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H. Luke Shaefer  
*University of Michigan*

Liyun Wu  
*University of Michigan*

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## Unemployment Insurance and Low-Educated Single Working Mothers Before and After Welfare Reform

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H. Luke Shaefer, Ph.D.

Assistant Professor

*University of Michigan School of Social Work*

1080 South University Avenue, Ann Arbor, MI 48104

[lshaefer@umich.edu](mailto:lshaefer@umich.edu)

Phone: 734.936.5065

Liyun Wu

Ph.D. Candidate

*University of Michigan Department of Economics and School of Social Work*

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### ABSTRACT

Using the Survey of Income and Program Participation (SIPP), a nationally representative, longitudinal survey, this study examines changing levels of Unemployment Insurance (UI) eligibility and benefit receipt among working low-educated single mothers, 1990–2005. It also examines changing participation in cash welfare and the Food Stamp Program (FSP). Relative to single childless women, there has been no increase in UI benefit receipt among single mothers entering a spell of unemployment in the postreform period, even though single mothers have increased their relative rates of UI eligibility. Because of declining cash assistance receipt, UI became a more common income support than cash assistance for this population during the period 2001–2005. Furthermore, the probability of accessing FSP for low-educated single mothers entering a spell of unemployment increased in the years 2001–2005. As a result, the proportion of this population accessing benefits from one or more of these programs remained virtually unchanged across the study period.

**JEL Classification Codes:** J65, J68, I38

**Key Words:** Welfare Reform, Unemployment Insurance, Low-educated Single Mothers

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## **INTRODUCTION**

During the 1990s, low-educated single mothers left cash welfare and increased their labor force participation at unprecedented rates (Blank 2006). A number of factors contributed to these dramatic changes: the 1996 welfare reform, the expansion of the Earned Income Tax Credit (EITC), and the economic expansion of the late 1990s (Ellwood 2000; Meyer and Rosenbaum 2001). An important question is the extent to which increased work effort by low-educated single mothers who experience job loss has translated into increased access to unemployment insurance (UI).

UI is the major social insurance program in the United States protecting against lost income incurred during unemployment. However, existing literature finds that low-wage workers often experience difficulties accessing the program (Levine 2006; Shaefer 2010; Vroman 1998; Wenger 2006). This study explores the extent to which UI utilization patterns of low-educated single working mothers entering a spell of unemployment have changed during the postwelfare reform era, relative to patterns in the prereform era. In addition, we examine changes in utilization of two major income support programs that may be important to this population: cash welfare and the Food Stamp Program (FSP, now called the Supplemental Nutrition Assistance Program, SNAP).

This study addresses three questions:

- 1) Has the large growth in labor force participation among adult single mothers since the early 1990s been accompanied by a growth in UI participation by this population when they experience a spell of unemployment?

2) Has eligibility for UI changed over time for this group, and are nonmonetary or monetary eligibility requirements more important?

3) Has the relative importance of three major income support programs—UI, FSP, and cash welfare—changed for single mothers who enter a spell of unemployment?

In most descriptive and multivariate analyses, we compare program participation outcomes for low-educated single mothers to those of low-educated single childless women. We do this to control for competing explanatory factors that would have affected low-educated single mothers and low-educated single childless women similarly, in an effort to evaluate whether any changes in the UI participation of single mothers might be attributed to welfare reform and changes in related social welfare policies (Ellwood 2000; Meyer and Rosenbaum 2001; Meyer and Sullivan 2004).

Relative to single childless women, our results suggest there has been no increase in UI benefit receipt among single mothers who enter a spell of unemployment in the postreform period. This is despite the fact that single mothers appear to have improved their likelihood of meeting monetary and nonmonetary eligibility requirements for UI, relative to single childless women. Because cash assistance has declined precipitously, however, UI has for the first time become a more common income support than cash assistance for single mothers entering a spell of unemployment. While we find that cash assistance receipt among this population declined over the study period, the proportion accessing the Food Stamp Program increased, to the extent that the proportion of single mothers accessing some form of benefits from one of these three programs stayed virtually constant across the study period.

## **Background and Contribution**

Most research on participation in UI by vulnerable workers explores the importance of three key factors: 1) monetary eligibility, 2) nonmonetary eligibility, and 3) take-up of benefits (Bassi and McMurrer 1997; Levine 2006; O’Leary and Kline 2008; Vroman 2009). Each of these factors has been cited as a barrier to benefit receipt.

Monetary eligibility generally requires a state-specific minimum of earnings from any qualifying employer. These requirements vary, but they generally fall between \$1,000 and \$3,000 earned over four quarters. Many states also have a high quarter requirement, with a minimum requirement within a single quarter. Until recently, the base period used by most states to determine eligibility included earnings in the first four of the previous five completed quarters, which caused long lags between job loss and the earnings that could be included in eligibility calculations. A growing number of states have adopted Alternative Base Periods (ABPs), which allow workers to include earnings from their most recently completed quarter, thus increasing the chances that low-wage workers (who often have shorter work histories) would meet monetary requirements (Boushey and Wenger 2006; Wenger 2006).<sup>1</sup> Some recent studies, however, find that vulnerable workers already have high rates of monetary eligibility (O’Leary and Kline 2008; Rangarajan and Razafindrakoto 2004; Rangarajan, Razafindrakoto, and Corson 2002; Shaefer 2010). High levels of monetary eligibility among vulnerable populations suggest that this is not the primary factor driving low levels of UI participation.

