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AFDC, SSI, and Welfare Reform Aggressiveness: Caseload Reductions vs. Caseload Shifting¹

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Abstract

Efforts at welfare reform since the late 1980s have made receipt of cash benefits both more difficult and less attractive for single mothers in the U.S. In this paper, we examine whether efforts at reforming AFDC have affected caseloads of another welfare program - Supplemental Security Income (SSI). The SSI program provides cash benefits for disabled individuals with low-income. Shifting of individuals from AFDC to SSI may have occurred for several reasons. First, as AFDC became more restrictive, the relative costs and benefits of program participating made SSI more attractive. Second, states have increasingly had greater incentives to reduce AFDC caseloads relative to SSI caseloads. To examine whether and to what extent shifting was taking place, we exploit state level variation in welfare reform efforts over time. We find that female-headed households in states approaching welfare reform with greater aggressiveness were 21.6 percent more likely to receive Supplemental Security Income. One policy implication of this finding is that a decrease in caseloads in one program cannot necessarily be interpreted as an equal-sized decrease in the number of families receiving public assistance. In addition, this finding has implications for the well being of women currently on welfare who are facing time limits.

Dataset used: Current Population Survey (CPS): U.S., 1988-1998

I. Introduction

Efforts at welfare reform over the past decade, beginning with the Family Support Act of 1988, continuing with state-level waivers in the early 1990s, and culminating in the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), have made receipt of welfare benefits both more difficult and less attractive for single mothers and their children. These reform features include work requirements, lowered benefits, and time limits.

During most of this time period, AFDC caseloads declined rapidly, as illustrated in Figure 1. Between January 1993 and January 1997, caseloads dropped by 17 percent.² Recent literature provides an ongoing debate over what portion of this drop can be attributed to welfare reform versus the strong economy.³

Regardless of the causal factors behind this dramatic decrease in caseloads, it could be misleading to interpret the reduction in AFDC caseloads as an equal-sized decrease in the number of families receiving public assistance. The Supplemental Security Income (SSI) Program provides means-tested income support to disabled individuals. The population served by this program has many similarities to AFDC populations in terms of employment history and educational status. There is also evidence of high disability rates among both women and children in AFDC families.⁴ Thus, it is possible that some of those leaving the AFDC rolls have simply moved on to SSI.

There are several reasons why we might expect to see this shifting. First, for political as well as budgetary reasons, states have a greater incentive to decrease AFDC caseloads than to decrease SSI caseloads (see Section IV). Second, a shift could be the result of individual choices to move to a program (SSI) that offers higher benefits and places fewer restrictions on benefit receipt.

This type of shifting has fiscal implications for both federal and state governments. In addition, it has implications for the well being of AFDC recipients faced with time limits or other sanctions under welfare reform. If shifting of families from AFDC to SSI exists, the negative effects of these time limits on women with disabilities will be mitigated to some extent.

If such shifting is taking place, we expect to see an increase in SSI receipt among single mother families. Figure 2 plots SSI participation rates for women and children by marital and motherhood status, and shows evidence of a dramatic increase in SSI receipt among female headed households. This suggests that some factor affecting single mothers, but not other women, led to a large increase in SSI caseloads over this time period. In this paper, we take a more rigorous approach to show what is implied by Figure 2 -- that the intensity of state welfare reform efforts prior to 1996 is associated with a significant increase in SSI caseloads among families headed by a single mother.

² Caseloads continued to drop between January 1997 and the rest of the 1990s. By January of 1999, caseloads had fallen 49 percent from their January 1993 level.

³ See Blank (1997), Council of Economic Advisers (1997, 1999), Levine and Whitmore (1998), Ziliak and Figlio (1999), and Wallace and Blank (1999).

⁴ See Loprest and Acs (1995), and Acs and Loprest (1999).

We use repeated cross-section data from the Current Population Survey March Supplement to examine changes in the probability that a woman or her children receive SSI. We find that individuals from the AFDC-eligible population in states aggressively pursuing welfare reform are 21.6 percent more likely to participate in the SSI program.

Section II outlines the welfare reform efforts that took place over the 1990s. Section III describes the Supplemental Security Income Program. Section IV discusses reasons why welfare reform might affect SSI caseloads. Section V describes our data, and Section VI presents our model specification and empirical results. Section VII summarizes the implications of our findings.

