides cash benefits to low-income families with children.[10] Created as part of welfare reform in 1996, TANF has strict lifetime time limits on program receipt: in 2002, over 30 states had a lifetime limit of 60 months or less.[11] Additionally, states are required to impose work requirements on at least some recipients.[12] The benefits are also relatively small compared to other programs–the median monthly benefit amount in 2020 was only 27% of the federal poverty line.[13] Benefit amounts are a decreasing function of household income. As with SNAP, we examine household-level TANF receipt.

Social Security Programs (SS): Several groups of individuals may qualify for SS income: those who retire at age 62 and older, those who are permanently disabled, and surviving spouses and dependent children. To be eligible, the individual or decedent needs

[8] Also, during the Great Recession, a temporary program extended benefit duration even longer between July 2008 and December 2013. This information taken from Whittaker and Isaacs (2019).

[9] Beginning in 1996, after the passage of welfare reform, many non-citizen documented immigrants become ineligible for SNAP, TANF, public health insurance, and SSI. In our primary sample, we do not condition on citizenship status, but in later analysis we plan to examine heterogeneity on this dimension. This discussion taken primarily from Hoynes and Schanzenbach (2015).

[10] TANF funds are also spent on other services to low-income families, however, we focus on the cash benefit component here.

[11] https://www.urban.org/sites/default/files/publication/58396/900769-State-Time-Limit-Policies.PDF.

[12] https://www.cbpp.org/sites/default/files/atoms/files/7-22-10tanf2.pdf.

[13] https://www.cbpp.org/research/family-income-support/tanf-benefits-still-too-low-to-help-families-es

to have sufficient work history before retirement, disability claim, or death. We condition our sample on individuals aged 60 at job loss, and only follow them for up to two years after job loss, so SS Retirement benefits are unlikely to be a large part of SS receipt in our analysis. In order to qualify for SSDI (disability), an individual must demonstrate that they are disabled, and that this disability is expected to inhibit their ability to work for at least 12 months. The individual must be earning below a threshold at the time they apply ($1260 per month in 2020) to demonstrate the disability limits their work ability. It typically takes 3-5 months from SSDI application to decision (which can then be appealed). If approved, there is an additional 5 month waiting period before an individual receives the benefits. Additionally, individuals who receive SSDI can received Medicare, but there is a two-year waiting period for Medicare, so many receive Medicaid during this waiting period. For now, we focus only on SS benefits received by the displaced worker.[14]

Supplemental Security Income (SSI): Similar to SS, SSI is available to several demographic groups: individuals over age 65, blind individuals, and disabled individuals. All three groups must meet income tests, but there is no work history requirement in contrast to SSDI. Adult recipients have to have monthly income lower than the minimum monthly benefit amount ($733 in 2015). Average wait time to decision about disability for SSI is 4 months, and there is no mandatory waiting time after that before benefit receipt.[15] For now, we focus only on SSI benefits received by the displaced worker.

Free and Reduced Price Lunch (FRPL): The free and reduced price lunch program is available to school-aged children who live in low-income households. Households with income below 130% of the poverty line qualify for free meals, and households with income between 130-185% qualify for reduced price meals. Additionally, categorical eligibility exists for children who receive SNAP benefits, TANF benefits, are a foster child, homeless, a runaway or migrant, or if the child is in Head Start. In the mid-2000s states began to expand the program information they used to directly certify children's eligibility to also include Medicaid information. School breakfast operates similarly, but participation is more limited in our time period, so we focus on school lunch only. Since only children are eligible for this program, we create a variable indicating whether anyone in the household received these benefits, which is also how the SIPP solicits this information. We also impute the value of these monthly benefits by taking the maximum per meal reimbursement rate in the 48 contiguous states, multiplying by the number of children reported to be receiving these

[14]Information taken from *What You Should Know Before You Apply for Social Security Disability Benefits* (n.d.); *If You Are The Survivor* (n.d.); *Disability Benefits — How You Qualify* (n.d.).

[15]This information taken from Duggan et al. (2015).

benefits in the household, and finally multiplying this by 22 school days in the month.[16]

Special Supplemental Nutrition Program for Women, Infants, and Children (WIC): WIC is available to low-income children under age 5, as well as pregnant and postpartum women. The program provides vouchers for specific food items and other services, such as nutritional education and referrals to other social services. Individuals meeting these categorical requirements must have income below 185% of the poverty line, or be participating in SNAP, Medicaid, or TANF, and be deemed nutritionally needy (the latter of which in practice is not a very binding constraint).[17] Since only some demographic groups are eligible for this program, we create variables indicating whether anyone in the household received these benefits and the total reported household value of WIC benefits.

Energy Assistance:[18] The largest energy assistance program for low-income households is the Low-Income Home Energy Assistance Program. Households must have income below 150% of the federal poverty line and 60% of the state median income level.[19] Additionally, households participating in SNAP, SSI, or TANF may be automatically eligible.[20] The SIPP collects information about all energy assistance provided by federal, state, and local governments, and we use information about this benefit receipt at the household level.

Public Health Insurance (PHI): There are three major public health insurance (PHI) programs that we examine here. First is Medicaid which provides PHI to low-income individuals. Historically, the program was much more generous for children and pregnant women than adults, but in the late 1990s and early 2000s states began to expand eligibility to low-income parents and childless adults as well, though income eligibility thresholds were still very low for these groups compared to for children (Buchmueller et al., 2015).[21]

For children, the State Children's Health Insurance Program also provides PHI, often to income eligibility thresholds greater than Medicaid. Finally, Medicare provides PHI to elderly (age 65+) and disabled individuals. Since we restrict our sample to be job losers age 60 or younger, elderly eligibility for Medicare is less likely to be important, however we

[16] Information on maximum reimbursement amounts is from the Federal Register for each year. E.g.: `https://www.govinfo.gov/content/pkg/FR-2014-07-16/pdf/2014-16719.pdf`. This discussion taken primarily from Hoynes and Schanzenbach (2015).

[17] This discussion taken primarily from Hoynes and Schanzenbach (2015).

[18] In future work we will also incorporate the value of housing assistance, but the SIPP only includes information about whether the household receives these benefits, rather than their value, so we need to impute the value of these benefits.

[19] `https://liheapch.acf.hhs.gov/delivery/income_eligibility.htm`

[20] `https://www.benefits.gov/benefit/623`

[21] Additionally, the Affordable Care Act allowed states to expand Medicaid eligibility for low-income childless adults, however this didn't happen until 2014.

will explore this by testing the robustness of the results to lower age thresholds in future work. We categorize any of these programs as "public health insurance", and employer or on non-group market insurance as "private health insurance".

2.3 Summary Statistics

We show summary statistics of all the income and resource variables in Table (2) We adjust all sources of income to be in constant 2015$s. Simply looking at these descriptive statistics reveals that individuals have much lower earnings after job loss, are much more likely to receive safety net program benefits, and are more likely to be in poverty.[22] Given the structure of the programs described above, we expect UI to be more widely available to higher-income job losers, whereas the means-tested programs will be used more frequently by lower-income job losers. Figure (2) confirms that this is the case. Panel (a) shows the participation rates *before* job loss by household poverty ratio in the first survey month.[23] Panel (b) shows the *change* in take-up after job loss compared to before, again by household poverty ratio. Several important patterns emerge. First, even before job loss, displaced workers with household income below 300% of the poverty line received benefits from means-tested programs including FRPL, SNAP, and WIC at rates of 10% to 55%, depending on the program and household income level.[24] Additionally, for households below the poverty line, a small percent (less than 10%) received TANF before job loss. Given that many households received means-tested programs *before* job loss, we will also look at the impact on the dollar value of benefits received from these programs, as this may be responsive to lower earnings due to job loss, even if program participation doesn't change.

Turning to panel (b), UI is clearly the program with the largest increase in take-up post job-loss–increasing by about 40-60 percentage points. Take-up of UI is also increasing in pre-job-loss household poverty ratio, a point we return to in more detail below. The increase in take-up of means-tested programs is much smaller, with participation in SNAP and FRPL increasing the most. These increases in means-tested programs are larger for

[22]UI receipt is non-zero in the pre-period, and this is largely due to individuals who report experiencing short periods of unemployment before the job separation. We believe these are temporary layoffs before a permanent layoff, and in future work we will drop these individuals in a robustness check.

[23]To calculate household poverty ratio, we use household-level total cash income, and the SIPP-assigned Census poverty threshold for each household, which is based on household size and composition. We show the number of job losers by household poverty ratio in Appendix Figure (A1).

[24]In 2020, for a family of 4, the poverty threshold was $26,200, so 300% of the poverty threshold is $78,600 for a family of 4. `https://aspe.hhs.gov/2020-poverty-guidelines`. Note that the eligibility thresholds for these programs is below 300% of the poverty threshold, however, since we only measure household poverty ratio at one point in time (first survey month), variability in income pre-job-loss may explain non-zero take-up even for households in the 200-299% bin.

lower-income individuals, although there are increases even for individuals with household income 400-600% of the poverty line pre-job-loss. Changes in participation in the other programs is very small across the income distribution.

3 Empirical Strategy

We follow the job loss literature (e.g. Jacobson et al. (1993); Stevens (1997); Sullivan and Von Wachter (2009)) and estimate event study models with individual fixed effects to examine the dynamics of income around the job loss. Specifically, our baseline model is as follows:

$$y_{it} = \alpha_i + \sum_{t=-12, t\neq -1,-2}^{24} \beta_t D_{it} + \xi_{it} + \epsilon_{it} \tag{1}$$

where y_{it} measures income source y for individual i at time t, and time is relative to the time of job loss, at $t = 0$. β_t measures the change in income relative to the omitted period, which is the two months before job loss (-1 and -2). Additionally, we group months in two-month bins to improve precision of our estimates. So, for example, β_2 measures the change in income 2-3 months after job loss, β_4 measures the change in income 4-5 months after job loss. In our baseline model, we only include controls for individual fixed effects (α_i) and age fixed effects (ξ_{it}), following the job loss literature. We weight by the SIPP individual weight at the time of job loss, and cluster standard errors by individual.

As shown in Table (1), job losers are different on many observables than non-job-losers. Therefore, the inclusion of individual fixed effects is important to take account of time-fixed characteristics of these individuals. In models with individual fixed effects, the key identifying assumption is that the timing of job loss is unrelated to individual trends in income. Note that everyone in our sample experiences a job displacement, so there is no untreated group. We will visually explore the validity of this assumption by examining the pre-trends in the event study models.

It is important to distinguish what type of casual estimates we are able to produce with this design. We rely on the plausible randomness of the timing of no-fault job losses to identify the casual impact of job loss on safety net program receipt. In addition, we investigate how the effects of job loss differ by pre-job-loss characteristics. We do not (so far) study the casual effect of safety net programs on job loser's outcomes. Finally, our analysis factors in any behavioral effects induced by safety net programs, although we do not directly estimate those behavioral effects here.

We also estimate a difference in difference equivalent of equation (1) where we replace all the post-job-loss dummy variables with one dummy variable indicating an observation is after job loss. This provides a more parsimonious way of summarizing our findings, which is particularly useful in our analysis by subgroups.

4 Effects on Safety Net Program Receipt

4.1 Job Loss and Earnings: Replication

We begin by replicating the analysis in the job loss literature that documents large and persistent declines in earnings following an involuntary job loss. Figure (3) and column (1) of Table (3) show the results of the event study analysis on the job loser's monthly earnings (in 2015$s) with individual fixed effects and age fixed effects as controls. In the first six months following the job loss, there is an earnings loss of $2,202-2,948, about 49-66% relative to the pre-job-loss mean ($4495.19). Note that in the period event time equals zero, the earnings loss is smaller, and this is because the job loss happens during this two-month period, rather than always at the beginning of it. By one year after the job loss, earnings losses are $1,708 compared to the month before job loss (38% lower). These magnitudes are similar to that found in the prior literature, which has primarily examined annual (rather than monthly) earnings and has found annual earnings losses of 14-66% in the first year after job loss (Couch and Placzek, 2010). Also consistent with past findings, we see evidence of persistence in these earnings losses–by the end of our sample period–24 months after the job loss–earnings are still $1,362 (30%) lower than pre-job-loss. We also explore whether this decline in earnings is due to lower wages, or a decline in the likelihood of working at all, by looking at the effect on having any earnings in Figure (4). It is clear from this figure that there are at least some people for whom the job loss leads to an extended period without any work, which is again consistent with prior findings (e.g. Stevens (1997); Stephens (2002)). A final important result is that there is no evidence of significant pre-trends in earnings before job loss, which supports our identifying assumption.

4.2 Job Loss and the Safety Net

Next, we explore how the take-up of safety net programs changes around job loss using the same event study model. In Figure (5) and Table (4), we report the results. Note, we scale all the dummy variables by 100, so the vertical axis measures the percentage point change. In panel (a) it is clear the program with the largest increase in take-up relative to pre-job-loss

is UI; in the months immediately following job loss there is a roughly 40 percentage point increase in take-up, consistent with our findings looking at mean changes in take-up above. This is also consistent with past findings that UI is the most responsive program to state-level economic downturns (Bitler and Hoynes, 2016). UI receipt is time-limited, so we also observe a sharp decline in the likelihood of receiving UI as we move away from the initial job loss. Recall that the longest UI duration was 99 weeks during the Great Recession, though we still see significant increases in UI receipt up to 2 years following the job loss (Table (4)). This is likely due to the fact that job losers often suffer multiple job losses (Stevens, 1997).[25]

We see some evidence of increases in other safety net programs as well. In panel (b) we drop UI and re-scale the vertical axis to visually examine the effects on other programs better. The results indicate meaningful and significant (regression results show in Table (4)) increases in participation in SNAP, TANF, SS, SSI, and FRPL.[26] These effects in percentage point terms are much smaller than for UI, but relative to the pre-job-loss mean, these are very large increases; one year after job loss, SNAP participation has increased by 41%, TANF participation increased by 34%, SS participation increased by 133%, SSI participation increased by 94%, and FRP Lunch participation increased by 9%. While these programs are modest in insuring income after a job loss; the impact of job-loss on a families' use is substantial relative the programs' scope. Additionally, it is interesting to note that participation in SNAP, SS and SSI remains higher than pre-job-loss levels for at least two years after the job loss. This could be due to the persistent earnings decline from job loss which allows individuals to remain eligible for these programs, or, to these programs dis-incentivizing work after the job loss, or, to job loss leading to take up of programs that families had already qualified for but had not made use of. These magnitudes of increased takeup in UI and SNAP are similar to those in Rothstein and Valletta (2017), who study the short-run impact of job loss on income *among* those who receive UI during recessions. However, as documented above, the means-tested programs are available for the working poor *before* job loss, so, we look next at the dollar value of benefits received from these programs, as this may respond to a loss in income, even if households were already receiving these benefits prior to the job loss.

[25]The vast majority of states require 20 weeks of work, plus meeting minimum earnings requirements. So, a worker could lose a job again within two years of the first job loss and re-qualify for UI. Information from: `https://oui.doleta.gov/unemploy/content/sigpros/2000-2009/January2008.pdf`.

[26]We do find significant negative coefficients before job loss for both UI and FRPL, however, there is a clear break in trend in participation around job loss in both of these programs in the event study figures, so we do not view these results as being driven by a pre-trend.

We estimate to what extent these programs make up for the lost earnings of job losers in Figure (6) and Table (3). The black dots replicate the findings from Figure (3), and then the blue dots indicate the effect on the outcome variable of earnings plus UI income. The other colored marks show the effect on income sequentially adding in the other safety net programs (all measures are inclusive of zeros). From this figure it is very clear that UI is the most important program for job losers, not only in terms of participation, as seen above, but in terms of the dollar value of income received from the program. It is the only program that meaningfully makes up for the lost income following the job loss in the full sample, despite the very large percentage increases in take-up of the other programs compared to pre-job-loss. This also indicates that displaced workers who were already receiving means-tested safety net programs do not see a substantial increase in benefit amounts following job loss. This finding is similar to Leung and O'leary (2020), who found that among low-income job losers who are eligible for UI, UI provides more transfer dollars than TANF or SNAP.

On average, UI provides $560 in benefits in the months immediately following job loss. In comparison, SNAP, which is the second largest program in terms of transfer dollars 2-3 following job loss, provides on $10 in benefits on average. We explore the extent to which benefit generosity might explain the importance of UI, by tabulating the mean monthly benefit amount received after job loss for participants in each program in Figure (7).[27] UI is the most generous program in terms of average monthly benefit paid. SS and SSI benefits are the second most generous after UI; though eligibility is much more restricted for these programs. Finally, the means-tested programs (SNAP, TANF, FRPL, WIC, and energy assistance) provide relatively small benefit amounts to participants compared to these social insurance programs.

4.2.1 By Pre-Job-Loss Household Poverty Ratio

Because eligibility for many safety net programs is conditional on meeting income tests, we examine heterogeneous effects by pre-job-loss household poverty ratio, measured in the first survey month. To easily compare the effects across income groups, we estimate a difference-in-difference equivalent of the event study model.[28] Specifically, we replace the event time dummies with one post-job-loss dummy, and we plot the coefficient on this dummy by pre-job-loss household poverty ratio bins, in 99 percentage points up to 800+% of the poverty line. The outcome variables are the value of safety net benefits received by each program.

[27] This pattern of relative generosity is the same as is documented by Bitler and Hoynes (2016) who use administrative data on average benefit amounts by program.

[28] Note that because our sample is unbalanced, more weird is put towards observations right around the job loss. However, the results are very similar on the balanced sample as shown in Appendix B.

We focus here on the change in the value of benefits received, rather than take-up, because low-income households already participate in some programs before job loss.

Figure (8) demonstrates that the value of the job loss safety net varies greatly by income. The total value of transfers increases with pre-job-loss household poverty ratio (we include $0s in these transfer value variables). Households with income below poverty before job-loss receive less than half of the transfer dollars that households with incomes between 400-699% of the poverty line ($272 compared to $641-691). And, as we saw before, UI makes of the vast majority of transfer dollars to displaced workers, which is true even for workers below poverty, who are likely eligible for many means-tested programs.