Most nonmonetary requirements relate to the circumstances surrounding a worker’s job separation, including the reason for job loss and availability for future employment. To be eligible, workers typically must have left employment because of layoff, plant closing, or some

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<sup>1</sup> Many of these states adopted an ABP in response to monetary incentives included in the recent American Recovery and Reinvestment Act (ARRA).

other involuntary reason, without cause, and be looking for work. In a few states, workers who do not initially meet nonmonetary requirements may later become eligible. Further, some states have provisions that allow workers who voluntarily quit for good cause to maintain eligibility (such as care for a family member, child care difficulties, trailing spouse provisions, and domestic violence provisions). A number of existing studies suggest that nonmonetary requirements may be the more important eligibility barrier to UI access facing vulnerable workers (Holzer 2000; O’Leary and Kline 2008; Rangarajan and Razafindrakoto 2004; Rangarajan, Razafindrakoto, and Corson 2002). High rates of nonmonetary ineligibility among vulnerable workers may be due in part to the characteristics of the industries in which they are clustered. Low-wage workers are disproportionately employed in industries that tend to avoid formal layoffs (General Accounting Office 2000; Lambert 2008).

A final factor affecting access to UI is benefits take-up. Vulnerable unemployed workers who are eligible for UI may be less likely to take up UI benefits as compared to more-advantaged eligible unemployed workers. Using the 2001 panel of the SIPP, Shaefer (2010) found that eligible workers in the lowest wage quintile were less likely to participate in UI than higher-paid eligible workers. Using CPS supplements, Wandner and Stettner (2000) report that more than half of the unemployed do not file for unemployment insurance, and that the most common reason cited is “perceived ineligibility.”

### **Low-Educated Single Mothers, Labor Force Participation, and UI Participation**

Most studies find that single mothers increased their labor force participation in the 1990s in response to a combination of the 1996 welfare reform, expansions of the Earned Income Tax Credit (EITC), increases to the minimum wage, and the booming economy of the 1990s (Blank 2006; Dahl, DeLeire, and Schwabish 2009; Dickert, Houser, and Scholz 1995; Eissa and

Liebman 1996; Ellwood 2000; Hotz and Scholz 2003; Meyer and Rosenbaum 2001). The EITC expansions and the 1996 welfare reform fundamentally changed antipoverty policy by raising the benefits of work while ending an entitlement to cash assistance.

These changes led to a dramatic decline in the number of single-mother families receiving cash assistance. Cash assistance through Aid to Families with Dependent Children (AFDC) and then Temporary Assistance for Needy Families (TANF) caseloads declined from 11.5 million individuals in 1990 to just 4.5 million in 2005. What is unknown is whether single mothers entering a spell of unemployment experienced growing access to UI during this period. Did cash assistance previously act as “UI for low-educated single mothers”? If so, has it stopped serving this function? Most importantly, if single mothers entering a spell of unemployment saw declining access to cash assistance over the period 1990–2005, did their probability of accessing UI increase?

Isaacs (2005) uses the Current Population Survey (CPS) data to show that the proportion of all low-income single female household heads with related resident children who received UI grew during the early recession years of 2001–2003, beyond the increase in participation rates during the recession of the early 1990s. She concludes that this growth in UI participation at least in part explains why TANF rolls continued to fall during the 2001 recession. However, she does not examine the participation rates of single mothers entering a spell of unemployment, nor does she use a comparison group to rule out the importance of other factors besides the major social policy changes.

In a study using recent administrative data from four major states, O’Leary and Kline (2008) find that 90 percent of welfare (TANF) leavers who left TANF for employment and then lost a job and applied for UI were monetarily eligible. Welfare leavers in these states, however,

were far less likely to meet nonmonetary eligibility requirements than other applicants, which the authors attribute to higher rates of voluntary job quits and dismissals. Two other studies of TANF leavers find that a large majority of former welfare recipients met monetary requirements, and that nonmonetary requirements were again the greater eligibility barrier (Rangarajan and Razafindrakoto 2004; Rangarajan, Razafindrakoto, and Corson 2002). These studies examine relatively short study periods and do not utilize nationally representative samples.

Boushey and Wenger (2006) use SIPP data to examine the monetary eligibility of recent welfare recipients who transitioned to work, pre- and postwelfare reform. They find that recent welfare leavers were less likely to meet monetary requirements in the late 1990s than they were in the early 1990s. They do not, however, look at other key outcomes of UI benefit receipt or nonmonetary eligibility, nor do they use a comparison group. Furthermore, while examining recent welfare leavers offers important information, it is important to examine the broader sample of single mothers, not just recent welfare recipients, because there have been large compositional changes in the makeup of welfare leavers across time (Meyer and Sullivan 2004).<sup>2</sup> These selection effects may affect estimates in important ways. It is also important to explore changes in outcomes relative to a comparison group, in an effort to control for other factors.

### **Contribution of the Current Study**

To our knowledge, the current study is the first to look at changes in both UI benefit receipt and UI eligibility using a nationally representative longitudinal sample of low-educated single mothers at the point that they enter a spell of unemployment during the period 1990–2005. This period includes the 1996 welfare reform, the major EITC expansions, two recessions, and

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<sup>2</sup> A single mother who received cash assistance in the early 1990s may have never received benefits in the postreform era. On the other hand, the same woman who left welfare postreform may have never left during the early 1990s.



two economic expansions of varying sizes. We also believe that this is the first study to examine the changing importance of UI utilization relative to that in two major income support programs—1) AFDC/TANF and 2) the Food Stamp Program (FSP, now the Supplemental Nutrition Assistance Program, SNAP).

We hypothesize that single mothers entering a spell of unemployment will experience a relative increase in eligibility and UI benefit receipt in the postwelfare reform period, spurred by increasing labor force participation and declining access to cash welfare (Holzer 2000; Isaacs 2005). However, we further hypothesize that, as a result of declines in cash assistance, the probability of accessing any safety-net support will decline postreform.