II. AFDC Program Information and Welfare Reform

Over the past two decades, welfare policy in the United States has undergone a dramatic evolution. Changes in policy over this time period have drastically altered the nature of entitlements to low-income single mothers in the United States. This evolution in policy has mirrored changes in public opinion about the role of public assistance programs. As AFDC grew from a program supporting widows to a program supporting divorced, separated, and never married women,⁵ and as female labor force participation for all women grew, public support for the goals of the welfare system eroded. Politicians voiced increasing concern about perverse incentives of these programs towards work, marriage, and fertility. Policy makers became increasingly aware of the importance of changes in policy that would strengthen work incentives.

The Family Support Act of 1988 (FSA88) was a major part of an ongoing “effort to transform welfare from a means-tested entitlement into a reciprocal obligation, in which getting a welfare check would carry with it a requirement to look for and accept a job, or to participate in activities that prepare people for work.”⁶ FSA88 established the Job Opportunities and Basic Skills (JOBS) Training Program, which essentially required the majority of AFDC recipients whose youngest child was older than three years old to participate in some form of education, training, or job placement activities. However, mandated participation in the JOBS program was not equivalent to mandated work, and many states' implementation emphasized education over immediate job placement.⁷ In spite of this legislation, AFDC caseloads continued to grow rapidly throughout the early 1990s, as shown in Figure 2. This increase in caseloads was larger than could be explained by the 1991 recession. Blank (1997) analyzes the increase in AFDC caseloads over this time period, and attributes it to increases in take-up rates (the fraction of those eligible who actually participate in the program), and increases in eligibility that are not

⁵ Married couples were also eligible for AFDC benefits through the AFDC-Unemployed Parents program. State participation in the AFDC-UP program was mandated beginning in 1990. However, AFDC-UP caseloads and expenditures remained a small share of total caseloads and expenditures. In 1995, only 6.9% of the total AFDC caseload was comprised of AFDC-UP cases. These cases represented 10.1% of total AFDC expenditures.

⁶ Gueron (1990). The *first* “work or training” program for welfare recipients was the Work Incentive (WIN) Program, established in 1968.

⁷ In addition, participation rates for JOBS were never very high. In 1992, 43% of adult AFDC recipients were required to participate, but only 16% of that group actually participated.

well explained by control variables.⁸

Beginning in the early 1990s, states were granted federal waivers to experiment with their welfare programs. These waivers granted permission to incorporate time limits, work requirements, family caps, higher earnings disregards, and stronger sanctions for noncompliance with rules. As of 1996, 31 states had been granted some type of welfare waiver. Several recent studies (Blank (1997), Council of Economic Advisers (1997, 1999), Levine and Whitmore (1998), Ziliak and Figlio (1999), and Wallace and Blank (1999)) find evidence that AFDC caseloads decreased as a result of the waivers granted over this time period.

III. SSI Program Information

AFDC was not the only federal program for low-income individuals during this time period. The Supplemental Security Income program is a federal program that makes monthly payments to individuals who have limited income and resources if they are age 65 or older, or if they are blind or have another disability. Disabled SSI recipients include both adults who have difficulty working, and children who suffer limitations that prevent them from pursuing age-appropriate activities. In 1996, 32 percent of all SSI recipients were elderly, approximately 54 percent were adult-disabled, and the remaining 14 percent were child-disabled. SSI benefits are means-tested, and unlike Social Security Disability Income (SSDI) benefits, do not require a work history.

The determination of disability for SSI (and SSDI) eligibility involves a five-step process.⁹ This process is time-consuming and involves a great deal of effort. An important aspect of the process comes from self-selection, as applicants drop out along the way.¹⁰ In addition, we expect that the determination process deters some individuals who might be eligible from applying.¹¹

The SSI program has seen unprecedented growth in the past decade. The growth in SSI blind and disabled caseloads since 1980 is shown in Figure 3. The growth is especially noteworthy when compared with elderly SSI caseloads, which remained fairly constant over the same time period. Between 1986 and 1995, the number of disabled SSI recipients grew an average of eight percent per year. A great deal of this growth can be attributed to a relaxing of both the disability review process for new applicants, and the Continuing Disability Review process for existing beneficiaries, beginning with the Disability Reform Act of 1984. In the late 1980s and early 1990s, relaxation of disability determination was extended to children. An outreach program for disabled and blind children was established in 1989, and the *Sullivan v. Zebley* Supreme Court Decision in 1990 rejected the Social Security Administration's policy of more restrictive disability standards for children. Testimony from the General Accounting Office to the Senate Finance Committee in 1995 suggested that a large part of the program

⁸ A third important factor in the caseload increase is the rise in child-only cases. We discuss this factor in Section IV.