The level of earnings lost may also be increasing in pre-job-loss household poverty ratio. We therefore tabulate the estimated change in total transfer dollars *as a percent of the estimated loss in earnings following job loss*, by pre-job-loss household poverty ratio in Figure (9).[29] This pattern is a little more complicated than the absolute value of transfer dollars– it follows an inverse "U" shape. Workers below poverty pre-job-loss receive replacement rates of 21%. In contrast, workers in households at a poverty ratio between 100-499%, the replacement rate is 26-28%, on average. For workers above 500% of the poverty line, the replacement rate begins to decline, likely due to the caps on UI benefit amounts.

We also explore whether this same pattern holds when we split the sample by individuals' pre-job-loss earnings, also measured in the first survey month. We split the sample by earnings quintile in Figures (A2) and (A3). The same patterns–more dollars in aid to higher earnings quintiles is evident–$261 to the lowest quintile, compared to more than $650 for the highest two quintiles. And, when we look at percent of lost earnings replaced, the second through fourth quintiles have 29-30% of lost earnings replaced, compared to 22% for the lowest earnings quintile.

4.2.2 Other Types of Heterogeneity

Income is clearly an important source of heterogeneity in the safety net for displaced workers, and we next explore whether splitting the sample by race/ethnicity, or presence of children also leads to differential results. Splitting into non-Hispanic white, non-Hispanic black, and Hispanic, we see that non-Hispanic whites receive the largest value of benefits, however scaling as a percent of lost earnings, the differences largely disappear (shown in Appendix

[29]To calculate the numbers plotted in this figure, we sum the coefficients across all programs by poverty ratio in Figure (8) for the numerator. For the denominator, we again estimate a difference in difference model by household poverty ratio, with earnings as the outcome variable, and use the coefficient on this post period dummy.

Figures (A4) and (A5)). This again indicates that the most advantaged (in terms of pre-job-loss earnings) receive the largest value of transfer dollars after job loss.

Children may be an important factor in determining take-up and benefit amounts for some safety net programs; in most states UI benefit amounts are larger for workers with children, TANF, FRPL and WIC are only available to workers with children (or pregnant women in the case of WIC), and SNAP eligibility is unconditional on work for individuals with children. In Appendix Figures (A6) and (A7), FRPL benefits are larger for workers with kids, as are SNAP benefits, however the dollar value of the transfer is actually larger for workers without children. As a percentage of lost earnings, the difference is minimal whether or not the worker has children.

4.3 Disability Programs

Next, we investigate in more detail our finding that disability programs seem to play some role as a safety net after job loss. In the full sample, there are significant, but small, increases in participation in SS and SSI (Figure (5)). In order for working-aged individuals to qualify for these programs, they must be able to demonstrate a work-limiting or work-preventing disability, which is a relatively small fraction of the overall population. The SIPP directly collects self-reported information on disability, and, in our sample, 6% reports having a work-limiting disability at the beginning of the sample period.[30]

We split the sample by whether an individual reported having a work-limiting disability at the beginning of the survey in Figure (10) and Tables (A1)-(A2). The percentage point increase in SS and SSI takeup is larger for those reporting a disability at the beginning of the sample, however, there is still a significant increase for those reporting no disability. For those initially disabled, participation in SS increases by about 4 percentage points one year after job loss (71% increase of the pre-job-loss mean). And participation in SSI increases by 1 percentage point (54% increase of the pre-job-loss mean). Moreover, for the group initially reporting a disability, the increase in the benefit amount of SS and SSI after job loss does replace slightly more lost earnings than for the full sample, especially after six months post job loss, as shown in Figure (11).

Disability status is self-reported and may be subjective and a function of employer-provided accommodations. Therefore, we explore self-reported disability status changes around the time of job loss in Figure (12) and Appendix Table (A3). Interestingly, for those

[30]For this analysis by disability, we drop from the sample individuals who report having a work-preventing disability at the beginning of the sample.

reporting no disability at the beginning of the survey, there is an increase in reporting a work-limiting disability after the job loss that appears to *begin* to trend up before the job loss. The magnitude of this increase is very large–a 66-100% change over the baseline mean. This is similar to the finding in Rothstein and Valletta (2017), who document a 48% increase in self-reported disability following job loss. This finding indicates one of two possibilities: that individuals lost their job *because* they become disabled (correlated shocks or reverse causality), or, when individuals lose their job (or believe they are at risk of losing their job), their perceptions of their disability change. The latter could be due to the fact that when individuals lose their job, the cost of applying for SS and SSI become much lower, since they do not have to give up wages to in order to qualify. Also, for those who report being disabled at the beginning of the period, there is actually a decrease in self-reported disability following the job loss that appears to be related to the timing of the job loss. This decline is meaningful in magnitude–one year after job loss, the likelihood of reporting a work-limited disability has declined by 13%. One possible explanation is that work itself exacerbates physical or mental pain related to a disability. Another possibility is that because the job losers daily activities have changed, they encounter their disability less often and therefore are less likely to report it. Regardless, these results suggest that we cannot rule out either reverse causality, or changes in subjective reporting that may explain the link between job loss and disability take up; though neither case invalidates the role of SSI/SSDI in acting as a post job loss safety net.

4.4 Health Insurance

So far we have not considered one of the major facets of the safety-net: public health insurance.[31] Some earlier work has examined how health insurance changes around job loss, finding that declines in employer-provided private health insurance are at least partially made up for with increases in public health insurance (Schaller and Stevens, 2015; Schaller and Zerpa, 2019). We build off that work by looking at the impacts across all members of the household (rather than just the job loser or their children) and looking at heterogeneity by pre-job loss household poverty ratio.

Figure (13) shows changes health insurance by type, plotting in event time the probability of having any insurance, public insurance, or private insurance. Panel (a) focuses on job losers own coverage, and shows a large, 17 percentage point decline in private insurance

[31] Unlike cash and near cash transfers, public insurance is difficult to monetize because it is not only valued in terms of the amount spent on premiums, but also the value to risk adverse consumers of having insurance that smooths income over periods.

coverage after job loss. This is modestly offset by a roughly 2 percentage point increase in public insurance. Panel (b) shows a similar pattern for the likelihood that *any adult* in the household (including the job loser) is covered by insurance.[32] Though, the decline in *any* adult covered by private insurance is smaller than for the job loser, and is offset similarly by public insurance. It is also striking how persistent these effects are; two years after job loss the likelihood of not having insurance for at least one adult in the household is still 5 percentage points lower. Finally, panel (v) looks at coverage of *any child* in the household for a given type of insurance. The effect of public insurance on offsetting declines in private insurance is larger for children than adults–there is a 5 percentage point increase in public health insurance that persists for two years. This makes sense given that income eligibility thresholds are on average much higher for children than adults. Within half a year to a year after the job loss, overall insurance coverage for children has returned to the baseline level, and the remaining gap in private coverage is fully made up for by public insurance.

Figure (14) considers these patterns across pre-job loss household poverty ratios.[33] Panel (a) shows results for adults and panel (b) for children, where both panels plot the coefficients from difference in differences models on an indicator for having private insurance (in red) and for having public insurance (in blue). The results reveal that public insurance is more progressive than the cash and near cash safety net. Focusing first on adults, households below poverty experience relatively small declines in private insurance and larger increases in public insurance.[34] Conversely, adults in households with the highest incomes have the smallest declines in private insurance and little to no increase in public insurance. This suggests that the middle class are the ones most vulnerable to losing health insurance following a job loss with a net increase of no adult having insurance in the household of around 15 percentage points following a job loss. For children, the pattern by household income is similar, though public insurance is clearly more generous for children. In households below the poverty line, children's loss in private insurance is almost completely offset by public insurance. The increases in public insurance for children with pre-job loss household income of 100-400% of the poverty line is similar in magnitude to children in households below

[32]We have also run models where the dependent variable is the proportion of adult/children in the household with a given type of insurance. The results follow the same pattern as our dummy variable approach here. Therefore, we show results on any adult/child having a given insurance type, because the coefficients are easier to interpret.

[33]As noted above, recall that because our sample is unbalanced, more weight is put towards observations right around the job loss, so these difference in difference estimates look more like the estimates in the first few months after job loss, rather than two years after job loss. Future work will explore this more explicitly by modelling effects at different points in time after job loss.

[34]The relatively small decline in private insurance may be due to lack of private coverage even while working.

poverty. However, there are somewhat larger declines in private insurance following job loss for children in these households as well.

4.5 Severance Pay

Another possibly important safety net for job losers–though not publicly provided–is severance pay they receive from their employer. We explore how this may buffer the loss in income compared to the public safety net. Only 20% of all full and part-time workers were covered by employer-provided severance pay in 2000, and this coverage is not evenly distributed by employer type. For example, workers in professional occupations were more than twice as likely as those in blue collar occupations to have access to severance pay (35% vs. 12%).[35]

We look at the effects of job loss on receipt and amount of severance pay in Figures (15) and (16). Take-up of severance pay increases directly after job loss–by 7 percentage points–and appears to only payout for up to 3 months after the job loss on average. Similarly, the only period in which severance pay makes up meaningfully for lost income is in the period of the job loss, where it provides about $600 in benefits on average.[36] Finally, we look at heterogeneity in the takeup and value of severance pay by pre-job-loss household poverty ratio in Figure (17). This shows that the private safety net in the form of severance pay is also regressive; takeup is increasing in pre-job-loss earnings, as is the value of severance pay (inclusive of $0s), and the percent of lost earnings replaced. Taken with our above findings on the public safety net, there is strong evidence that the lowest income individuals are less insured (both publicly and privately) in the face of job loss.[37]

4.6 Total Household Resources

Finally, we look at the impact of job loss on several measures of household resources to get a sense of overall well-being. We follow Bitler et al. (2017a) and create three measures of household resources, all relative the Census poverty threshold that we used above. First, we divide total household earned income by the poverty threshold. Second, we divide total household cash income by the poverty threshold (the standard measure of income used for calculating the poverty rate and how we measure household poverty in the heterogeneity analysis above). This second measure includes cash transfers from UI, TANF, SS, SSI, and

[35] `https://www.bls.gov/ncs/ebs/sp/ebbl0019.pdf`

[36] Regression results reported in Appendix Tables (A4) and (A5).

[37] We do not considered the added worker effect here, which is another potentially important source of private insurance.

severance pay, as well as cash income from other sources. Finally, the third measure adds the cash value of the other near-cash safety net programs we measure: SNAP, FRPL, WIC, and energy assistance. The differences between the poverty measures will inform us about how much the cash and near-cash programs help individuals stay out of poverty after a job loss.

Figure (18) displays the results for these three poverty measures, also shown in Table (5). Looking only at earned income (panel (a)), there is an immediate increase the likelihood of being below 100% and 200% of the poverty line by almost 30 percentage points after job loss. This decreases over time, but even two years after the job loss, the likelihood is more than 10 percentage points higher than pre-job-loss. The likelihood of being below 400% of the poverty line based only on earned income follows a similar pattern, though with smaller effect sizes. Turning to the second measure of poverty, based on all cash income (panel (b)), it is clear that the effects on poverty are smaller once we take into account cash transfers. The increase in the likelihood of being below 100% of poverty is between 7-15 percentage points. Interestingly, now the increase in the likelihood of being below 200% and 400% of poverty is larger than 100% of poverty, though those level increases are still smaller than when we looked at earnings only. This indicates that cash transfers (as we have shown, primarily UI) reduce the likelihood of falling below the poverty line, and instead move some of those households into slightly higher parts of the income distribution. Finally, adding in near-cash benefits in panel (c), does not meaningfully change the results relative to panel (b), demonstrating that these means-tested programs (SNAP, FRPL, WIC, and energy assistance) are not as an important of sources of income for the average displaced worker at risk of falling into poverty.

5 Conclusion

This paper investigates the role of the safety net after a job loss in mitigating lost income. We look at the effects on take-up and benefit amount received of a large number of safety net programs. We quantify which programs compensate the most for lost income, who benefits from these programs across pre-job loss socio-economic status, and the dynamics of when those programs matter during the two-year period following displacement. Our individual fixed effects research design compares within job loser before relative to after a job loss.

Our results demonstrate that UI is by far the most important source of insurance for displaced workers. Additionally, we show that UI, and by extension the safety net as a whole, is less generous for those in poverty compared to those with income 100-699% of poverty

pre-job-loss. For workers with pre-job-loss household income below 200% of the poverty line, means-tested safety net benefits are also important: with SNAP and FRPL offsetting lost income from work the most after UI. Finally, there is persistence in participation in means-tested programs including public health insurance, well after job loss, even as household earnings recover. While receipt of SS, SSI and severance pay also increase following job loss, the value of these benefits is relatively small for the average worker.

These results are important to understand how to design programs and who to target to help mitigate the decline in household resources after a displacement. In that sense, the lack of insurance following job loss for poor households is perhaps the most important finding. This suggests that expanding the generosity of SNAP and FRPL could improve their ability to act as social insurance. Alternatively, targeting UI to provide more and larger transfers to those who work in lower wage jobs pre-job-loss could also decrease the regressivity of the system. Finally, we note that we do not include tax credits, such as the Earned Income Tax Credit, which also may be important for displaced workers (Bitler et al., 2017b).[38]

Our findings are particularly relevant in light of the COVID-19 recession of 2020. In early 2020, lawmakers passed several relief laws that expanded UI, SNAP, and FRPL. The expansions to UI counteracted some of the regressivity we pointed out here, by increasing benefits by a flat amount for everyone, and by extending eligibility to groups that previously were not covered by UI (e.g. self-employed and gig workers) (Bitler et al., 2020; Ganong et al., 2020). Additionally, there was a 13 week benefit extension and work history requirements were waived. Consistent with our findings here, preliminary evidence suggests that the UI expansions led to the largest relief payments in terms of dollars spent, relative to SNAP and FRPL expansions (Bitler et al., 2020). But, many of these provisions have expired or will expire soon. We have demonstrated that many workers and their families, particularly the neediest, are likely to experience losses in resources and increased material hardship if the federal government does not pass more relief packages.

[38]EITC eligibility changes annually with tax filing, compared to the programs here where eligibility and receipt can change monthly. The SIPP has more limited information about the EITC in special topical modules that are not collected in every survey year. In future work, we will exploit this information, and possibly model EITC eligibility using NBER TAXSIM.

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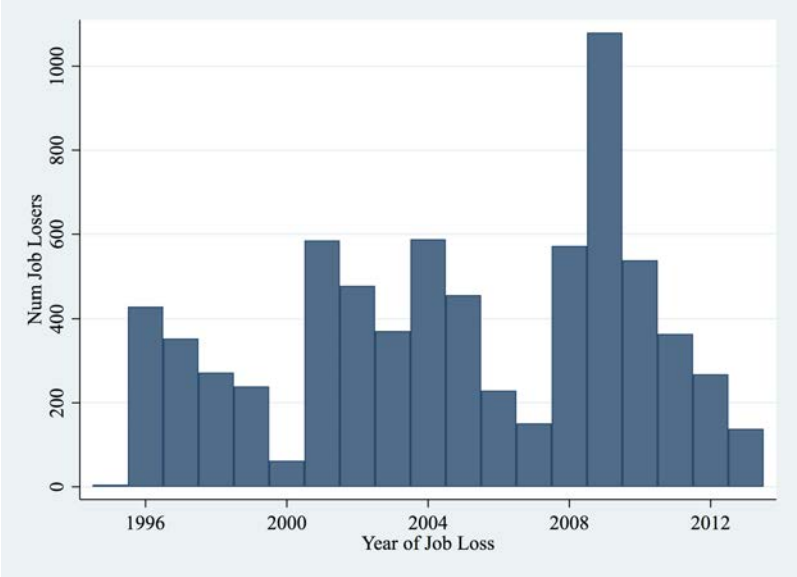
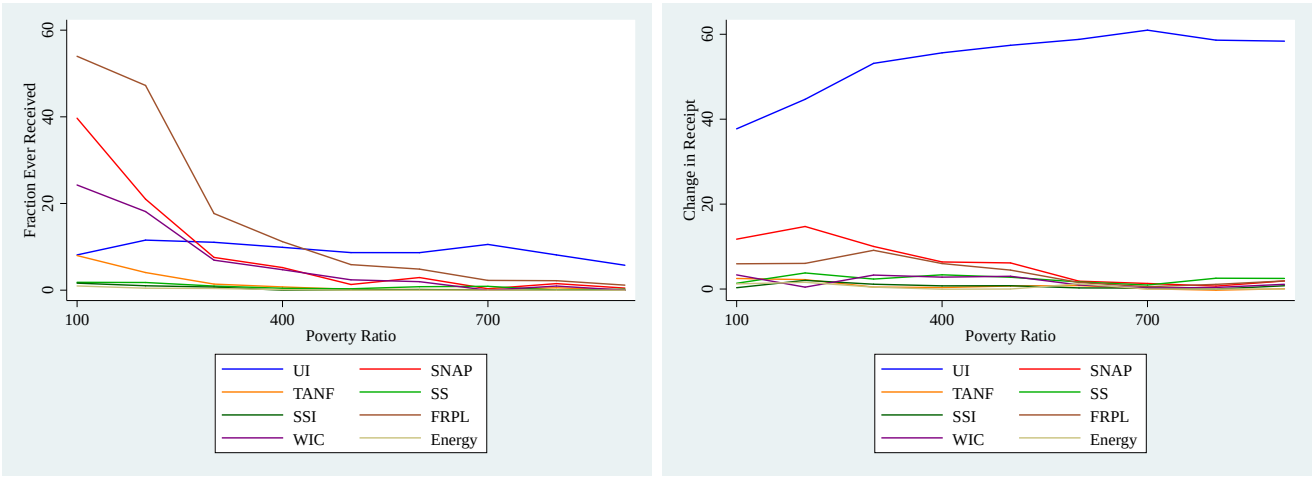
6 Figures

Figure 1: Sample Size by Year of Job Loss



Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it.