## **DATA AND METHODS**

This study utilizes the Survey of Income and Program Participation (SIPP), collected by the U.S. Census Bureau, which offers a longitudinal representation of the civilian noninstitutionalized population in the United States. The survey selects a nationally representative sample by clustering addresses within cities and counties based on population counts from the most recent decennial census. Interviews are conducted every four months about each individual in the household for each intervening month, gathering data on demographics, income sources, welfare, household and family structure, and jobs and work history. A recent comparative analysis of eight major nationally representative surveys that measure income and program participation finds that SIPP does a superior job of measuring the income of poor households and measuring public program participation (Czajka and Denmead 2008).<sup>3</sup>

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<sup>3</sup> Despite SIPP's relative strength in measuring program participation, Meyer, Mok, and Sullivan (2009) find that the survey still suffers from underreporting of public program benefit receipt and the amount of benefits.

For the current analyses, we pooled data from the 1990, 1991, 1992, 1993, 1996, 2001, and 2004 SIPP panels to create a sample with data from the start of 1990 through the end of 2005, with short gaps only in 1995 and 2000 between SIPP panels. The 1990–1993 panels were typically two years long and overlapped. Later panels were three to four years long and did not overlap. All analyses use person-month weights. Standard errors are clustered to account for multiple observations per respondent. A few small states are not uniquely identifiable in the 2001 and older panels. As is common with SIPP studies, we drop observations from these states, because we cannot match them with state program eligibility rules (Gruber and Simon 2008).

We define our study population as working-age single mothers, ages 22–55, with minor children, who have a high school degree or less.<sup>4</sup> Our comparison group is similarly educated single childless women in the same age range. In most analyses, we compare the relative outcomes of these two groups across time because these two populations experience similar dynamics in the labor market but are differentially affected by welfare reform and other policy changes. By comparing low-educated single mothers to low-educated single childless women, we hope to control for external factors leading to changes in program participation and eligibility that are not unique to single mothers (Ellwood 2000; Meyer and Rosenbaum 2001; Meyer and Sullivan 2004).

### **Identifying Job Separations in SIPP**

Most analyses in this paper examine workers at the point that they enter a spell of unemployment. A respondent is considered to have entered a spell of unemployment if she was

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While this presents a limitation to our work, we believe that it highlights one of the strengths of relying on a comparison population, as it is unlikely that rates of underreporting for single mothers and single childless women differ systematically over time.

<sup>4</sup> We take marital status and education at time  $t$ , the point at which they enter a spell of unemployment. We explore the importance of a recent marital separation in the sensitivity analysis section.

employed and working during month  $t - 1$  and not working but seeking work in month  $t$ . A respondent is considered to have transitioned out of the labor force if she was working in month  $t - 1$  and not working and not seeking work in month  $t$ . (These guidelines are adapted from official definitions used by the Bureau of Labor Statistics [2007].) These categorizations are fairly stable during the months following job loss. Based on these restrictions, our sample includes 49,354 person-year observations of low-educated single women. We have 4,412 person-month observations in which low-educated single women go from working in  $t - 1$  to not working but seeking work in  $t$ .<sup>5</sup> This includes some respondents who experience multiple transitions during a panel.

Table 1 compares demographic attributes for single mothers and single childless women in the prereform years (1990–1994) and the postreform years (2001–2005) under study. This shows that the Hispanic ethnicity, age, and education characteristics of low-educated single mothers stayed relatively constant in comparison to low-educated single childless women. It does appear that single childless women were more likely to be nonwhite in the postreform period, relative to single mothers (making race an important control variable in later multivariate models). As would be expected, the proportion of single mothers who work rises considerably relative to the proportion of single childless women who work—an 11.8-percentage-point increase for the former, compared to a 6.2-percentage-point decline for the latter (for a total relative change between the two groups of 18 percentage points).

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<sup>5</sup> For some analyses of transitions across months in SIPP, there would be concern that imputation might lead to a false transition. However, labor market variables in SIPP are imputed by taking the respondent's previous month's values, so in this case imputation would not cause such a transition.

## **Estimating UI Participation and Eligibility**

UI participation. A respondent is considered to have participated in UI if she reported cash benefit receipt from a state unemployment insurance program during the first three months following a job separation (two-, four-, and five-month lagged variables were explored, but none substantively changed the results). This lagged variable is necessary because considerable time can elapse between job loss and benefit receipt. Workers may be on layoff waiting to be called back, or they may explore other employment options before turning to UI. Also, most state programs required one-week waiting periods before granting benefits.

Monetary eligibility. SIPP includes monthly data on earnings. Monetary eligibility requirements by state-year were drawn from annual comparisons of state program laws provided by the Department of Labor, and merged with the SIPP data by state-year. To estimate monetary eligibility, each worker's wages were run through a simulation comparing her earnings over one year to her state's minimum base period and high quarter (if applicable) requirements for that year. The three months directly preceding the employment separation were omitted to mirror the period that would typically be excluded by states prior to adoption of ABPs. Although this does not coincide exactly with the worker's official base period, it is a close approximation. Earnings from work were included for the 12 prior months, stretching back 15 months prior to the employment separation. The sample base for estimating monetary eligibility is restricted to workers in the sample for five or more months prior to employment separation. This may lead to an upward bias in eligibility due to nonrandom attrition (workers who are most likely not to meet these requirements may be most likely to leave the SIPP sample early). However, this bias is likely similar for mothers and childless women within panels, so it should not affect relative comparisons. A worker was considered to meet her state's monetary requirements if her earnings

in the simulated base period and her high quarter earnings were at or above her state's minimum requirements.

Nonmonetary eligibility. Initial nonmonetary eligibility requirements related to employment separations also vary by state, but they are often generalized in studies of nationally representative microdata (Levine 2006). For this study, a respondent is considered to have met initial nonmonetary requirements if the unemployment spell began because the worker “lost a job or was laid off” (Levine 2006). The respondent is considered ineligible if she left a position because of a discharge for cause or a voluntary quit. Because of difficulties with the time frame (person-month observations), responses on this measure are available for only a portion of the total sample used for other estimates. To ensure that this does not bias the results, we ran all descriptive and regression estimates, restricting them to this smaller subsample, and these results proved substantively similar. Another concern is that some respondents may choose not to self-report discharge or firing. This means that estimates from the SIPP may somewhat overestimate nonmonetary eligibility. However, those who are discharged or fired are likely to report a voluntary quit instead, which would also lead to the respondent being coded as nonmonetarily ineligible. Thus the bias is likely small, if it exists at all.