⁹ For a detailed description of the disability determination process, see Lahiri et al (1995).

¹⁰ See Benitez-Silva et al. (1999).

¹¹ Once on SSI, a recipient potentially must undergo Continuing Disability Reviews (CDRs) to verify that he or she still has a disability that prevents work.

growth over the 1990s could be accounted for by increases in SSI participation among children.¹²

This trend towards more liberal eligibility criteria ended with the Social Security Independence and Program Improvement Act of 1994, which restricted the applicability of alcohol or drug addiction as disabilities for SSI purposes. It also mandated Continuing Disability Reviews for at least 100,000 recipients in fiscal years 1996, 1997, and 1998.^{13,14}

IV. Why might welfare reform affect SSI caseloads?

A public assistance program provides eligible families with some financial benefit, at some cost of program participation. As AFDC benefits decrease relative to SSI benefits, there is an increased incentive for individuals to try to move from one program to another. Even if relative benefit levels remain constant, a change in the relative cost of participation between the two programs should lead to a shift in participation. The increased work requirements and impending time limits associated with welfare waivers caused the cost of AFDC program participation to rise relative to the cost of SSI participation. Both of these factors should lead families, when possible, to move from the AFDC rolls to the SSI program.

To illustrate the relative incentives, consider a single mother of one with no earnings in Maryland in 1996. As an AFDC recipient, she received a monthly benefit of \$292. If she moved to SSI, she received a \$470 monthly federal benefit.¹⁵ In addition, her child became an AFDC "child only case,"¹⁶ and received benefits of \$165 per month. As recipients of both programs were eligible for Medicaid, her family's health insurance was not affected by the move to SSI. The total monthly benefit she would have received under SSI was \$343 higher than the benefit she received as an AFDC recipient. Alternatively, identification of her *child* as disabled for SSI purposes would have generated a similar financial gain.¹⁷

If the decision-making process is influenced solely by monetary benefits, there exists a clear incentive for an individual in this situation to switch to SSI. However, there are costs of participating as well. The application process for AFDC prior to welfare reform was relatively simple, and the requirements for benefits minimal. The application process for SSI includes the time-consuming disability determination process, which requires medical evaluation. Under the

¹² The average annual growth rate in child SSI cases was 16.4 percent between 1986 and 1993. The percent of the total SSI caseload comprised of child cases rose from 6 percent in 1990 to 14 percent in 1996.

¹³ Despite the relaxation of the CDR process in the 1984 legislation, SSA had authority to perform CDRs for SSI recipients over the 1990s. However, in practice (primarily due to a lack of funding), only a few were done.

¹⁴ In 1996, PRWORA continued to modify the SSI program, primarily affecting eligibility for children. PRWORA contained a new definition for child disability that was much more restrictive than the definition used through much of the 1990s. It also required CDRs every three years for recipients under the age of 18 with non-permanent disabling conditions (U.S. HHS (1996)).

¹⁵ Although the federal benefit level is fixed, states are able to provide a supplement to SSI recipients at their discretion. Maryland does not supplement SSI benefits.

¹⁶ The number of child-only AFDC cases rose by 90 percent between 1990 and 1994 (Blank, 1997).

¹⁷ The sanctions and time limits imposed by welfare reform imply that movement of a child from AFDC to SSI is not as beneficial as moving the mother. If the child shifts, the family does receive more money, but the mother is still subject to high participation costs. If the mother shifts, those participation costs fall.

pre-welfare reform regime, for some individuals, the costs of participating in SSI likely outweighed the difference in benefit levels. However, as AFDC becomes increasingly restrictive, the individual calculus changes. The lack of time limits and work requirements in SSI shifts the relative costs of participating in the two programs, with SSI participation becoming relatively less burdensome.