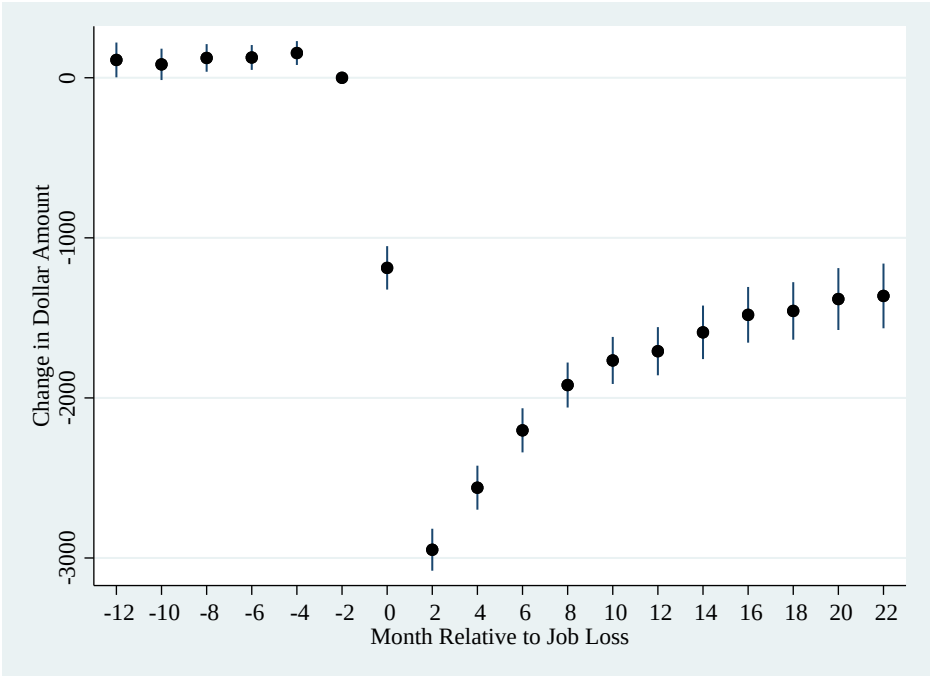
Figure 2: Receipt of Safety Net Programs by Pre-Job-Loss Household Poverty



(a) Before Job Loss **(b)** Change After Job Loss

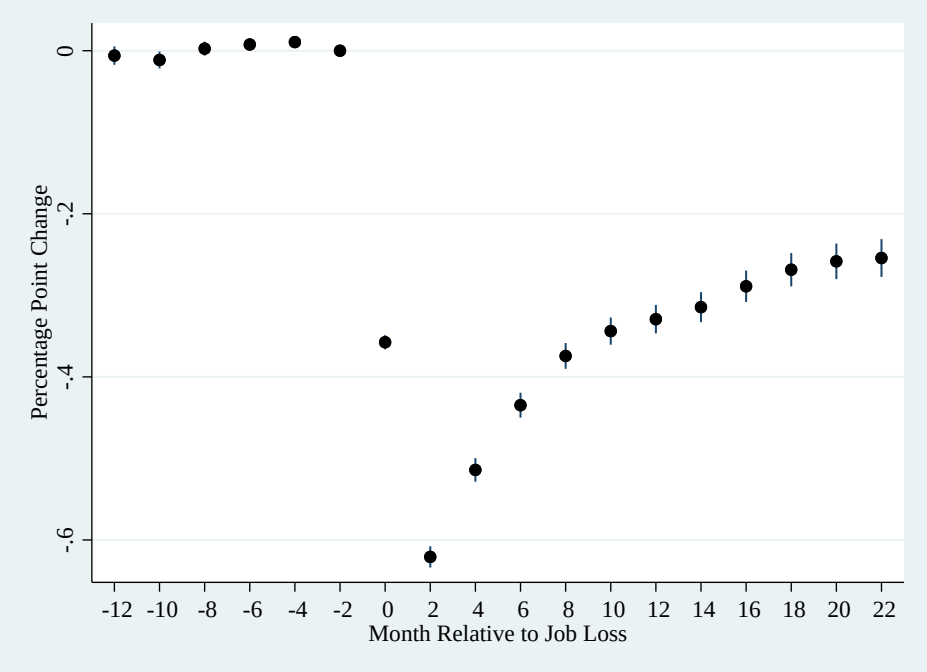
Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The results are weighted using individual survey weight in the month of job loss. The data is collapsed into bins based on the ratio of total household cash income to the household poverty threshold in the first survey month. The bins are below 100%, 100-199%, 200-299%, 300-399%, and so on by 99 percentage points, up to the highest bin of above 800% of the poverty line. The Census poverty line threshold is assigned to each household in the SIPP based on household size and composition. Panel (a) plots the likelihood of displaced workers ever taking up each program in the year prior to job loss. Panel (b) plots the change in the likelihood of ever taking up each program in the two years after job loss compared to the year prior to job loss.

Figure 3: Event Study around Job Loss: Own Earnings



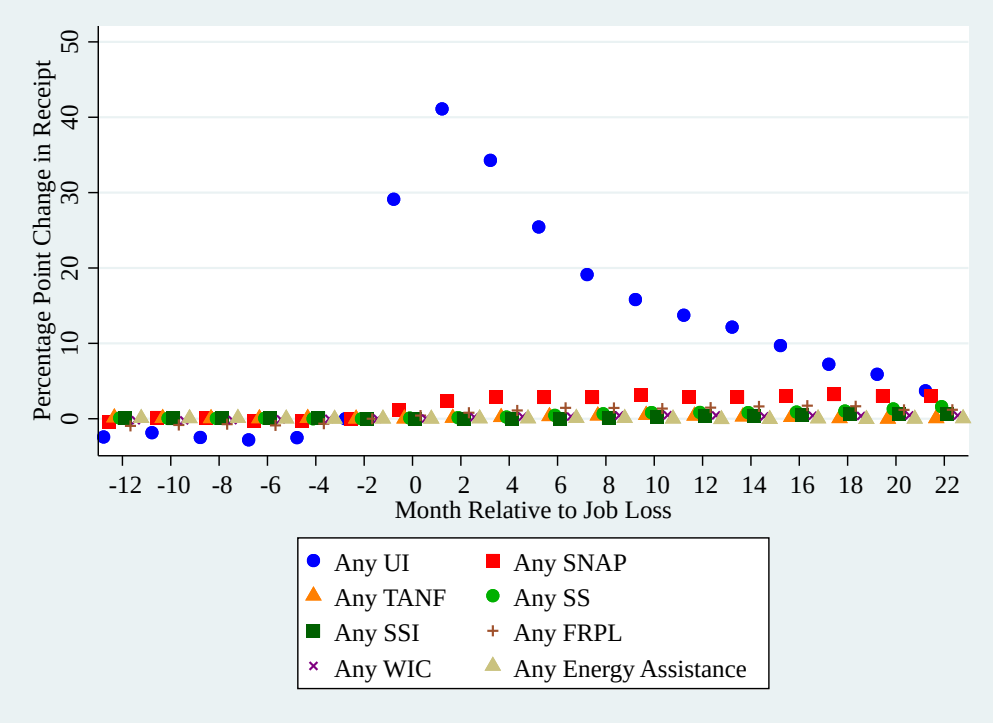
Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. The horizontal axis denotes months from job loss. The black dots represent the event study coefficients. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level and the 95% confidence intervals are plotted in the dashed lines.

Figure 4: Event Study around Job Loss: Own Likelihood of Any Earnings

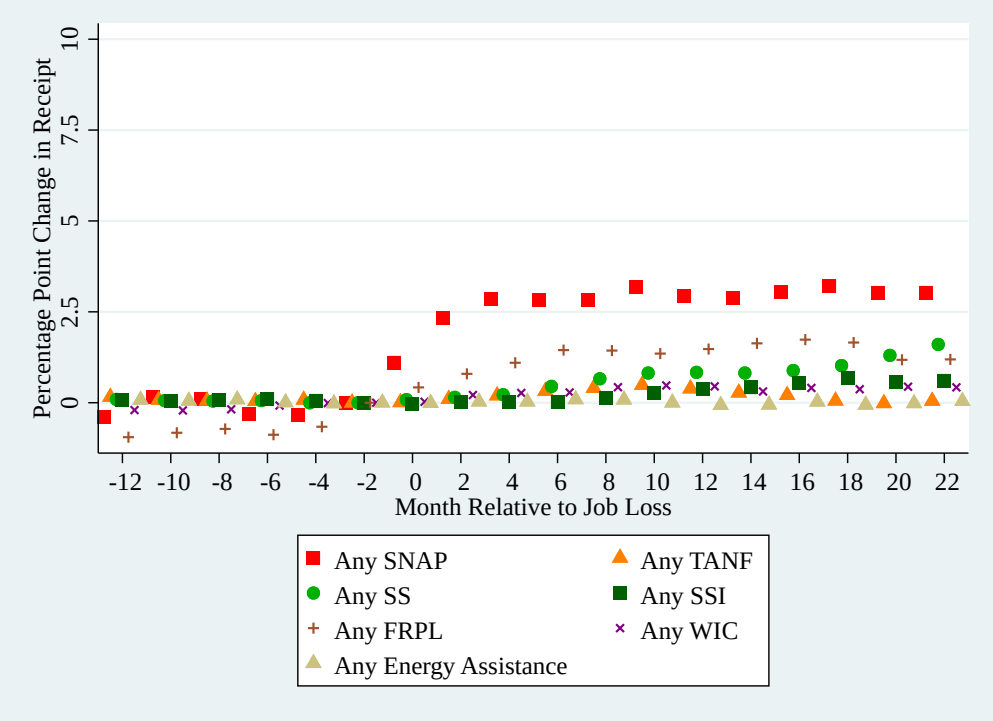


Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. The horizontal axis denotes months from job loss. The black dots represent the event study coefficients. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level and the 95% confidence intervals are plotted in the dashed lines.

Figure 5: Event Study around Job Loss: Receipt of Safety Net Programs



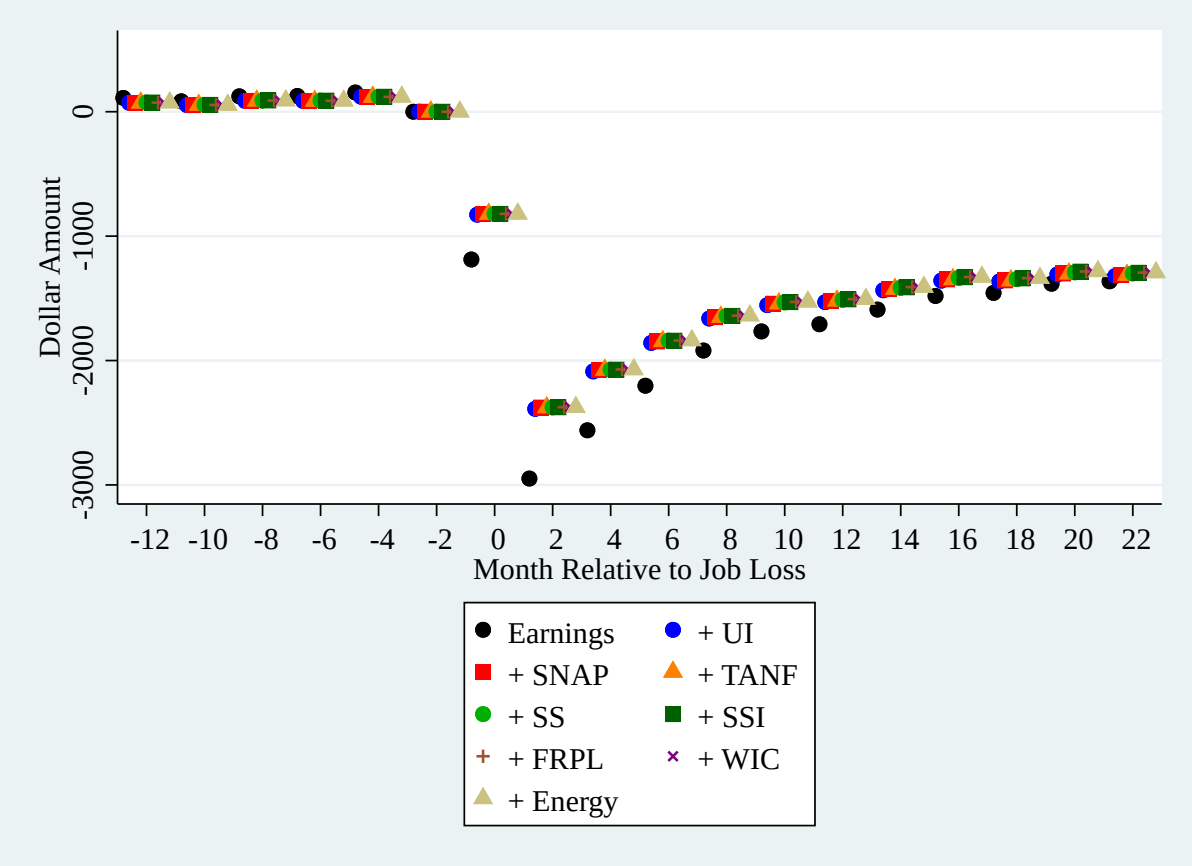
(a) Percentage Point Effect



(b) Percentage Point Effect, Omit UI

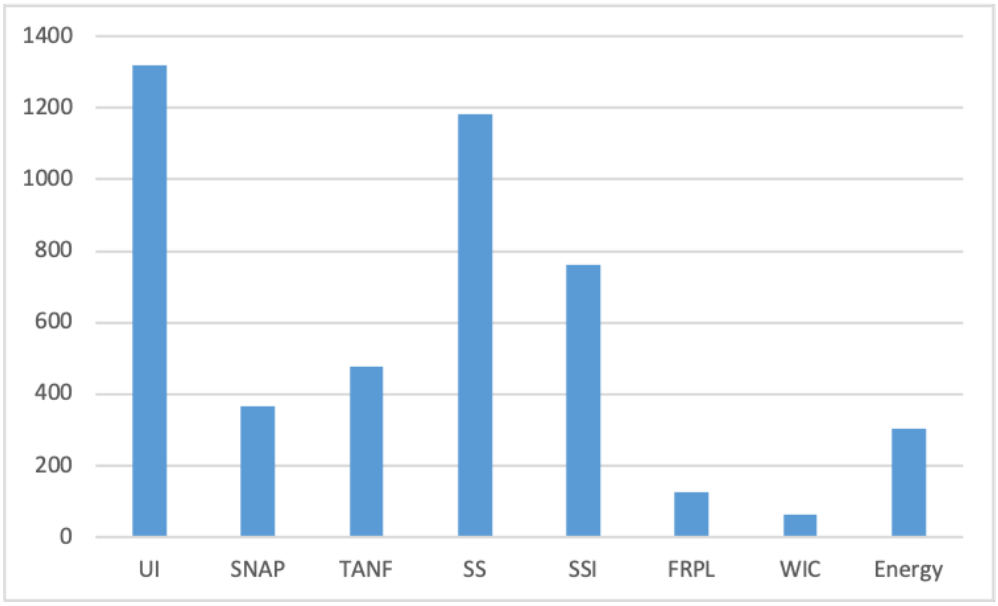
Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. The horizontal axis denotes months from job loss. The markers represent the event study coefficients. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level and the 95% confidence intervals are plotted in the dashed lines.

Figure 6: Event Study around Job Loss: Own Earnings and Value of Safety Net Programs



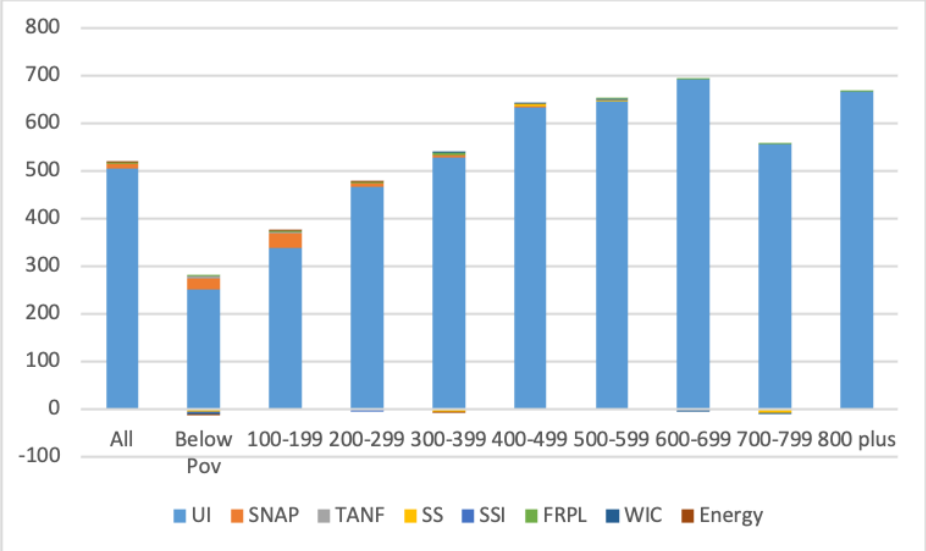
Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. The horizontal axis denotes months from job loss. The markers represent the event study coefficients from models with earnings and earnings plus safety net programs additively as noted. The results are weighted using individual survey weight in the month of job loss.

Figure 7: Monthly Benefit Amount Received Among Participants by Program



Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. Only observations after job loss are included to calculate the means. The results are weighted using individual survey weight in the month of job loss.

Figure 8: Difference in Difference Estimates of Safety Net Program Value, by HH Poverty Status in First Survey Month

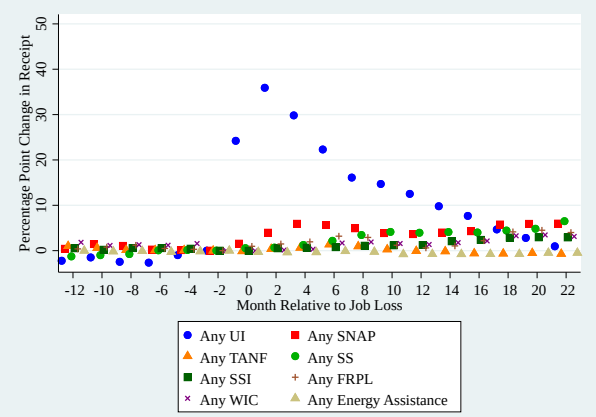


Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The plotted estimates are from a difference in difference version of equation (1) with a post period dummy replacing the event time coefficients. We estimate this model for the full sample, and split by household poverty ratio in the first survey month. The outcome variables are dollar value of the benefits received from each program. The results are weighted using individual survey weight in the month of job loss.