An important limitation of this method is that it will lead some workers to be coded as ineligible who meet the voluntary quits provisions employed by some states discussed above. Unfortunately, it is impossible to adequately account for this in nationally representative estimates using survey microdata, given the complexity of state rules. Thus, similar studies use the standardized decision rules employed here (Levine 2006).

For ease of interpretation, in both descriptive and multivariate models we cluster the years into three *period* dummy variables: prereform (1990–1994), reform implementation (1996–

1999), and postreform (2001–2005). The years 1995 and 2000 are omitted from all analyses because of breaks in the SIPP panels. Clustering into three periods does not substantively change our findings. The periods 1990–1994 and 2001–2005 provide particularly useful comparison periods, as both included a mild recession and some expansionary years. The period 1996–1999 was quite anomalous because it occurred during an economic boom, and states implemented their TANF programs at different times following the 1996 reform. Thus, we focus our analyses on comparisons of outcomes in the prereform period and the postreform period.

### **Multivariate Method**

For multivariate analyses, we use an approach that is similar to that employed by Meyer and Rosenbaum (2001) and Meyer and Sullivan (2004). We restrict our sample to low-educated single mothers and low-educated single childless women in the same age range, focusing on the relative outcomes between these two groups, which face similar conditions in the labor market. Our baseline specification is as follows:

$$UI_{i,j,t+n} = X\beta_{i,j,t} + \phi period_{i,j,t} + \lambda (singlemother_{i,j,t} * period_{i,j,t}) + \varepsilon_{i,j,t} .$$

The dependent variables for most model variations are dichotomous lagged outcome measures where 1 = UI benefit receipt or eligibility in month  $t$ ,  $t + 1$ , or  $t + 2$  following job loss and 0 = no UI participation or eligibility in  $t$ ,  $t + 1$ , or  $t + 2$  following job loss.  $X$  is a vector of individual and environmental characteristics taken at time  $t$  that include race (white, black, other), ethnicity (Hispanic origin = 1), age (in dummy categories for ages 22–30, 31–40, 41–50, and 51–55), marital status (never married, divorced, separated, widowed), whether the

respondent lives in a metropolitan area, education (high school graduate = 1), the state-month unemployment rate, and state fixed effects.<sup>6</sup>

Each model includes a series of interacted *single mother \* period* dummy variables. These interacted terms represent the relative difference in the probability of the dependent outcome between the comparison group (low-educated single childless women) and the treatment group (low-educated single mothers), after controlling for other factors in the model. The effect size is calculated by subtracting the point estimate associated with the single mother \* postreform term by the point estimate associated with the single mother \* prereform term, to show the relative change in the difference between the two groups between periods. We test the statistical significance of the difference between these point estimates with a test of linear restrictions. The *p*-values for these tests are reported for all models.

We use linear probability (LP) models because the interpretation of an interaction between two variables is straightforward in linear models. In contrast, the “interaction effect in nonlinear models [probit or logit models] does not equal the marginal effect of the interaction term, can be of opposite sign, and its statistical significance is not calculated by standard software” (Ai and Norton 2003, p.123). Thus, while probit or logit specifications are generally preferable for models with dichotomous outcomes, in this case an LP approach is more appropriate.

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<sup>6</sup> In sensitivity analyses we run alternative models that account for a recent divorce or separation, long-term labor-force attachment, industry, and household headship. We run models using region fixed effects rather than state. We also run models 1) restricting our models to job losers and 2) broadening our models to all respondents who go from working to not working. While some of these do change the point estimates slightly, they do not change our interpretation of the results.

## RESULTS

### Descriptive results

Table 2 compares UI participation and eligibility outcomes for low-educated single mothers to those of low-educated childless women. The top panel reports on the proportion of low-educated single mothers (column 1) and childless women (column 2) entering a spell of unemployment who access UI cash benefits, by period. Column 3 reports the difference in outcomes between these two groups for each period (column 1 – column 2), along with associated standard errors.<sup>7</sup>

The top panel of column 1 reports that the proportion of single mothers entering a spell of unemployment who reported UI receipt fell over the three time periods: from 28.7 percent in the years 1990–1994 to 21.4 percent in the years 2001–2005. Single childless women, though, experienced a similar drop (from 31.4 to 25.5 percent), so the difference in outcomes between the two groups stayed virtually the same across the three time periods, changing by a statistically insignificant 1.4 percentage points from 1990–1994 to 2001–2005. Contrary to our hypothesis, these estimates suggest that single mothers experiencing a spell of unemployment did not improve their probability of accessing UI benefits upon entering a spell of unemployment.

The next panel reports on monetary eligibility rates for single mothers and single childless women over the three study periods.<sup>8</sup> While single mothers did not improve their probability of accessing benefits, we do find that low-educated single mothers experiencing a spell of unemployment improved their rates of monetary eligibility across the three time periods.

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<sup>7</sup> Standard errors of the differences use the form for standard errors for the difference between two large and independent random samples, which generates wider standard errors than some alternative measures.

<sup>8</sup> Our estimates of both monetary and nonmonetary eligibility are quite similar to existing estimates for similar although not identical populations and study periods (Kaye 1997; Rangarajan and Razafindrakoto 2004; Rangarajan, Razafindrakoto, and Corson 2002).



Whereas 71.5 percent of this group was eligible for UI during the period 1990–1994, a statistically significantly different 76.9 percent was eligible during the postreform period of 2001–2005. Across the three periods, the monetary eligibility rates of single childless women stayed roughly constant (84.2 percent prereform and 82.6 percent postreform). Therefore, single mothers improved their relative probability of meeting monetary requirements by a statistically significant 7 percentage points between the periods 1990–1994 and 2001–2005.