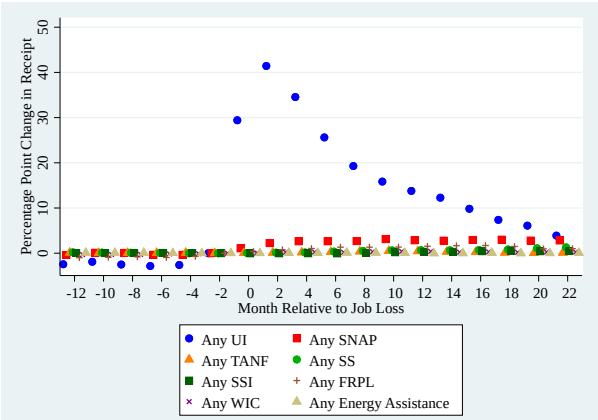
Figure 9: Difference in Difference Estimates of Safety Net Program Value as Percentage of Lost Earnings, by HH Poverty Status in First Survey Month

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The plotted estimates are from a difference in difference version of equation (1) with a post period dummy replacing the event time coefficients. We estimate this model for the full sample, and split by household poverty ratio in the first survey month. We sum the estimated effect on each program from Figure (8) for the numerator. For the denominator, we run regressions with earnings as the outcome variable and use the estimated coefficient on the post dummy for each sample. The results are weighted using individual survey weight in the month of job loss.

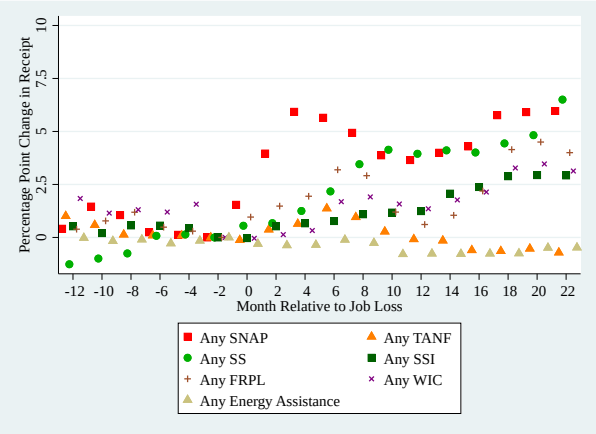
Figure 10: Event Study around Job Loss: Receipt of Safety Net Programs, Disability Subgroups



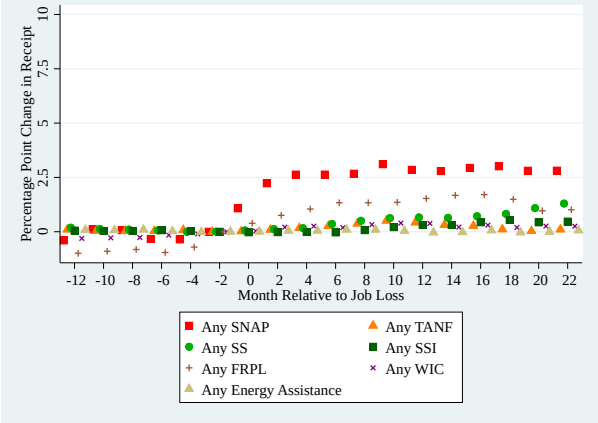
(a) Work-Limiting Disability, Percentage Point Effect



(b) No Disability, Percentage Point Effect



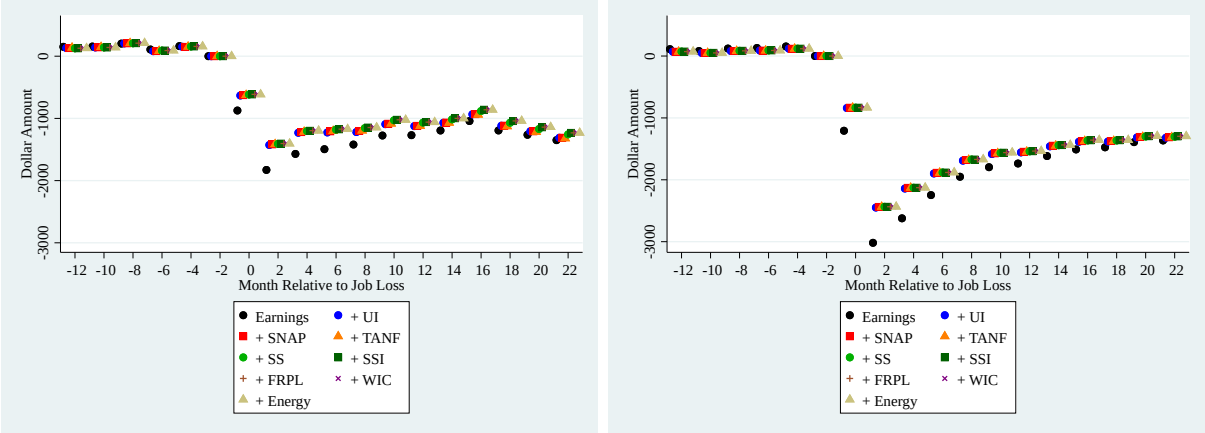
(c) Work-Limiting Disability, Percentage Point Effect, Omit UI



(d) No Disability, Percentage Point Effect, Omit UI

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. We split the sample by self-reported disability status (self-reported work-limiting disability or no disability that affects work) in the first survey month. We exclude individuals who report a work-preventing disability in the first survey month. The model includes individual fixed effects and age fixed effects. The horizontal axis denotes months from job loss. The markers represent the event study coefficients. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level and the 95% confidence intervals are plotted in the dashed lines.

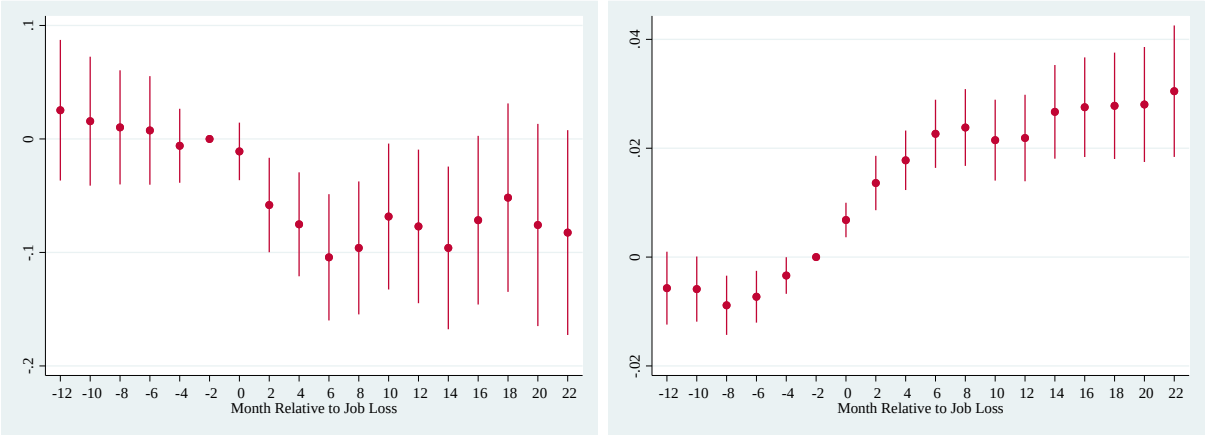
Figure 11: Event Study around Job Loss: Own Earnings and Value of Safety Net Programs, Disability Subgroups



(a) Work-Limiting Disability **(b)** No Disability

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. We split the sample by self-reported disability status (self-reported work-limiting disability or no disability that affects work) in the first survey month. We exclude individuals who report a work-preventing disability in the first survey month. The model includes individual fixed effects and age fixed effects. The model includes individual fixed effects and age fixed effects. The horizontal axis denotes months from job loss. The markers represent the event study coefficients from models with earnings and earnings plus safety net programs additively as noted. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level and the 95% confidence intervals are plotted in the dashed lines.

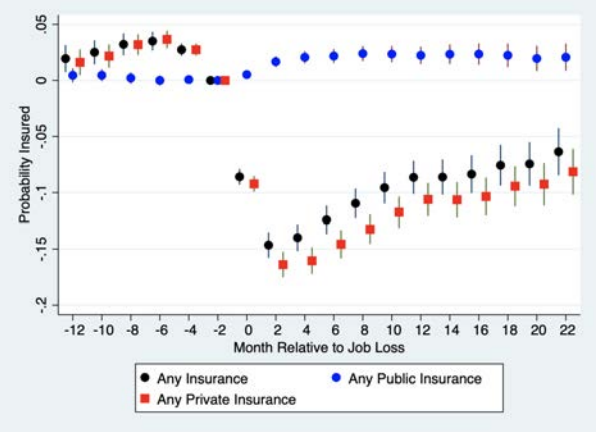
Figure 12: Event Study around Job Loss: Self-Reported Disability Status, Disability Subgroups



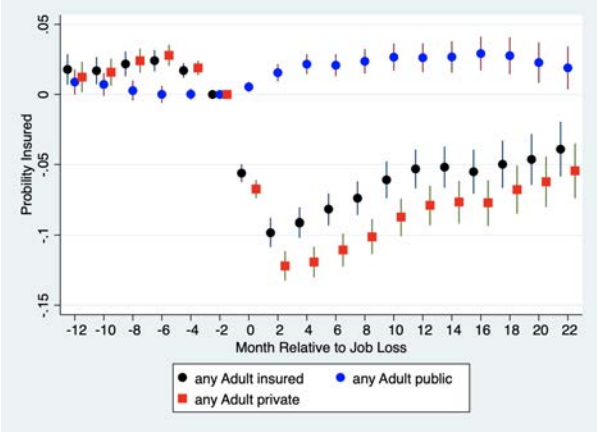
(a) Work-Limiting Disability **(b)** No Disability

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. We split the sample by self-reported disability status (self-reported work-limiting disability or no disability that affects work) in the first survey month. We exclude individuals who report a work-preventing disability in the first survey month. The model includes individual fixed effects and age fixed effects. The horizontal axis denotes months from job loss. The markers represent the event study coefficients. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level and the 95% confidence intervals are plotted in the dashed lines.

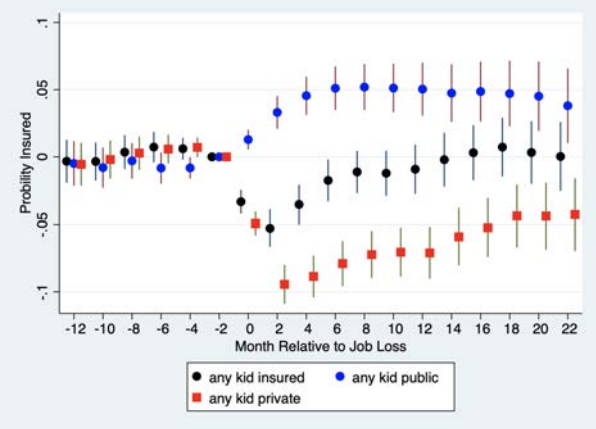
Figure 13: Event Study on Insurance Coverage and Type



(a) Percentage Point Change in Insurance Coverage, Job Loser



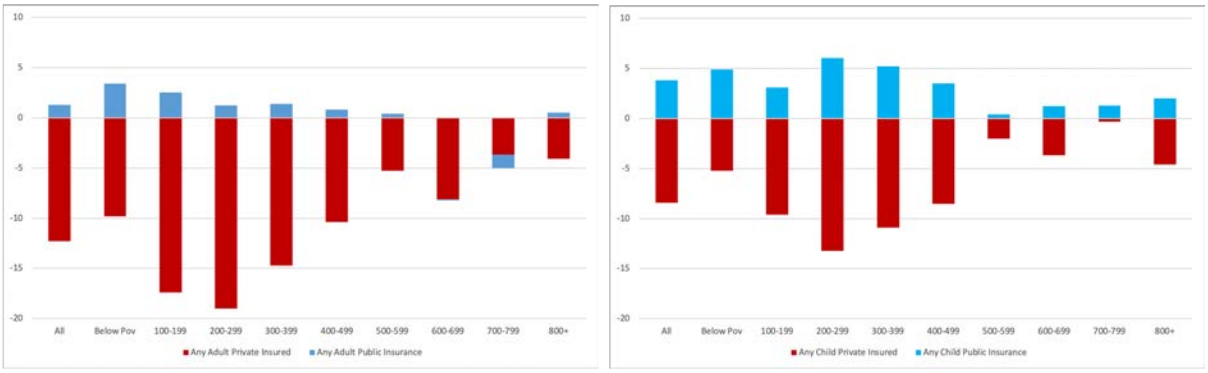
(b) Percentage Point Change in Insurance Coverage, All Adults



(c) Percentage Point Change in Insurance Coverage, All Children

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. The horizontal axis denotes months from job loss. The black dots represent the event study coefficients. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level and the 95% confidence intervals are plotted in the dashed lines.

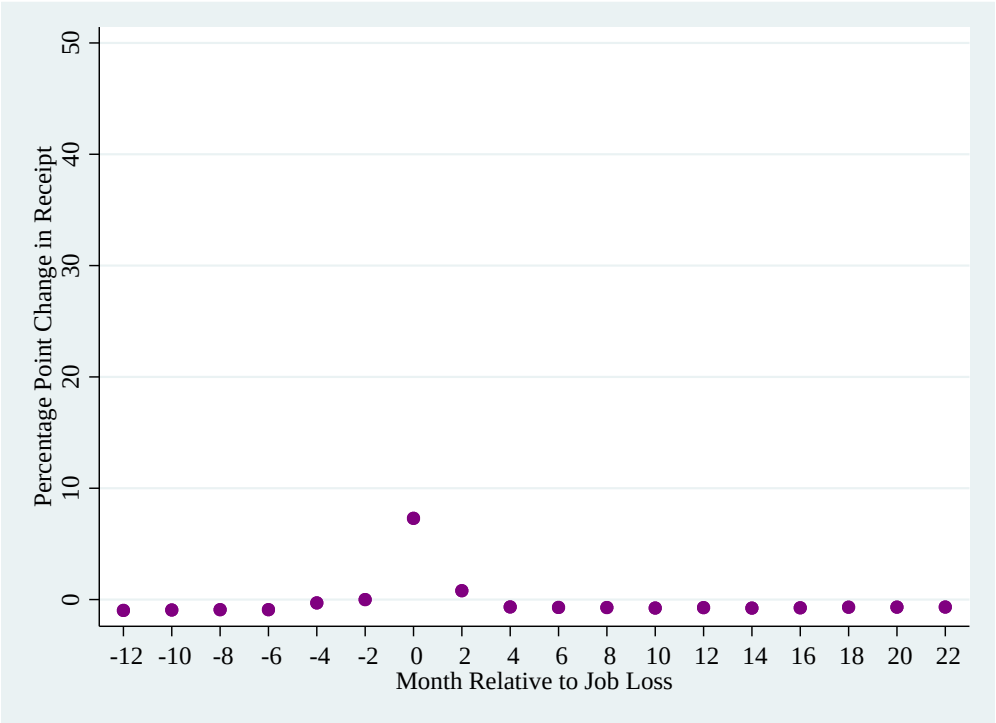
Figure 14: Difference in Difference Estimates of Insurance Coverage by Household Poverty Ratio



(a) Insurance, Any adult **(b)** Insurance, Any child

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The results are weighted using individual survey weight in the month of job loss. The orange bar represents the percentage point decline in the likelihood of having insurance for at least one person in the household (child or adult). The blue bar shows the percentage point increase in having public insurance coverage for at least one (child or adult) in the household.

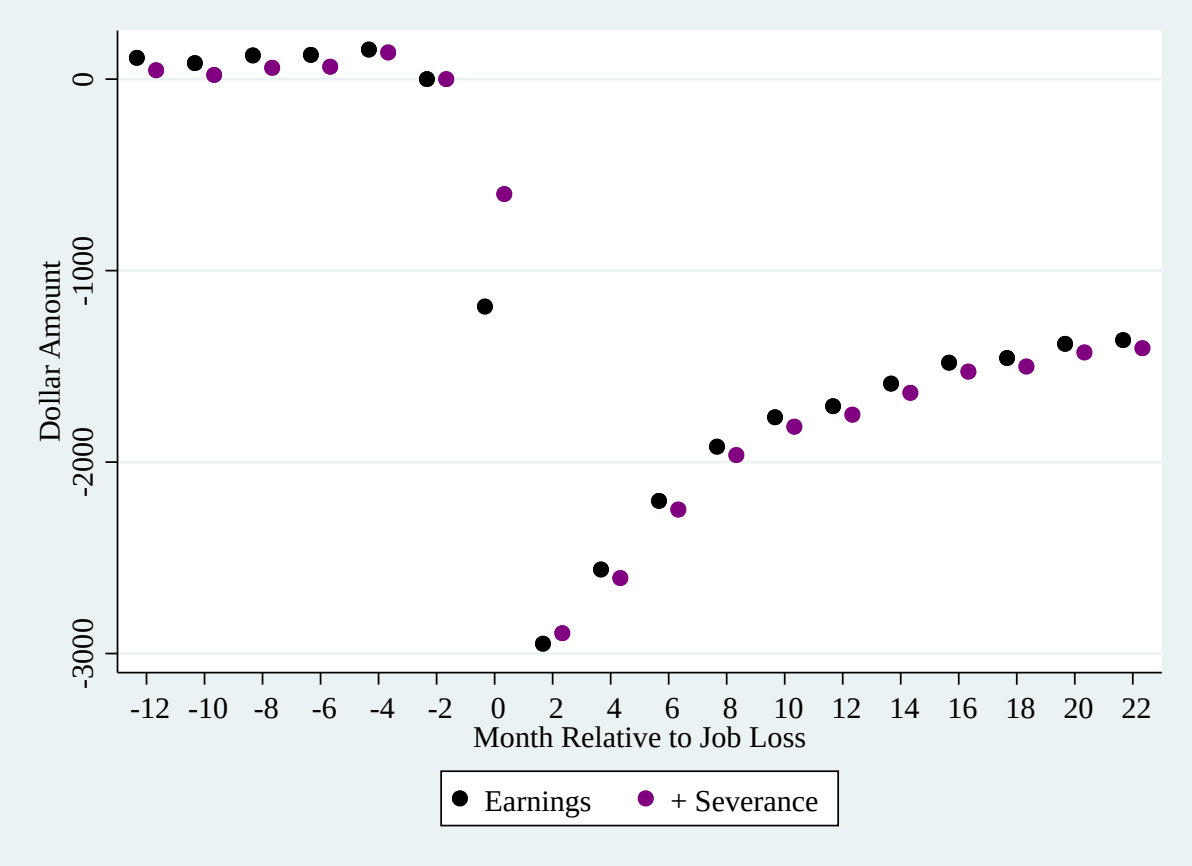
Figure 15: Event Study around Job Loss: Receipt of Severance Pay



(a) Percentage Point Effect

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. The horizontal axis denotes months from job loss. The markers represent the event study coefficients. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level and the 95% confidence intervals are plotted in the dashed lines.

Figure 16: Event Study around Job Loss: Own Earnings and Value of Severance Pay

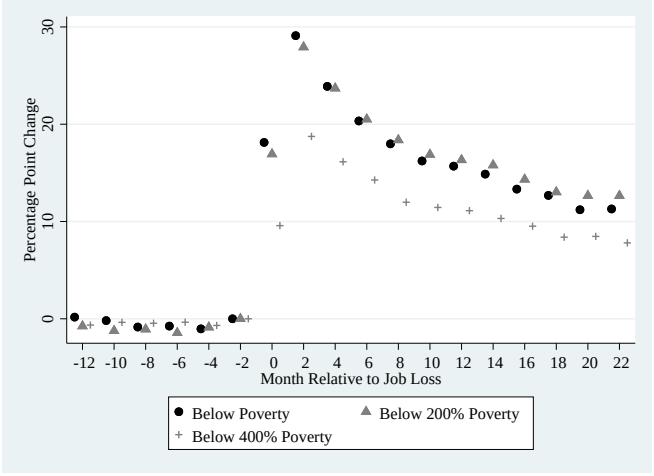


Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. The horizontal axis denotes months from job loss. The markers represent the event study coefficients on earnings and earnings plus severance pay. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level and the 95% confidence intervals are plotted in the dashed lines.

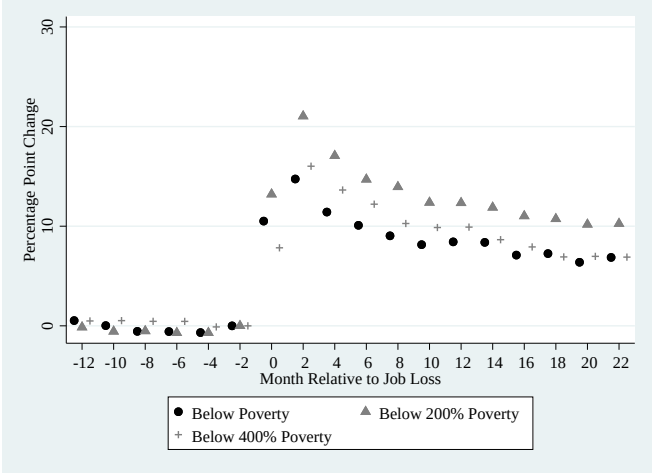
Figure 17: Difference in Difference Estimates of Severance Pay, by HH Poverty Status in First Survey Month

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The plotted estimates are from a difference in difference version of equation (1) with a post period dummy replacing the event time coefficients. We estimate this model for the full sample, and split by household poverty ratio in the first survey month. For the value of severance on the right scale, we plot the coefficients with severance pay value as the outcome variable. For receipt, on the left scale, we plot the coefficients with receipt of severance pay as the outcome variable. For the percent of lost earnings replaced, also on the left scale, we coefficient on severance pay value for the numerator, and, for the denominator, we run regressions with earnings as the outcome variable and use the estimated coefficient on the post dummy for each sample. The results are weighted using individual survey weight in the month of job loss.

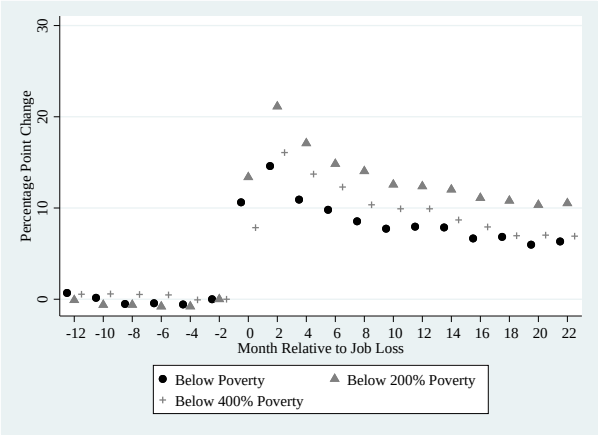
Figure 18: Event Study around Job Loss: Household Poverty



(a) Household Earned Income / Poverty Threshold



(b) Household Cash Income / Poverty Threshold



(c) Household Cash and Near-Cash Income / Poverty Threshold

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. The outcome variables are the ratio of total household income, as noted, to Census household poverty thresholds, which are assigned to each household in the SIPP based on household size and composition. The horizontal axis denotes months from job loss. The markers represent the event study coefficients. The results are weighted using individual survey weight in the month of job loss.

7 Tables

Table 1: Demographics of Job Losers and Full Sample in 1st Survey Month

	All Job Losers	Job Losers w 1 Year Job Tenure	Full Sample of Workers	Workers w 1 Year Job Tenure
Earnings (2015$s)	3791.21	4491.55	4550.93	5915.17
Age	39.81	41.24	41.95	42.09
Female	0.45	0.48	0.52	0.49
Hispanic	0.17	0.16	0.12	0.10
Non-Hispanic Black	0.12	0.11	0.10	0.10
Non-Hispanic White	0.66	0.68	0.73	0.74
Other	0.05	0.05	0.05	0.05
Less than HS	0.14	0.12	0.10	0.07
HS	0.48	0.47	0.44	0.44
Some College	0.18	0.18	0.17	0.17
College	0.20	0.23	0.29	0.32
Married	0.61	0.64	0.70	0.71
# Kids	0.91	0.88	0.92	0.89
N	12,081	7,781	173,875	98,557

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60. The results are weighted using individual survey weight in the first survey month.

Table 2: Summary Statistics

	Pre-Job-Loss	Post-Job-Loss
Monthly Income Receipt		
Receipt of Own UI	2.45	24.48
Receipt of Hhold SNAP	7.12	10.19
Receipt of Hhold TANF	1.09	1.21
Receipt of Own Social Security	0.57	1.46
Receipt of Own Supplemental Security Income	0.33	0.58
Receipt of Hhold FRPL	15.34	16.99
Receipt of Hhold WIC	5.81	6.02
Receipt of Hhold Energy Subsidy	0.20	0.19
Monthly Health Insurance Receipt		
Own Private Health Insurance	0.77	0.62
Own Public Health Insurance	0.05	0.07
Own Any Health Insurance	0.81	0.68
Monthly Income Amounts (2015$s)		
Own Earnings	4539.48	2460.13
Own UI Benefits	27.87	322.77
Hhold SNAP Benefits	24.67	37.11
Hhold TANF Benefits	5.18	5.77
Own Social Security Benefits	5.77	17.25
Own Supplemental Security Income Benefits	2.01	4.38
Hhold FRPL Benefits	19.44	21.07
Hhold WIC Benefits	3.82	3.85
Hhold Energy Subsidy	0.19	0.60
Household Poverty Status		
Hhold Earned Income Below Poverty Line	11.23	30.13
Hhold Cash Income Below Poverty Line	8.19	18.17
Hhold Cash Income + Near-Cash Transfers Below Poverty Line	6.19	16.51
N	68,649	122,864

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The results are weighted using individual survey weight in the month of job loss. Pre-period observations are 12 to 1 month prior to job loss. Post-period observations are 1 to 24 months after the job loss.

Table 3: Event Study Coefficients on Earnings and Income Made Up for by Safety Net Benefits

	Earnings	Plus UI	Plus SNAP	Plus TANF	Plus SS	Plus SSI	Plus FRPL	Plus WIC	Plus Energy
-12	111.378**	72.475	70.946	71.613	73.602	74.113	73.128	73.169	73.269
	(55.454)	(55.050)	(55.035)	(55.046)	(54.954)	(54.923)	(54.924)	(54.926)	(54.927)
-10	83.623*	52.814	53.547	53.739	55.134	55.285	54.568	54.612	54.666
	(49.967)	(49.497)	(49.489)	(49.498)	(49.426)	(49.401)	(49.410)	(49.412)	(49.412)
-8	123.821***	86.921**	87.288**	87.447**	90.023**	90.514**	89.577**	89.621**	89.658**
	(44.053)	(43.749)	(43.739)	(43.743)	(43.709)	(43.694)	(43.700)	(43.702)	(43.702)
-6	126.762***	86.673**	85.563**	85.723**	88.751**	89.361**	88.111**	88.119**	88.047**
	(39.623)	(39.619)	(39.599)	(39.600)	(39.619)	(39.612)	(39.617)	(39.618)	(39.619)
-4	154.545***	120.121***	118.582***	118.980***	120.067***	120.406***	119.708***	119.699***	119.669***
	(38.055)	(38.180)	(38.175)	(38.177)	(38.179)	(38.178)	(38.180)	(38.180)	(38.180)
0	-1187.598***	-827.844***	-822.532***	-822.307***	-821.192***	-821.232***	-820.673***	-820.670***	-820.657***
	(69.152)	(69.907)	(69.909)	(69.910)	(69.924)	(69.926)	(69.926)	(69.926)	(69.925)
2	-2948.353***	-2388.005***	-2377.972***	-2377.313***	-2376.052***	-2375.534***	-2374.512***	-2374.479***	-2374.342***
	(66.865)	(65.744)	(65.761)	(65.763)	(65.773)	(65.786)	(65.787)	(65.786)	(65.785)
4	-2560.732***	-2087.562***	-2076.294***	-2075.662***	-2073.841***	-2073.286***	-2071.964***	-2071.908***	-2071.798***
	(70.086)	(68.689)	(68.724)	(68.726)	(68.742)	(68.754)	(68.747)	(68.745)	(68.744)
6	-2202.492***	-1857.853***	-1846.301***	-1845.356***	-1840.476***	-1840.406***	-1838.762***	-1838.686***	-1838.467***
	(70.298)	(68.362)	(68.367)	(68.369)	(68.366)	(68.371)	(68.354)	(68.351)	(68.350)
8	-1919.515***	-1662.198***	-1651.089***	-1649.798***	-1642.065***	-1640.996***	-1639.185***	-1639.014***	-1638.628***
	(71.673)	(70.021)	(70.013)	(70.016)	(69.985)	(69.982)	(69.970)	(69.969)	(69.967)
10	-1765.883***	-1554.684***	-1543.098***	-1541.647***	-1532.572***	-1530.299***	-1528.491***	-1528.372***	-1527.729***
	(74.953)	(73.556)	(73.543)	(73.562)	(73.548)	(73.546)	(73.533)	(73.529)	(73.527)
12	-1708.196***	-1530.389***	-1520.658***	-1519.603***	-1510.894***	-1508.194***	-1506.510***	-1506.492***	-1505.676***
	(76.737)	(75.441)	(75.400)	(75.417)	(75.427)	(75.425)	(75.405)	(75.400)	(75.402)
14	-1590.212***	-1435.008***	-1425.481***	-1425.310***	-1415.155***	-1411.416***	-1409.678***	-1409.811***	-1409.118***
	(85.283)	(84.056)	(83.968)	(83.977)	(83.961)	(83.955)	(83.933)	(83.929)	(83.929)
16	-1480.870***	-1357.419***	-1347.343***	-1347.608***	-1335.000***	-1330.275***	-1328.373***	-1328.360***	-1327.717***
	(88.761)	(87.624)	(87.551)	(87.556)	(87.557)	(87.552)	(87.529)	(87.523)	(87.521)
18	-1456.507***	-1364.423***	-1355.429***	-1356.715***	-1345.561***	-1339.580***	-1337.884***	-1337.841***	-1337.264***
	(91.608)	(90.398)	(90.296)	(90.298)	(90.285)	(90.291)	(90.271)	(90.262)	(90.257)
20	-1382.341***	-1308.180***	-1300.104***	-1301.380***	-1291.148***	-1285.189***	-1284.038***	-1284.092***	-1283.032***
	(98.625)	(97.408)	(97.277)	(97.277)	(97.343)	(97.352)	(97.337)	(97.330)	(97.323)
22	-1362.890***	-1319.810***	-1312.310***	-1313.247***	-1299.749***	-1294.223***	-1293.122***	-1293.132***	-1292.003***
	(103.090)	(101.748)	(101.616)	(101.612)	(101.699)	(101.711)	(101.698)	(101.693)	(101.693)
Mean Y Before Job Loss	4495.19	4524.22	4549.24	4554.59	4560.91	4563.30	4583.44	4587.25	4587.49
Observations	198689	198689	198689	198689	198689	198689	198689	198689	198689

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. We display the estimates on the event time variables. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level. * p<0.10, ** p<0.05, *** p<0.01

Table 4: Event Study Coefficients on Safety Net Receipt

	UI	SNAP	TANF	SS	SSI	FRPL	WIC	Energy
-12	-2.418***	-0.390	0.158	0.092	0.079	-0.948**	-0.201	0.077
	(0.468)	(0.366)	(0.175)	(0.152)	(0.121)	(0.456)	(0.322)	(0.064)
-10	-1.851***	0.157	0.076	0.060	0.039	-0.826*	-0.212	0.052
	(0.426)	(0.334)	(0.144)	(0.133)	(0.105)	(0.442)	(0.287)	(0.067)
-8	-2.485***	0.104	0.051	0.047	0.069	-0.720**	-0.179	0.087
	(0.357)	(0.291)	(0.117)	(0.110)	(0.083)	(0.355)	(0.247)	(0.061)
-6	-2.802***	-0.319	0.041	0.060	0.099*	-0.881***	-0.077	0.007
	(0.291)	(0.238)	(0.096)	(0.079)	(0.059)	(0.299)	(0.207)	(0.049)
-4	-2.509***	-0.341**	0.079	-0.002	0.061*	-0.660***	-0.009	-0.021
	(0.215)	(0.166)	(0.059)	(0.043)	(0.036)	(0.205)	(0.132)	(0.033)
0	29.122***	1.107***	0.009	0.086	-0.025	0.422**	0.027	-0.010
	(0.507)	(0.195)	(0.070)	(0.064)	(0.037)	(0.191)	(0.133)	(0.050)
2	41.111***	2.341***	0.101	0.148	0.010	0.795**	0.212	0.027
	(0.671)	(0.299)	(0.100)	(0.097)	(0.061)	(0.316)	(0.203)	(0.072)
4	34.284***	2.844***	0.196*	0.221*	0.022	1.099***	0.269	0.027
	(0.681)	(0.329)	(0.117)	(0.117)	(0.072)	(0.363)	(0.251)	(0.077)
6	25.443***	2.831***	0.323**	0.450***	0.011	1.448***	0.283	0.091
	(0.670)	(0.357)	(0.145)	(0.144)	(0.082)	(0.412)	(0.295)	(0.098)
8	19.126***	2.827***	0.403**	0.659***	0.129	1.435***	0.427	0.082
	(0.672)	(0.388)	(0.160)	(0.168)	(0.107)	(0.440)	(0.325)	(0.103)
10	15.815***	3.174***	0.488***	0.818***	0.266**	1.352***	0.476	0.000
	(0.692)	(0.437)	(0.187)	(0.182)	(0.124)	(0.482)	(0.368)	(0.095)
12	13.735***	2.925***	0.387**	0.836***	0.367***	1.477***	0.451	-0.068
	(0.713)	(0.472)	(0.195)	(0.187)	(0.137)	(0.516)	(0.399)	(0.097)
14	12.156***	2.892***	0.275	0.818***	0.419**	1.634***	0.310	-0.056
	(0.742)	(0.525)	(0.192)	(0.212)	(0.164)	(0.564)	(0.427)	(0.113)
16	9.709***	3.055***	0.207	0.886***	0.552***	1.735***	0.407	0.026
	(0.757)	(0.526)	(0.199)	(0.232)	(0.206)	(0.589)	(0.456)	(0.144)
18	7.229***	3.220***	0.054	1.023***	0.682***	1.656***	0.372	-0.060
	(0.782)	(0.568)	(0.206)	(0.257)	(0.237)	(0.638)	(0.485)	(0.133)
20	5.900***	3.031***	-0.017	1.303***	0.581**	1.180*	0.441	-0.018
	(0.823)	(0.603)	(0.224)	(0.281)	(0.267)	(0.689)	(0.517)	(0.140)
22	3.707***	3.031***	0.049	1.604***	0.610**	1.192	0.424	0.044
	(0.875)	(0.653)	(0.243)	(0.310)	(0.286)	(0.729)	(0.541)	(0.162)
Mean Y Before Job Loss	2.56	7.20	1.15	0.63	0.39	15.90	5.80	0.10
Observations	198689	198689	198689	198689	198689	198689	198689	198689

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. We display the estimates on the event time variables. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level. * p<0.10, ** p<0.05, *** p<0.01