The following panel tracks nonmonetary eligibility across the three time periods. As expected, rates of nonmonetary eligibility are far lower than rates of monetary eligibility across both groups of low-educated single women. While 40.0 percent of low-educated single mothers experiencing a spell of unemployment were nonmonetarily eligible during the prereform period, 38.7 percent met these requirements in the postreform period. During the same period, though, low-educated single childless women saw a 9.4-percentage-point drop in their nonmonetary eligibility (from 45.5 percent nonmonetarily eligible to 36.1 percent nonmonetarily eligible), and this led to a statistically significant relative improvement in the nonmonetary eligibility of single mothers of 8 percentage points. Thus, single mothers improved their eligibility rates, relative to single childless women, both in terms of monetary and nonmonetary eligibility.

The bottom panel of Table 2 reports the mean benefit amount received by single mothers, conditional on UI receipt, adjusted to 1996 dollars. This stayed relatively stable for single mothers, going from \$516 in 1990–1994 to \$504 in 2001–2005. Single childless women saw a statistically insignificant increase between these two periods, from \$537 to \$593. While this led to a substantial relative change of  $-\$68$ , the change was not statistically significant.

## Multivariate Results

Columns 1–3 of Table 3 report on a series of regression models testing the descriptive relationships discussed above. Note that the interacted terms *single mother \* time period* represent the relative difference between mothers and nonmothers in each period, after controlling for other factors included in the models. The effect size of interest is the difference between the point estimates for the *single mother \* prereform* term and the *single mother \* postreform* term. The test of linear restrictions determines whether these point estimates are statistically significantly different from each other. The *p*-value for these tests is presented in each column of Table 3.

The other covariates suggest that outcomes for this population are consistent with findings from existing studies. Older workers are more likely to access UI benefits and to meet both monetary and nonmonetary eligibility requirements than younger workers. High school graduates are more likely to access benefits and be nonmonetarily eligible, compared to those without a high school degree. Union members are 8.1 percentage points more likely to access benefits and 5.3 percentage points more likely to be monetarily eligible than nonunion members. Very few of the race and ethnicity point estimates are statistically significant. Blacks were 6.1 percentage points less likely to meet monetary eligibility requirements but no less likely to report UI benefit receipt. Interestingly, column 3 suggests low-educated Hispanic single women are 8.3 percentage points more likely to be nonmonetarily eligible than low-educated non-Hispanic single women.

Column 1 reports on a model predicting UI benefit receipt for low-educated single women experiencing a spell of unemployment. Examining the *single mother \* period* interaction terms in the first three rows, there are no statistically significant differences in program

participation between single mothers and single childless women during the prereform, reform, and postreform periods, and none of the interaction terms are statistically significantly different from one another. This supports the descriptive finding that single mothers experiencing a spell of unemployment did not improve their probability of accessing UI benefits in the period of 2001–2005, relative to single childless women.

The next two columns report on models with dichotomous outcomes for monetary eligibility (column 2) and nonmonetary eligibility (column 3). According to column 2, low-educated single mothers experiencing a spell of unemployment went from being a statistically significant 12.2 percentage points less likely than similar childless women to meet monetary eligibility requirements in 1990–1994 to a statistically insignificant 4.3 percentage points less likely in 2001–2005. This represents a relative improvement of 7.9 percentage points, which is statistically significant at the  $p < 0.05$  level. After controlling for other factors, column 2 is consistent with the descriptive findings that single mothers improved their rates of monetary eligibility, relative to single childless women.

In terms of nonmonetary eligibility, single mothers went from being –0.032 percentage points less likely to meet these criteria when compared to single childless women to 5.9 percentage points more likely to meet them. While the parameter estimates are not statistically significant, the test of linear restrictions for these terms yields a statistically significant  $p$ -value of 0.063. This supports the conclusion that single mothers improved their nonmonetary eligibility rates from 1990–1994 to 2001–2005, relative to single childless women. Finally, column 4 reports on the amount of benefits, conditional on receiving any. This model shows no statistically significant change in the average amount of benefits received by single mothers over the three time periods.

## Changing Participation in Other Public Programs Over Time

We now examine changing participation in two other major income-support programs, cash welfare (AFDC and TANF) and the Food Stamp Program (FSP, now SNAP). Cash welfare was the primary target of the 1996 welfare reform, so the major changes leading to declines in cash assistance caseloads affected low-educated single mothers particularly. FSP has the largest caseload of any means-tested income support program in the current decade.<sup>9</sup> With a caseload of 25.7 million individuals in 2007, FSP/SNAP served more individuals than TANF (4.5 million), UI (7.9 million), and even the EITC (22.8 million) (Scholz, Moffitt, and Cowan 2009).

Figure 1 plots annual benefit receipt rates for these programs by low-educated single mothers entering a spell of unemployment.<sup>10</sup> During all postreform years (2001–2005), a greater proportion of low-educated single mothers entering a spell of unemployment received UI benefits than received TANF. This is the first time this was true. In 2002, for example, 16 percent of single mothers entering a spell of unemployment participated in TANF, whereas 21 percent participated in UI. Since 2002, the proportion accessing TANF has shrunk even further, and the proportion participating in UI has stayed at or above 16 percent every year.

Between 1990 and 1993, UI benefit receipt rates were nearly identical to AFDC benefit receipt rates. AFDC participation rates peaked in 1994 for low-educated single mothers entering a spell of unemployment (as is true of the overall program caseloads), and participation in cash assistance declined over the next decade. Figure 1 shows that UI benefit receipt among low-educated single mothers experiencing a spell of unemployment dropped during the reform years

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<sup>9</sup> While FSP is officially considered a means-tested program, it is essentially an income support program that shifts out the budget constraint of participating families.