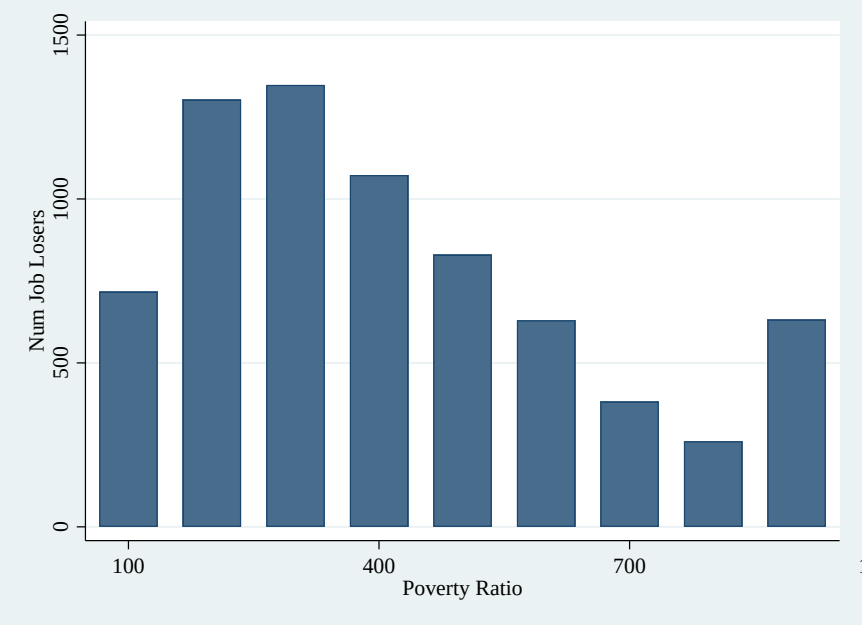
Table 5: Event Study Coefficients on Household Poverty

	Earned Income			Cash Income			Cash Income + Near-Cash Transfers		
	<100%	<200%	<400%	<100%	<200%	<400%	<100%	<200%	<400%
-12	0.171	-0.754	-0.644	0.528	-0.140	0.489	0.690	-0.099	0.549
	(0.562)	(0.652)	(0.637)	(0.499)	(0.636)	(0.653)	(0.482)	(0.647)	(0.653)
-10	-0.184	-1.236**	-0.364	0.024	-0.562	0.524	0.155	-0.619	0.583
	(0.491)	(0.599)	(0.581)	(0.436)	(0.581)	(0.601)	(0.427)	(0.596)	(0.601)
-8	-0.847*	-1.076**	-0.458	-0.554	-0.521	0.452	-0.519	-0.613	0.524
	(0.435)	(0.517)	(0.502)	(0.393)	(0.510)	(0.516)	(0.376)	(0.521)	(0.515)
-6	-0.751**	-1.446***	-0.349	-0.574*	-0.704	0.448	-0.438	-0.795*	0.473
	(0.378)	(0.455)	(0.439)	(0.341)	(0.453)	(0.452)	(0.332)	(0.453)	(0.453)
-4	-1.034***	-0.874***	-0.684**	-0.674***	-0.696**	-0.108	-0.570**	-0.788**	-0.069
	(0.264)	(0.334)	(0.326)	(0.247)	(0.330)	(0.341)	(0.245)	(0.327)	(0.341)
0	18.128***	16.930***	9.577***	10.512***	13.205***	7.833***	10.624***	13.378***	7.848***
	(0.443)	(0.459)	(0.427)	(0.395)	(0.443)	(0.428)	(0.396)	(0.446)	(0.428)
2	29.106***	27.923***	18.746***	14.739***	21.045***	16.023***	14.600***	21.131***	16.079***
	(0.659)	(0.672)	(0.607)	(0.545)	(0.633)	(0.594)	(0.543)	(0.642)	(0.595)
4	23.891***	23.694***	16.139***	11.421***	17.071***	13.634***	10.920***	17.096***	13.718***
	(0.663)	(0.698)	(0.642)	(0.537)	(0.657)	(0.630)	(0.532)	(0.666)	(0.631)
6	20.337***	20.513***	14.269***	10.089***	14.699***	12.211***	9.803***	14.834***	12.300***
	(0.676)	(0.727)	(0.664)	(0.540)	(0.683)	(0.659)	(0.532)	(0.691)	(0.660)
8	17.985***	18.376***	11.986***	9.036***	13.942***	10.271***	8.543***	14.035***	10.352***
	(0.706)	(0.757)	(0.698)	(0.575)	(0.718)	(0.690)	(0.562)	(0.726)	(0.692)
10	16.224***	16.879***	11.444***	8.148***	12.376***	9.869***	7.732***	12.568***	9.913***
	(0.744)	(0.789)	(0.726)	(0.613)	(0.751)	(0.717)	(0.602)	(0.761)	(0.718)
12	15.690***	16.326***	11.114***	8.430***	12.338***	9.909***	7.955***	12.380***	9.913***
	(0.783)	(0.829)	(0.753)	(0.657)	(0.792)	(0.756)	(0.647)	(0.806)	(0.758)
14	14.871***	15.794***	10.314***	8.376***	11.883***	8.648***	7.868***	12.022***	8.692***
	(0.824)	(0.881)	(0.811)	(0.697)	(0.846)	(0.812)	(0.684)	(0.855)	(0.814)
16	13.330***	14.324***	9.518***	7.099***	11.022***	7.920***	6.665***	11.102***	7.924***
	(0.864)	(0.926)	(0.841)	(0.733)	(0.893)	(0.846)	(0.716)	(0.902)	(0.848)
18	12.681***	13.026***	8.390***	7.253***	10.731***	6.918***	6.836***	10.801***	6.962***
	(0.908)	(0.987)	(0.896)	(0.777)	(0.953)	(0.900)	(0.764)	(0.948)	(0.902)
20	11.209***	12.652***	8.469***	6.380***	10.177***	6.973***	5.980***	10.339***	7.026***
	(0.974)	(1.051)	(0.942)	(0.833)	(1.012)	(0.944)	(0.808)	(1.009)	(0.946)
22	11.291***	12.650***	7.802***	6.868***	10.254***	6.899***	6.333***	10.522***	6.914***
	(1.048)	(1.130)	(1.008)	(0.908)	(1.087)	(1.017)	(0.880)	(1.083)	(1.019)
Mean Y Before Job Loss	11.63	30.27	64.10	8.44	25.97	60.97	6.97	25.36	60.90
Observations	198689	198689	198689	198689	198689	198689	198689	198689	198689

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. We display the estimates on the event time variables. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level. * p<0.10, ** p<0.05, *** p<0.01

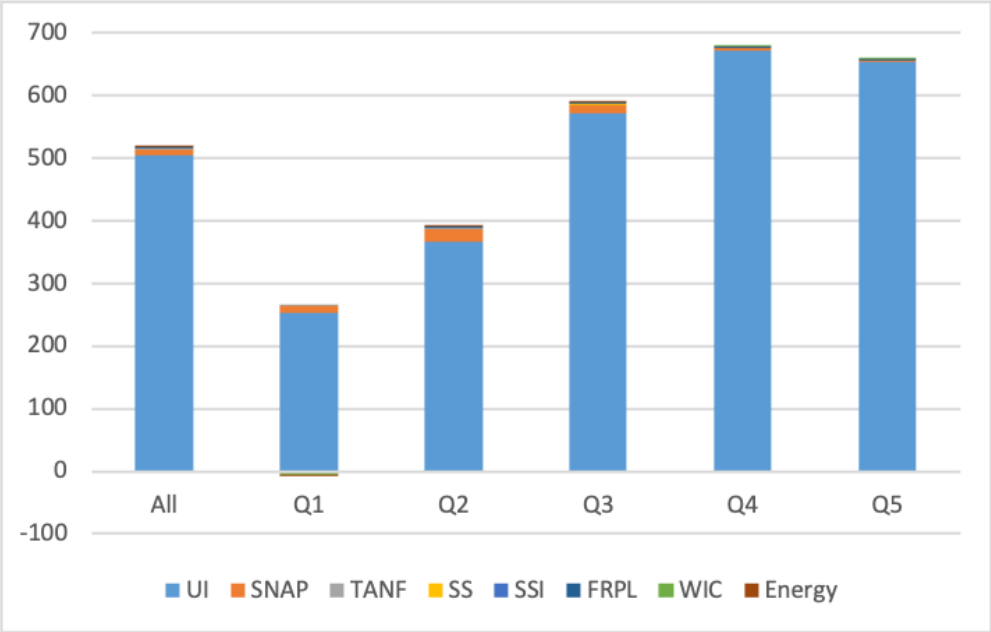
8 Appendix: Additional Results

Figure A1: Sample Size by Pre-Job-Loss Household Poverty



Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it.

Figure A2: Difference in Difference Estimates of Safety Net Program Value, by Pre-Job-Loss Monthly Earnings

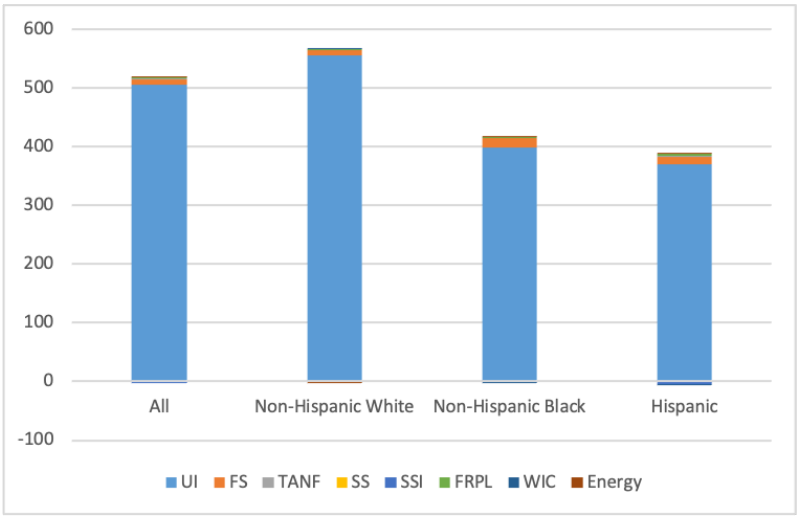


Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The plotted estimates are from a difference in difference version of equation (1) with a post period dummy replacing the event time coefficients. We estimate this model for the full sample, and split by pre-job-loss earnings quintile. The outcome variables are dollar value of the benefits received from each program. The results are weighted using individual survey weight in the month of job loss.

Figure A3: Difference in Difference Estimates of Safety Net Program Value as Percentage of Lost Earnings, by Pre-Job-Loss Monthly Earnings

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The plotted estimates are from a difference in difference version of equation (1) with a post period dummy replacing the event time coefficients. We estimate this model for the full sample, and split by pre-job-loss earnings quintile. We sum the estimated effect on each program from Figure (A2) for the numerator. For the denominator, we run regressions with earnings as the outcome variable and use the estimated coefficient on the post dummy for each sample. The results are weighted using individual survey weight in the month of job loss.

Figure A4: Difference in Difference Estimates of Safety Net Program Value, by Race/Ethnicity

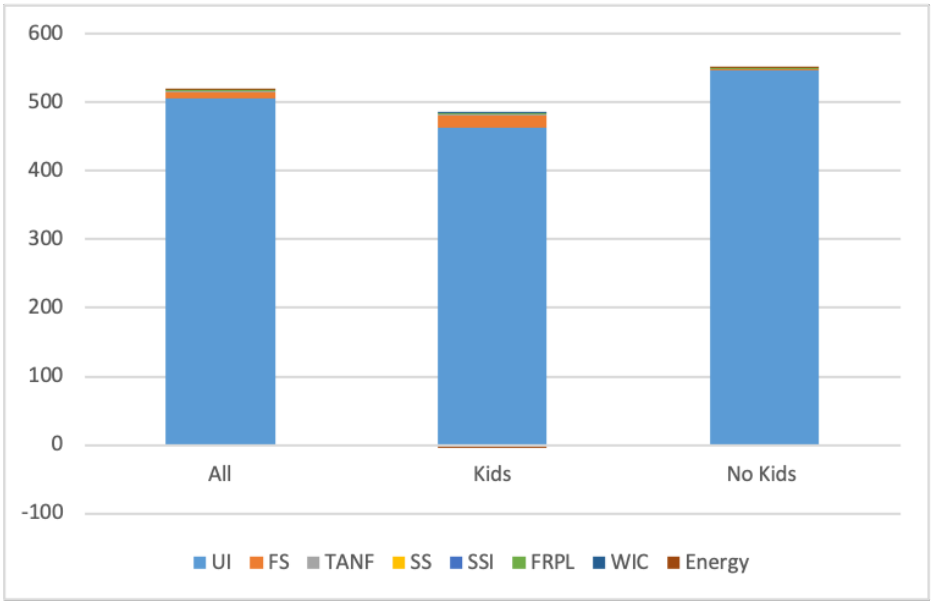


Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The plotted estimates are from a difference in difference version of equation (1) with a post period dummy replacing the event time coefficients. We estimate this model for the full sample, and split by race and ethnicity. The outcome variables are dollar value of the benefits received from each program. The results are weighted using individual survey weight in the month of job loss.

Figure A5: Difference in Difference Estimates of Safety Net Program Value as Percentage of Lost Earnings, by Race/Ethnicity

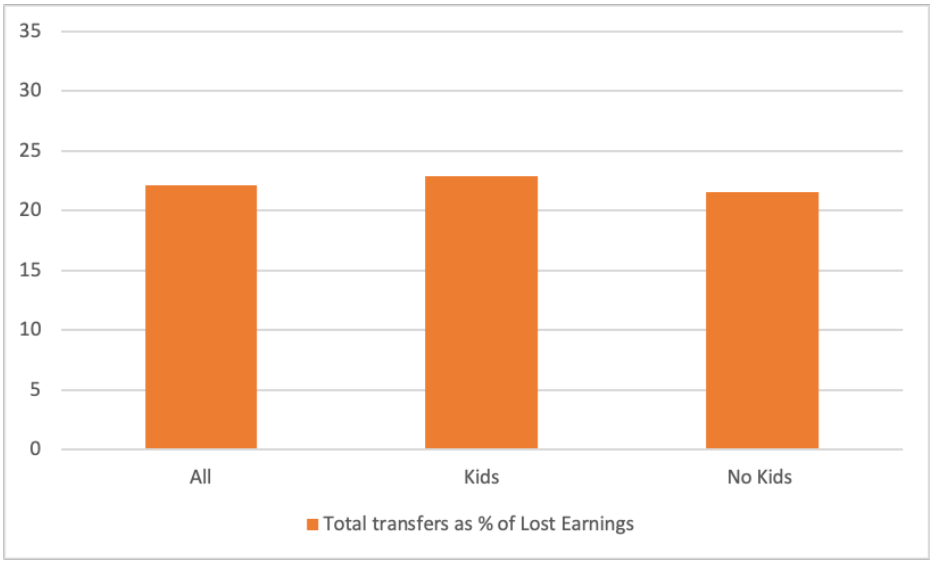
Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The plotted estimates are from a difference in difference version of equation (1) with a post period dummy replacing the event time coefficients. We estimate this model for the full sample, and split by race and ethnicity. We sum the estimated effect on each program from Figure (A4) for the numerator. For the denominator, we run regressions with earnings as the outcome variable and use the estimated coefficient on the post dummy for each sample. The results are weighted using individual survey weight in the month of job loss.

Figure A6: Difference in Difference Estimates of Safety Net Program Value, by Presence of Children in First Survey Month



Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The plotted estimates are from a difference in difference version of equation (1) with a post period dummy replacing the event time coefficients. We estimate this model for the full sample, and split by presence of children. The results are weighted using individual survey weight in the month of job loss.

Figure A7: Difference in Difference Estimates of Safety Net Program Value as Percentage of Lost Earnings, by Presence of Children in First Survey Month



Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The plotted estimates are from a difference in difference version of equation (1) with a post period dummy replacing the event time coefficients. We estimate this model for the full sample, and split by presence of children. We sum the estimated effect on each program from Figure (A4) for the numerator. For the denominator, we run regressions with earnings as the outcome variable and use the estimated coefficient on the post dummy for each sample. The results are weighted using individual survey weight in the month of job loss.