<sup>10</sup> We compared these estimates to publicly available caseload data for FSP and AFDC/TANF and found that our results for this particular population of recently unemployed single mothers followed a pattern similar to the caseload trends in general.

as well, as would be expected given the program's countercyclical design. In 2001, though, as the economy entered into a recession followed by a period of less robust economic growth, UI eclipsed cash welfare as a more important program for low-educated single mothers entering a spell of unemployment.

Far more common than either of these programs was receipt of FSP benefits. FSP participation grew in the early 1990s and declined significantly during the welfare reform period. However, FSP participation rates rose significantly during the postreform period, from 51 percent of low-educated single mothers entering a spell of unemployment in 2001 to 64 percent in 2005, the highest of any year in the study.

We return to multivariate results in Table 2, column 5, to examine the probability of benefit receipt in one or more programs upon entering a spell of unemployment. After controlling for other factors, the probability that a single mother will access at least one of these programs is approximately 25 percentage points higher than that of a single childless woman. This disparity stays about the same across all three periods studied, despite the precipitous decline in the probability of receiving cash assistance. Across all three periods, low-educated single mothers entering a spell of unemployment seem to have benefited from an extra layer of safety-net protection in the form of cash assistance and FSP benefits, relative to single childless women, at least in terms of the probability of benefit receipt during a spell of unemployment. The growth in access to the FSP appears to have compensated for the decline in cash assistance, at least in terms of the proportion of single mothers accessing benefits.

## **SENSITIVITY ANALYSES**

We ran a series of alternative models to assess the robustness of our findings. (All results are available upon request.) We added potentially endogenous industry variables, because industry has a strong effect on UI eligibility and receipt. Results for our single mother \* time period point estimates were virtually unchanged, likely because single mothers and single childless women are clustered in the same industries. We also restricted our models to household heads, since cohabiting single mothers may have access to resources not enjoyed by household heads. The results were again substantively similar. We ran models accounting for a recent marital status change and long-term labor force attachment, and these did not affect our results substantively.

We wanted to assess the importance of changing patterns of reemployment. Perhaps single mothers in the postreform period are more likely to go back to work faster. We found that single mothers in the prereform period were a statistically insignificant 2.3 percentage points less likely to be reemployed in two months. In the postreform period, they were a statistically insignificant 2.4 percentage points more likely to be reemployed. These point estimates are not statistically significantly different from each other. Therefore, there is some possibility that changes in the probability of becoming reemployed have had an effect on the take-up of UI benefits; however, these results are inconclusive.

We also ran our models on two other groups: first, we restricted it to the population of job losers (who by definition meet nonmonetary eligibility requirements), and second, we included a broader sample of single women who transitioned from work to not working (and who may not be seeking work, a prerequisite of accessing UI). While these alternative samples did lead to slight changes in the point estimates of the key interaction terms, the relative changes between

periods stayed substantively similar. One exception was among the broader population of single women transitioning from work to not working. These single mothers saw their probability of accessing one of the three programs fall, relative to single childless women, from about 34 percentage points higher to 25 percentage points higher. Thus, sample selection may have implications for understanding the package of benefits that these families rely on during a spell of unemployment. The current study, however, is focused on individuals who remain attached to the labor force.

## **DISCUSSION**

Our analyses have a number of limitations. Underreporting of benefits in household surveys is a concern (Meyer, Mok, and Sullivan 2009). Generally, SIPP enjoys higher reporting rates than similar household surveys. Still, because underreporting rates in a single survey can vary across years and especially panels, this complicates comparisons of annual participation rates. Also, certain other factors not related to the social policy changes experienced by single mothers may have led to changes over time in UI participation, such as broader labor market changes. These concerns highlight the advantages of focusing on relative comparisons of low-educated single mothers to low-educated single childless women over time, which may mitigate concerns about underreporting.

As with all studies using household survey microdata, this study is limited in its ability to accurately model monetary and nonmonetary eligibility. However, the empirical benefit of using data from household surveys such as SIPP—even when doing so requires making some assumptions—is the ability to examine a nationally representative population over a long period of time, which is not possible using administrative data. Also, few, if any, sources of

administrative data include information on family composition or education level, key variables in the current study (Levine 2006). Our estimates of monetary and nonmonetary eligibility are consistent with other studies of similar populations that use a variety of data sources (Kaye 1997; Rangarajan and Razafindrakoto 2004; Rangarajan, Razafindrakoto, and Corson 2002).

Despite these limitations, this paper offers a number of findings that could be useful in examining policy going forward. Relative to single childless women, we find no increase in UI benefit receipt among single mothers who enter a spell of unemployment in the postreform period, even though single mothers were more likely to be eligible for UI in the postreform period, relative to single childless women. Because cash assistance has declined, however, UI is now a more common income support than cash assistance.

While the importance of cash welfare has diminished over this period, the Food Stamp Program (now SNAP) has grown in importance. Roughly three-fifths of low-educated single mothers entering a spell of unemployment accessed FSP benefits in 2004–2005. Most low-educated single mothers access at least one of the three programs studied here upon entering a spell of unemployment, and they are far more likely to get some form of aid than similarly educated single childless women.

Recent policy efforts to boost the UI participation rates of vulnerable workers have focused on reforming UI eligibility rules. Our results lead to the conclusion that reforming eligibility requirements may not, in and of itself, significantly increase benefit receipt. While single mothers saw both their monetary and nonmonetary eligibility rates improve relative to single childless women, they did not see relative improvement in benefit receipt. This may be due to a lack of knowledge about the program, a lack of understanding of a complex bureaucratic process, a lack of need for benefits (as a result of greater access to the FSP), or a quick transition



back to work. Future research should explore this. A few papers find that the main reason that individuals fail to apply for UI is that they believe they are ineligible (Vroman 2009; Wandner and Stettner 2000). If this is the case, raising the take-up rates of eligible low-educated workers may require a public information campaign to raise awareness of possible eligibility.