Table A1: Event Study Coefficients on Safety Net Receipt, For Those Initially Disabled

	UI	SNAP	TANF	SS	SSI	FRPL	WIC	Energy
-12	-2.229	0.412	1.009	-1.265	0.525	0.390	1.838	-0.021
	(1.543)	(1.792)	(0.750)	(0.973)	(0.755)	(1.663)	(1.452)	(0.350)
-10	-1.497	1.457	0.588	-0.995	0.204	0.781	1.149	-0.168
	(1.387)	(1.593)	(0.725)	(0.920)	(0.627)	(1.456)	(1.364)	(0.555)
-8	-2.457**	1.052	0.135	-0.753	0.567	1.190	1.309	-0.099
	(1.181)	(1.275)	(0.390)	(0.778)	(0.517)	(1.131)	(1.426)	(0.571)
-6	-2.647***	0.241	0.093	0.078	0.560	0.485	1.199	-0.281
	(1.015)	(1.008)	(0.310)	(0.551)	(0.517)	(0.961)	(1.102)	(0.520)
-4	-0.988	0.127	0.095	0.143	0.439	0.298	1.569***	-0.152
	(0.707)	(0.744)	(0.223)	(0.298)	(0.425)	(0.730)	(0.580)	(0.240)
0	24.218***	1.542*	-0.127	0.552	-0.032	0.962**	-0.040	-0.303
	(1.842)	(0.855)	(0.277)	(0.517)	(0.297)	(0.435)	(0.668)	(0.309)
2	35.910***	3.961***	0.372	0.674	0.523	1.480*	0.135	-0.370
	(2.529)	(1.386)	(0.344)	(0.643)	(0.519)	(0.847)	(0.831)	(0.419)
4	29.825***	5.928***	0.642	1.250	0.665	1.945**	0.328	-0.351
	(2.597)	(1.617)	(0.395)	(0.874)	(0.467)	(0.941)	(0.953)	(0.413)
6	22.308***	5.649***	1.370*	2.173**	0.772	3.192**	1.687	-0.109
	(2.493)	(1.750)	(0.726)	(1.011)	(0.520)	(1.245)	(1.203)	(0.544)
8	16.112***	4.938***	0.956	3.455***	1.093*	2.914**	1.912	-0.260
	(2.588)	(1.778)	(0.677)	(1.238)	(0.644)	(1.362)	(1.190)	(0.644)
10	14.703***	3.873**	0.277	4.137***	1.174*	1.197	1.578	-0.789
	(2.758)	(1.889)	(0.545)	(1.355)	(0.683)	(1.483)	(1.270)	(0.557)
12	12.520***	3.649*	-0.085	3.948***	1.241*	0.611	1.353	-0.763
	(2.833)	(1.953)	(0.668)	(1.274)	(0.709)	(1.502)	(1.299)	(0.597)
14	9.795***	3.998**	-0.148	4.109***	2.068**	1.046	1.770	-0.778
	(2.969)	(1.995)	(0.708)	(1.352)	(0.806)	(1.623)	(1.332)	(0.652)
16	7.666***	4.293**	-0.602	4.008***	2.378***	2.192	2.142	-0.762
	(2.953)	(2.093)	(0.786)	(1.382)	(0.919)	(1.731)	(1.492)	(0.675)
18	4.681	5.765**	-0.645	4.437***	2.886***	4.145**	3.278**	-0.751
	(2.941)	(2.329)	(0.883)	(1.497)	(1.016)	(2.026)	(1.659)	(0.713)
20	2.810	5.911**	-0.529	4.824***	2.940***	4.501**	3.468**	-0.487
	(3.068)	(2.412)	(0.935)	(1.646)	(1.043)	(2.086)	(1.729)	(0.827)
22	0.960	5.966**	-0.712	6.503***	2.926**	4.001*	3.135*	-0.476
	(3.319)	(2.619)	(1.030)	(1.917)	(1.207)	(2.113)	(1.762)	(0.870)
Mean Y Before Job Loss	2.74	10.19	1.47	5.55	2.29	17.97	5.07	0.57
Observations	12890	12890	12890	12890	12890	12890	12890	12890

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. We display the estimates on the event time variables. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level. * p<0.10, ** p<0.05, *** p<0.01

Table A2: Event Study Coefficients on Safety Net Receipt, For Those Initially Not Disabled

	UI	SNAP	TANF	SS	SSI	FRPL	WIC	Energy
-12	-2.447***	-0.401	0.103	0.186	0.055	-0.991**	-0.306	0.087
	(0.487)	(0.373)	(0.180)	(0.147)	(0.120)	(0.474)	(0.328)	(0.065)
-10	-1.900***	0.109	0.041	0.131	0.031	-0.900*	-0.283	0.068
	(0.444)	(0.341)	(0.147)	(0.128)	(0.105)	(0.460)	(0.291)	(0.062)
-8	-2.503***	0.072	0.039	0.099	0.039	-0.815**	-0.266	0.099*
	(0.372)	(0.298)	(0.122)	(0.106)	(0.083)	(0.370)	(0.246)	(0.053)
-6	-2.830***	-0.330	0.035	0.062	0.068	-0.956***	-0.158	0.026
	(0.303)	(0.245)	(0.100)	(0.076)	(0.054)	(0.312)	(0.209)	(0.040)
-4	-2.603***	-0.354**	0.078	-0.008	0.035	-0.707***	-0.101	-0.013
	(0.224)	(0.170)	(0.061)	(0.043)	(0.028)	(0.213)	(0.135)	(0.031)
0	29.417***	1.075***	0.020	0.059	-0.027	0.390*	0.032	0.004
	(0.526)	(0.201)	(0.072)	(0.060)	(0.035)	(0.201)	(0.135)	(0.050)
2	41.423***	2.228***	0.088	0.123	-0.021	0.756**	0.212	0.047
	(0.695)	(0.306)	(0.104)	(0.096)	(0.057)	(0.332)	(0.209)	(0.071)
4	34.550***	2.633***	0.171	0.164	-0.015	1.045***	0.256	0.046
	(0.704)	(0.334)	(0.122)	(0.112)	(0.071)	(0.381)	(0.260)	(0.077)
6	25.618***	2.634***	0.264*	0.356**	-0.034	1.333***	0.189	0.095
	(0.694)	(0.364)	(0.148)	(0.140)	(0.081)	(0.430)	(0.305)	(0.099)
8	19.282***	2.672***	0.373**	0.505***	0.071	1.334***	0.329	0.093
	(0.694)	(0.398)	(0.165)	(0.162)	(0.107)	(0.459)	(0.337)	(0.103)
10	15.848***	3.105***	0.506***	0.628***	0.209*	1.356***	0.397	0.038
	(0.714)	(0.450)	(0.195)	(0.174)	(0.125)	(0.502)	(0.382)	(0.095)
12	13.777***	2.852***	0.424**	0.661***	0.313**	1.531***	0.385	-0.035
	(0.736)	(0.487)	(0.203)	(0.182)	(0.139)	(0.540)	(0.415)	(0.097)
14	12.280***	2.791***	0.309	0.639***	0.313*	1.672***	0.212	-0.022
	(0.766)	(0.543)	(0.199)	(0.210)	(0.166)	(0.590)	(0.445)	(0.114)
16	9.828***	2.942***	0.269	0.715***	0.435**	1.707***	0.303	0.062
	(0.783)	(0.543)	(0.205)	(0.231)	(0.211)	(0.616)	(0.476)	(0.148)
18	7.378***	3.010***	0.110	0.823***	0.543**	1.494**	0.195	-0.031
	(0.809)	(0.584)	(0.212)	(0.258)	(0.243)	(0.666)	(0.504)	(0.136)
20	6.100***	2.808***	0.027	1.087***	0.432	0.965	0.259	-0.004
	(0.852)	(0.622)	(0.231)	(0.280)	(0.277)	(0.720)	(0.538)	(0.141)
22	3.890***	2.813***	0.104	1.298***	0.470	1.012	0.256	0.062
	(0.905)	(0.673)	(0.249)	(0.306)	(0.295)	(0.763)	(0.563)	(0.164)
Mean Y Before Job Loss	2.55	6.99	1.13	0.29	0.26	15.76	5.85	0.06
Observations	185799	185799	185799	185799	185799	185799	185799	185799

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. We display the estimates on the event time variables. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level. * p<0.10, ** p<0.05, *** p<0.01

Table A3: Event Study Coefficients on Self-Reported Disability, By Initial Disability Type

	All	No Disability	Disability
-12	-0.004	-0.006*	0.025
	(0.004)	(0.003)	(0.032)
-10	-0.005	-0.006*	0.016
	(0.003)	(0.003)	(0.029)
-8	-0.008**	-0.009***	0.010
	(0.003)	(0.003)	(0.026)
-6	-0.007**	-0.007***	0.008
	(0.003)	(0.002)	(0.024)
-4	-0.004*	-0.003**	-0.006
	(0.002)	(0.002)	(0.017)
0	0.006***	0.007***	-0.011
	(0.002)	(0.002)	(0.013)
2	0.010***	0.014***	-0.058***
	(0.003)	(0.003)	(0.021)
4	0.013***	0.018***	-0.075***
	(0.003)	(0.003)	(0.023)
6	0.016***	0.023***	-0.104***
	(0.003)	(0.003)	(0.028)
8	0.017***	0.024***	-0.096***
	(0.004)	(0.004)	(0.030)
10	0.017***	0.021***	-0.068**
	(0.004)	(0.004)	(0.033)
12	0.016***	0.022***	-0.077**
	(0.004)	(0.004)	(0.034)
14	0.019***	0.027***	-0.096***
	(0.005)	(0.004)	(0.036)
16	0.022***	0.028***	-0.072*
	(0.005)	(0.005)	(0.038)
18	0.023***	0.028***	-0.052
	(0.005)	(0.005)	(0.042)
20	0.022***	0.028***	-0.076*
	(0.006)	(0.005)	(0.045)
22	0.024***	0.030***	-0.082*
	(0.007)	(0.006)	(0.046)
Mean Y Before Job Loss	0.06	0.03	0.58
Observations	198689	185799	12890

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. We display the estimates on the event time variables. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level. * p<0.10, ** p<0.05, *** p<0.01

Table A4: Event Study Coefficients on Severance Pay Receipt

	Severance
-12	-0.973***
	(0.117)
-10	-0.936***
	(0.111)
-8	-0.907***
	(0.107)
-6	-0.907***
	(0.101)
-4	-0.300***
	(0.112)
0	7.299***
	(0.274)
2	0.797***
	(0.169)
4	-0.663***
	(0.123)
6	-0.706***
	(0.119)
8	-0.715***
	(0.124)
10	-0.759***
	(0.128)
12	-0.724***
	(0.140)
14	-0.764***
	(0.147)
16	-0.738***
	(0.155)
18	-0.684***
	(0.170)
20	-0.679***
	(0.181)
22	-0.671***
	(0.191)
Mean Y Before Job Loss	0.32
Observations	198689

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. We display the estimates on the event time variables. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level. * p<0.10, ** p<0.05, *** p<0.01

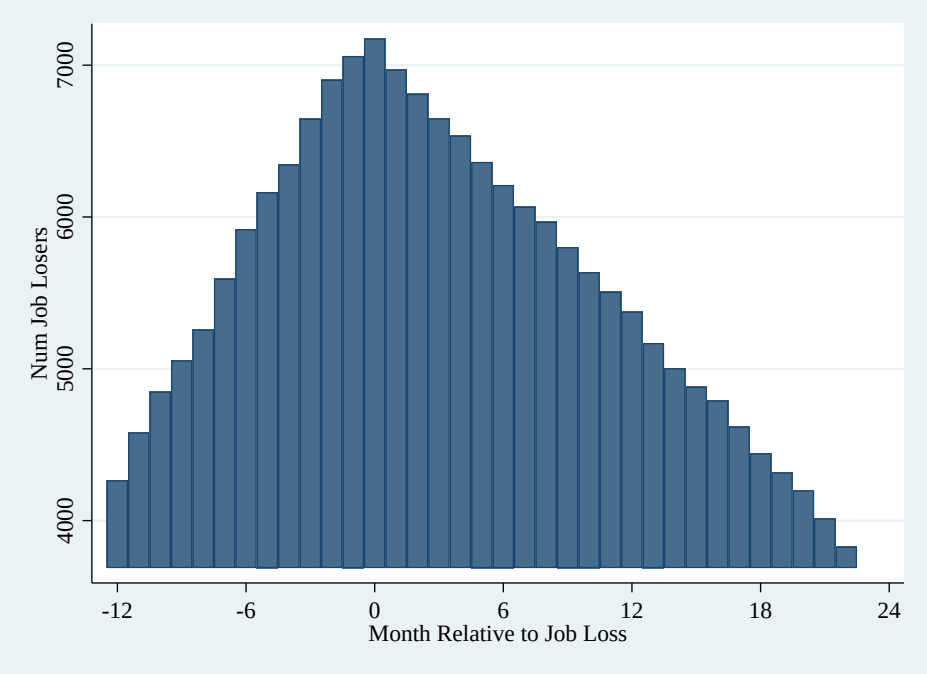
Table A5: Event Study Coefficients on Earnings and Income Made Up for by Severance Pay

	Earnings	Plus Severance
-12	111.378**	46.409
	(55.454)	(62.167)
-10	83.623*	21.946
	(49.967)	(56.159)
-8	123.821***	59.265
	(44.053)	(49.761)
-6	126.762***	64.913
	(39.623)	(44.946)
-4	154.545***	139.276***
	(38.055)	(53.547)
0	-1187.598***	-600.138***
	(69.152)	(105.850)
2	-2948.353***	-2893.645***
	(66.865)	(76.462)
4	-2560.732***	-2605.471***
	(70.086)	(74.762)
6	-2202.492***	-2247.877***
	(70.298)	(75.631)
8	-1919.515***	-1963.226***
	(71.673)	(77.938)
10	-1765.883***	-1815.165***
	(74.953)	(80.895)
12	-1708.196***	-1752.291***
	(76.737)	(84.080)
14	-1590.212***	-1638.242***
	(85.283)	(92.782)
16	-1480.870***	-1527.286***
	(88.761)	(97.163)
18	-1456.507***	-1500.881***
	(91.608)	(100.994)
20	-1382.341***	-1427.321***
	(98.625)	(108.531)
22	-1362.890***	-1405.050***
	(103.090)	(113.297)
Mean Y Before Job Loss	4495.19	4517.85
Observations	198689	198689

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. We display the estimates on the event time variables. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level. * p<0.10, ** p<0.05, *** p<0.01

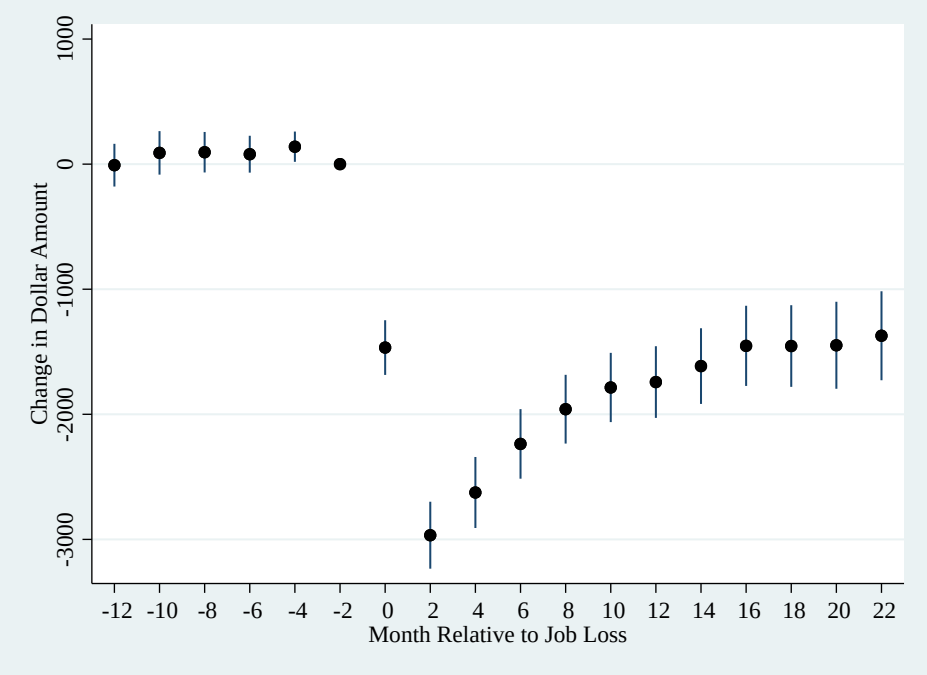
9 Appendix: Fully Balanced Sample

Figure B1: Sample Size by Month Relative to Job Loss



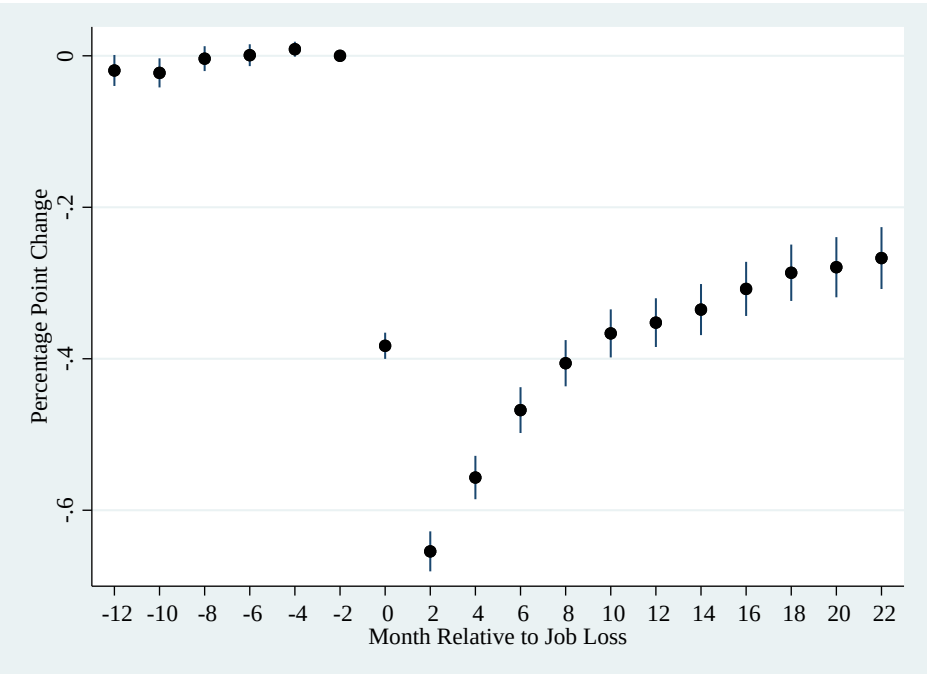
Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it.