To the extent that eligibility criteria act as a barrier to UI for this population, we find that nonmonetary requirements are a greater barrier than monetary requirements. However, reforming nonmonetary requirements involves issues of moral hazard—making UI benefits available to individuals who quit their jobs would incentivize them to do so. Some might argue that low rates of nonmonetary eligibility result from personal characteristics of low-educated single working mothers, who may not have the skills necessary to maintain employment. If this were accurate, the best way to increase UI receipt would be through stronger job training programs for low-skilled workers. Because low-educated single mothers access UI benefits at rates that are comparable to low-educated single childless women, such a campaign might benefit all low-educated workers.

Two things call this individual-level interpretation into question, though. First, the historical purpose of UI monetary eligibility rates has been to determine whether a worker has sufficient labor force attachment to merit access to UI benefits. As evidenced here, most working single mothers who fall into unemployment meet these thresholds, suggesting substantial attachment to the labor force. Second, low levels of nonmonetary eligibility are highly associated with the industries in which single mothers are clustered (General Accounting Office 2000). These industries avoid formal layoffs, utilizing changes in work hours and other methods that can often cause a worker to quit (Lambert 2008).

Thus, policymakers are left with a paradox. Liberalizing nonmonetary eligibility limits may weaken the UI system by marginalizing its status as social insurance. However, not liberalizing them may leave low-educated workers with substantial labor force attachment out of the UI system. How might policymakers begin to address this? A first step would be to examine the nonmonetary eligibility rules of other western industrial counterparts, many of whom limit nonmonetary ineligibility to a few weeks or months instead of the unemployment spell duration (Storey and Neisner 1997). While the policy prescriptions in this area may not be clear at this point in time, it is incumbent upon policymakers to at least consider how these requirements might be reshaped, if UI is to effectively act as social insurance for low-educated workers with substantial labor force attachment in the twenty-first century.

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**Table 1 Characteristics of Low-Educated Single Women Ages 22–55, Pre- and Postreform**

Means	Single mothers		Single women, no children	
	Prereform (1990–94)	Postreform (2001–03)	Prereform (1990–94)	Postreform (2001–03)
Race and ethnicity				
White, non-Hispanic	0.583	0.588	0.764	0.696
Non-white	0.384	0.363	0.233	0.278
Hispanic origin	0.174	0.156	0.113	0.112
Age	33.5	34.4	38.8	40.4
Employed	0.511	0.629	0.702	0.640
Education				
< High school degree	0.381	0.328	0.283	0.264
High school graduate	0.619	0.672	0.717	0.736
<i>N</i>	9,615	7,040	11,104	8,081

SOURCE: Authors' calculations from a pooled sample of SIPP. All estimates are weighted.

**Table 2 UI Program Participation and Eligibility of Low-Educated Single Women, Ages 22–55**

Proportions (standard errors)

Year	Mothers (1)	Childless women (2)	Difference (1 – 2) (3)
UI participation, single women entering unemployment			
Prereform period (1990–1994)	0.287 (0.017)	0.314 (0.018)	–0.027 (0.025)
Reform period (1996–1999)	0.171* (0.017)	0.209* (0.020)	–0.038 (0.026)
Postreform period (2001–2005)	0.214* (0.018)	0.255* (0.020)	–0.041 (0.027)
Monetary eligibility for UI, single women entering unemployment			
Prereform period (1990–1994)	0.715 (0.021)	0.842 (0.015)	–0.127 (0.026)
Reform period (1996–1999)	0.730 (0.023)	0.855 (0.021)	–0.125 (0.031)
Postreform period (2001–2005)	0.769* (0.019)	0.826 (0.020)	–0.057* (0.028)
Nonmonetary eligibility for UI, single women entering unemployment			
Prereform period (1990–1994)	0.400 (0.025)	0.455 (0.024)	–0.055 (0.035)
Reform period (1996–1999)	0.341* (0.025)	0.346* (0.030)	–0.005 (0.039)
Postreform period (2001–2005)	0.387 (0.023)	0.361* (0.027)	+0.026* (0.035)
Amount of UI benefit receipt, conditional on any (1996 \$)			
Prereform period (1990–1994)	\$516 (22)	\$537 (20)	–\$21 (30)
Reform period (1996–1999)	461 (29)	495 (68)	–34 (74)
Postreform period (2001–2005)	504 (31)	593 (45)	–89 (55)

NOTE: \*Statistically significantly different from same-column estimate for 1990–1994 by 0.05 level or greater. Standard errors clustered by state.

SOURCE: Authors' calculations from a pooled sample of the 1990–2004 SIPP panels.

**Table 3 OLS Models: Public Program Participation and Eligibility of Low-Educated Single Women, Ages 22–55** (standard errors)

	UI benefit receipt (1)	Monetary eligibility (2)	Nonmonetary eligibility (3)	UI benefit amount, if received (4)	Participation in UI, TANF, or FSP (5)
Single mother * prereform (1990–1994)	–0.00382 (0.0249)	–0.122*** (0.0248)	–0.0317 (0.0346)	10.90 (33.92)	0.250*** (0.0312)
Single mother * reform (1996–1999)	0.0172 (0.0263)	–0.0900*** (0.0296)	0.0496 (0.0389)	–4.487 (72.59)	0.286*** (0.0300)
Single mother * postreform (2001–2005)	–0.0120 (0.0269)	–0.0429 (0.0283)	0.0592 (0.0368)	–39.13 (57.22)	0.246*** (0.0267)
P-value from tests of linear restriction: Ho: Singlemom * pre – Singlemom * post = 0	0.818	0.03**	0.063*	0.310	0.916
Other variables					
Age					
22–30	---	---	---	---	---
31–40	0.111*** (0.0189)	0.0599*** (0.0200)	0.0466* (0.0261)	3.656 (31.67)	0.0401** (0.0193)
41–50	0.127*** (0.0245)	0.0725*** (0.0219)	0.0878*** (0.0317)	74.65* (40.06)	0.0577** (0.0233)
51–55	0.200*** (0.0382)	0.0667** (0.0289)	0.227*** (0.0509)	–5.095 (49.48)	0.105*** (0.0335)
Race					
White	---	---	---	---	---
Black	0.00681 (0.0187)	–0.0607*** (0.0205)	–0.00455 (0.0268)	–57.59 (42.68)	0.188*** (0.0259)
Other	0.00284 (0.0465)	–0.0263 (0.0415)	0.0708 (0.0562)	–34.72 (49.35)	0.0284 (0.0449)
Hispanic origin	0.0326 (0.0263)	0.0128 (0.0258)	0.0827** (0.0378)	12.28 (32.57)	0.0276 (0.0253)
High school graduate	0.0520*** (0.0169)	0.0645*** (0.0174)	–0.0129 (0.0224)	12.87 (25.54)	–0.0371** (0.0175)
Marital status					
<i>Never married</i>	---	---	---	---	---
Widowed	0.0112 (0.0444)	0.00887 (0.0378)	0.0585 (0.0578)	–107.2** (49.52)	–0.0732 (0.0525)
Divorced	0.0233 (0.0204)	0.0432** (0.0183)	0.00149 (0.0276)	–63.56** (27.70)	–0.000720 (0.0257)
Separated	–0.0279 (0.0245)	0.00887 (0.0378)	–0.0186 (0.0336)	–59.75 (39.59)	0.0123 (0.0287)
MSA resident	–0.0546** (0.0220)	0.0296 (0.0232)	–0.0136 (0.0295)	109.0*** (26.79)	–0.0583** (0.0231)
Current student	–0.0482 (0.0298)	–0.0376 (0.0393)	–0.0731 (0.0468)	48.80 (60.13)	0.00215 (0.0367)
Union member	0.0814** (0.0399)	0.0528* (0.0321)	0.0480 (0.0467)	38.55 (50.68)	0.0918** (0.0396)

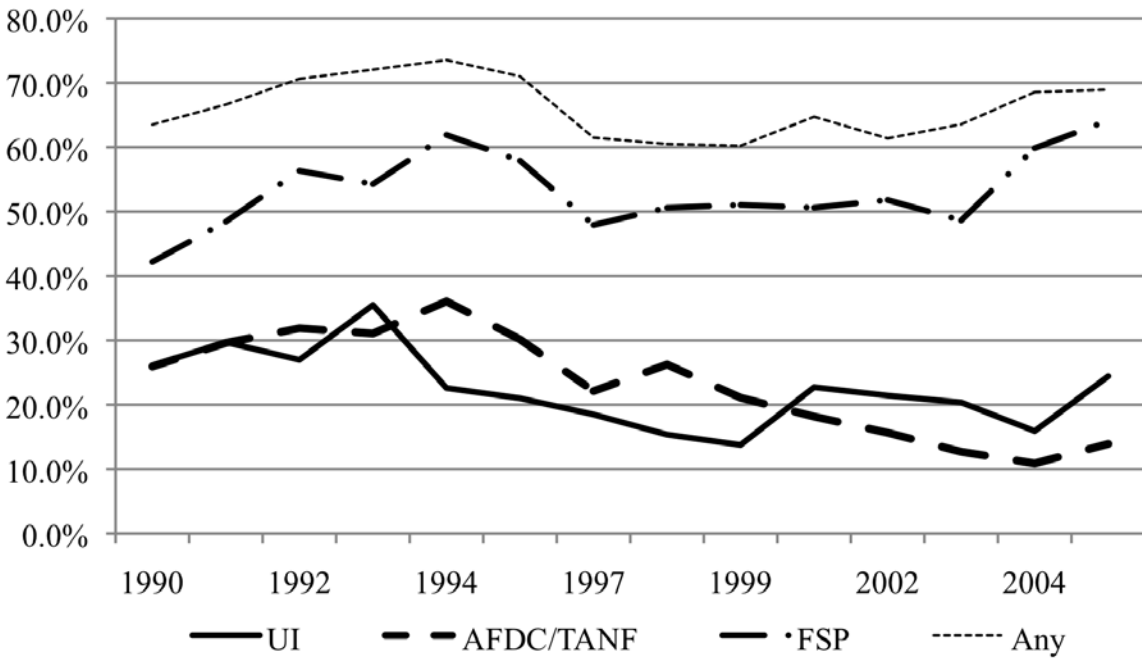


**Table 3** (Continued)

	UI benefit receipt (1)	Monetary eligibility (2)	Nonmonetary eligibility (3)	UI benefit amount, if received (4)	Participation in UI, TANF, or FSP (5)
State-month unemployment rate	0.0205** (0.00873)	0.00374 (0.00910)	0.0152 (0.0119)	-29.72** (13.38)	0.0262*** (0.00799)
Time period					
<i>Prereform period</i>	---		---	---	---
Reform period	-0.0685** (0.0325)	0.0106 (0.0317)	-0.0801* (0.0440)	-110.5 (69.35)	-0.0398 (0.0362)
Postreform period	-0.0343 (0.0293)	-0.0209 (0.0283)	-0.0848** (0.0388)	1.063 (47.15)	-0.00693 (0.0266)
State fixed effects	x	x	x	x	x
Observations	4,412	3,396	2,853	1,071	4,412
R-square	0.09	0.07	0.07	0.09	0.13

NOTE: Standard errors clustered by respondent. Sample restricted to single women, ages 22–55. --- = data not available; blank = not applicable. Robust standard errors in parentheses. \* significant at 10%; \*\* 5%; \*\*\* 1%.  
SOURCE: Authors' calculations from a pooled sample of the 1990–2004 SIPP panels.

**Figure 1: Program Participation of Single Mothers Entering into Unemployment**



Source: Authors' analyses using a pooled sample of the 1990-2004 SIPP panels