Figure B2: Event Study around Job Loss: Own Earnings, Balanced Sample



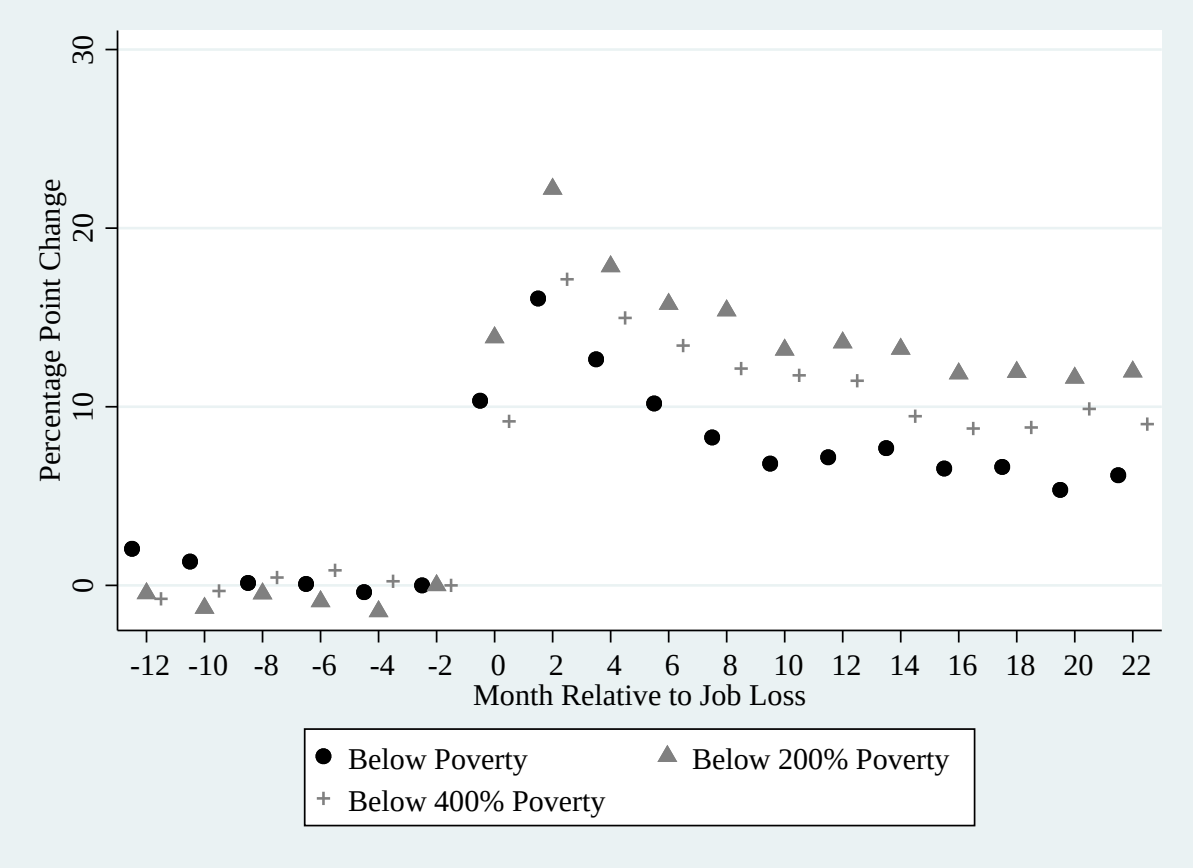
Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. The horizontal axis denotes months from job loss. The black dots represent the event study coefficients. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level and the 95% confidence intervals are plotted in the dashed lines.

Figure B3: Event Study around Job Loss: Own Likelihood of Any Earnings, Balanced Sample



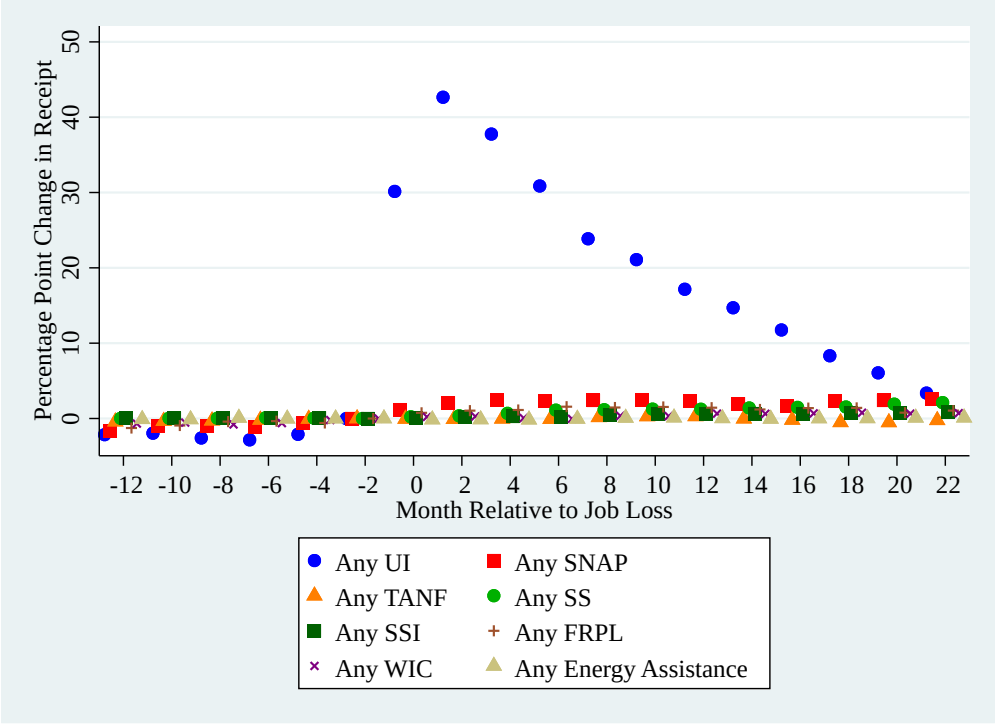
Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. The horizontal axis denotes months from job loss. The black dots represent the event study coefficients. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level and the 95% confidence intervals are plotted in the dashed lines.

Figure B4: Event Study around Job Loss: Household Poverty, Balanced Sample

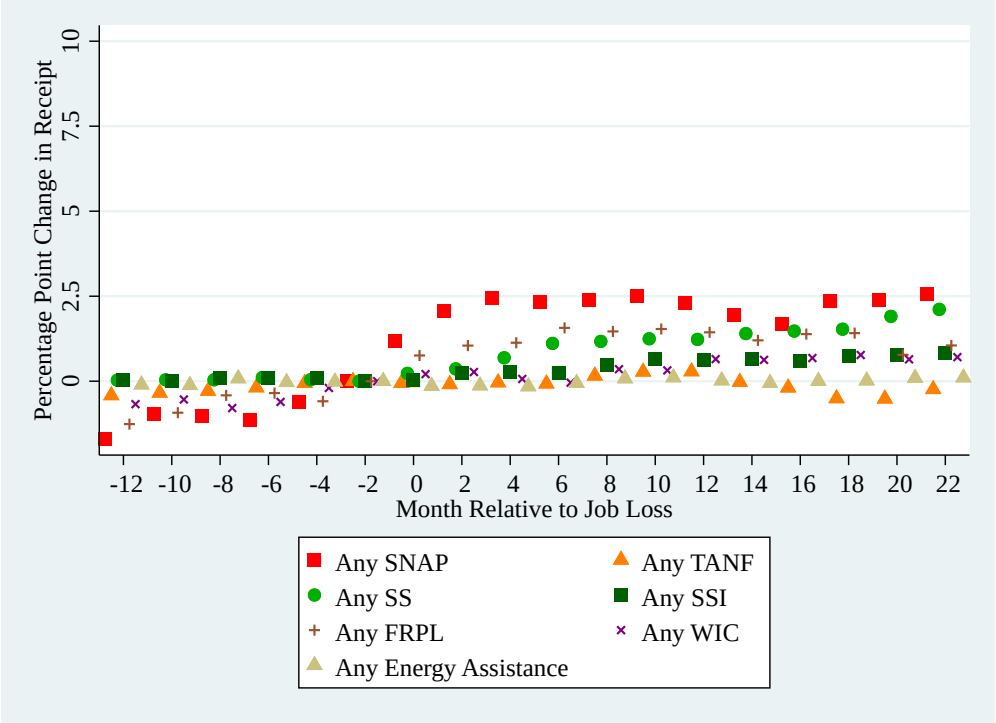


Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. The outcome variables are the ratio of total household cash income to Census household poverty thresholds, which are assigned to each household in the SIPP based on household size and composition. The horizontal axis denotes months from job loss. The results are weighted using individual survey weight in the month of job loss.

Figure B5: Event Study around Job Loss: Receipt of Safety Net Programs, Balanced Sample



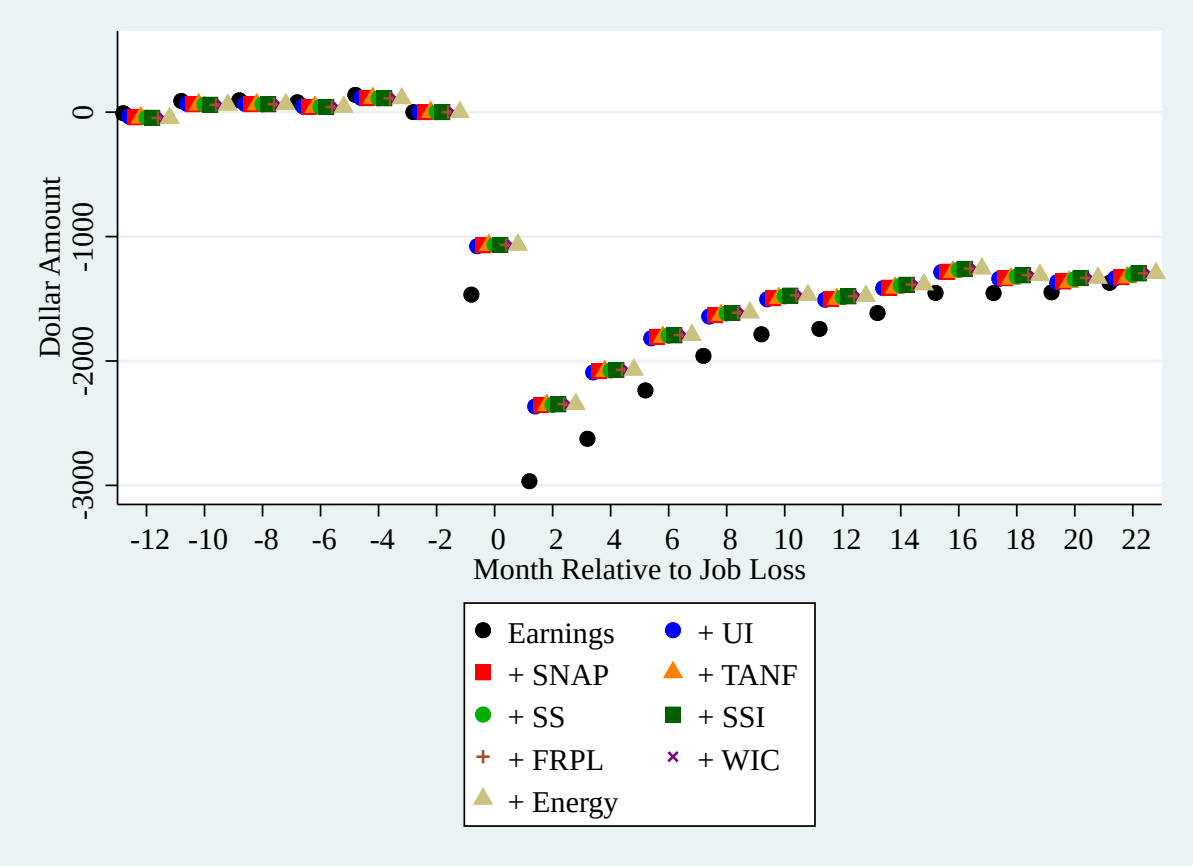
(a) Percentage Point Effect



(b) Percentage Point Effect, Omit UI

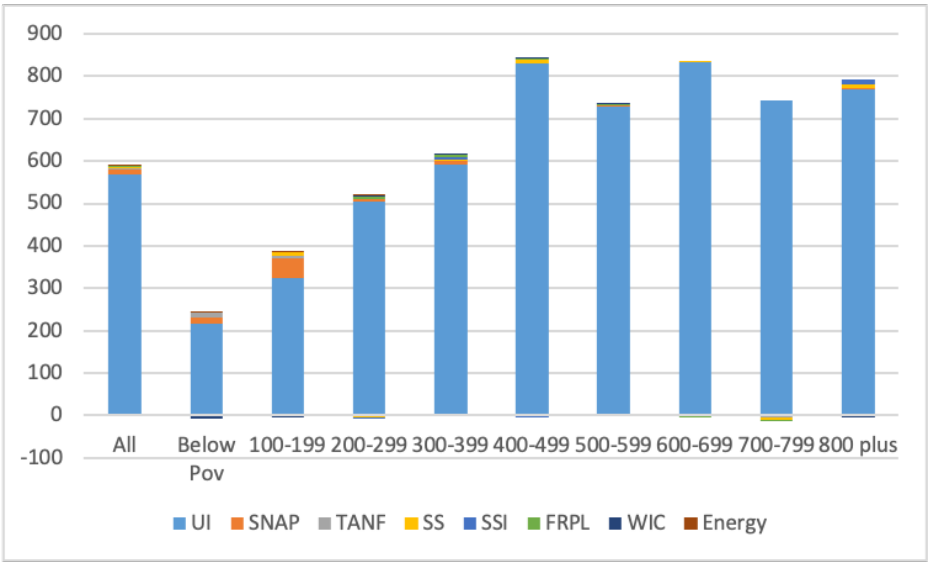
Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. The horizontal axis denotes months from job loss. The markers represent the event study coefficients. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level and the 95% confidence intervals are plotted in the dashed lines.

Figure B6: Event Study around Job Loss: Own Earnings and Value of Safety Net Programs, Balanced Sample



Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. The horizontal axis denotes months from job loss. The markers represent the event study coefficients from models with earnings and earnings plus safety net programs additively as noted. The results are weighted using individual survey weight in the month of job loss. Standard errors clustered at the individual level and the 95% confidence intervals are plotted in the dashed lines.

Figure B7: Difference in Difference Estimates of Safety Net Program Value After Job Loss, by HH Poverty Status in First Survey Month, Balanced Sample

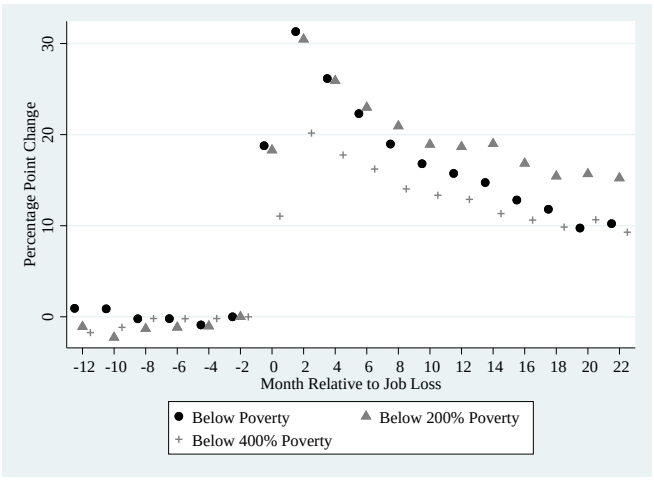


Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The plotted estimates are from a difference in difference version of equation (1) with a post period dummy replacing the event time coefficients. We estimate this model for the full sample, and split by household poverty ratio in the first survey month. The outcome variables are dollar value of the benefits received from each program. The results are weighted using individual survey weight in the month of job loss.

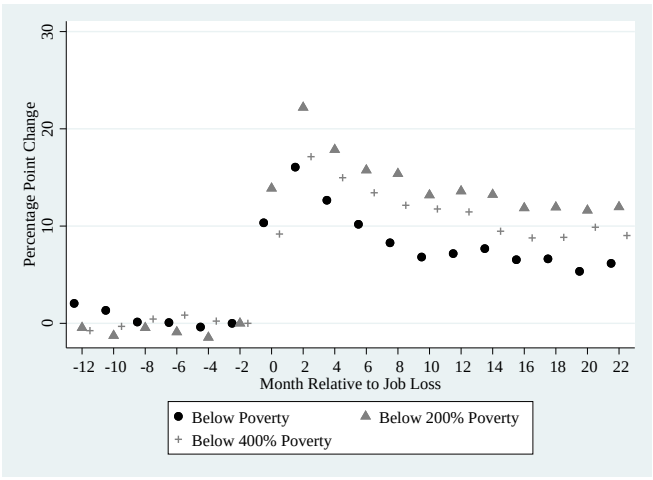
Figure B8: Difference in Difference Estimates of Safety Net Program Value as Percentage of Lost Earnings After Job Loss, by HH Poverty Status in First Survey Month, Balanced Sample

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The plotted estimates are from a difference in difference version of equation (1) with a post period dummy replacing the event time coefficients. We estimate this model for the full sample, and split by household poverty ratio in the first survey month. We sum the estimated effect on each program from Figure (B7) for the numerator. For the denominator, we run regressions with earnings as the outcome variable and use the estimated coefficient on the post dummy for each sample. The results are weighted using individual survey weight in the month of job loss.

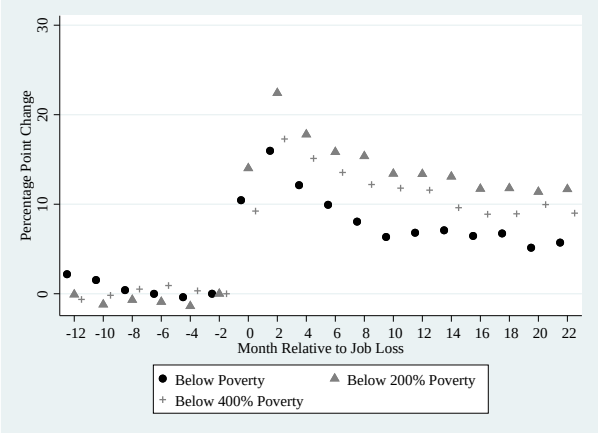
Figure B9: Event Study around Job Loss: Household Poverty



(a) Household Earned Income / Poverty Threshold



(b) Household Cash Income / Poverty Threshold



(c) Household Cash and Near-Cash Income / Poverty Threshold

Notes: Data are from the 1996-2008 Survey of Income and Program Participation. The sample includes heads, spouses, and unmarried partners aged 24-60 at the time of job loss who worked at their lost job for at least one year prior to losing it. The model includes individual fixed effects and age fixed effects. The outcome variables are the ratio of total household income, as noted, to Census household poverty thresholds, which are assigned to each household in the SIPP based on household size and composition. The horizontal axis denotes months from job loss. The markers represent the event study coefficients. The results are weighted using individual survey weight in the month of job loss.