State governments have both political and budgetary incentives to move AFDC families to the SSI rolls. AFDC benefits were financed partially by the federal government and partially by the state. SSI benefits (with the exception of optional state supplements) are financed entirely by the federal government. There was, therefore, a fiscal incentive for states to move families from AFDC to SSI. To illustrate the states' incentives, consider again the state of Maryland in the year 1996. For the single mother of one, the state paid 50 percent of her monthly AFDC benefit of \$292, or \$146. If they moved her to SSI, they paid only \$82.50 (50 percent of the child-only AFDC benefit), since Maryland does not supplement SSI benefits.

Although *incentives* for both individuals and states suggest that SSI caseloads might increase, the definition of disability for SSI eligibility appears to be a fairly objective standard. The disability determination process is also likely to constrain movements between AFDC and SSI. This would imply relative invariability of SSI caseloads. However, there are reasons why we might expect SSI caseloads to fluctuate even if objective disability conditions remain fairly constant. First, as with most public assistance programs, SSI take-up rates are considerably less than 100 percent.¹⁸ McGarry (1996) finds take-up rates of approximately 56% among the elderly SSI population. These take-up rates imply that SSI participation rates could increase even if the underlying characteristics of the population remain unchanged. Second, there is some evidence that the self-reporting of disability endogenously responds to changes in the programs that provide income maintenance to the disabled.¹⁹ Bound and Burkhauser observed that "...the decision to apply for disability program benefits is not purely a function of health but is also related to economic alternatives – work or alternative program eligibility."²⁰ Changes in economic circumstances or relative program incentives may result in changes in self-reported disability rates, leading to increases in SSI participation.

In addition, there is some evidence of similarities between populations receiving SSI and AFDC. Loprest and Acs (1995) find evidence of high disability rates among AFDC recipients. Depending on the data source, between 16.6 and 20.1 percent of women receiving AFDC answered yes to the question, "Do you have a physical, mental, or other health problem that limits the kind or amount of work you can do?" Between 8.4 and 10.6 percent of female AFDC recipients reported a serious disability preventing one or all work-related functions. Furthermore, in 11.1 to 15.9 percent of AFDC families, the children have some limitation in the amount of their daily activity. Since both AFDC and SSI are means-tested programs, recipients are also likely to be similar with regard to other characteristics, such as education and work experience.

¹⁸ Hypotheses for this phenomenon of "non-participating eligibles" include the stigma of receiving public assistance, transaction costs of participation, and incomplete information about the availability of benefits. See Moffitt (1992) and Blank and Ruggles (1996).

¹⁹ See Waidmann et al (1995).

²⁰ Bound and Burkhauser (1998), p. 2.

Perhaps due to this overlap in potential populations, research suggests that there has been some movement of both adults and children between public assistance programs. Bound, et. al. (1998) find that the elimination of Michigan's General Assistance (GA) program, along with outreach efforts by state agencies, played an important role in increased SSI applications in the state. Garrett and Glied (1997) find that after the *Sullivan v. Zebley* Supreme Court decision liberalizing the disability standard for children, the states that had the highest increases in AFDC benefits showed lower increases in SSI caseloads. Kubik finds that families eligible for more assistance from other programs are less likely to apply for SSI (1999), and that states undergoing budgetary difficulties are more likely to show increases in child SSI caseloads relative to their AFDC population (1998). More recent evidence suggests that 23 percent of non-working welfare leavers were receiving Supplemental Security Income.²¹

This evidence that individuals and states respond to differential incentives in program benefits and costs suggests that the decrease in AFDC caseloads should be associated with an increase in SSI caseloads for those individuals most likely to be eligible for AFDC. We expect that states with more aggressive welfare reform should experience a larger increase in SSI caseloads among the relevant population -- single mothers and their children. This is the hypothesis explicitly tested in this paper.

V. Data

We use data from the Current Population Survey (CPS) March Supplement from years 1988 through 1997 (corresponding to calendar years 1987 through 1996).²² The CPS, like other Census data sources, does not identify who in the household is eligible for the SSI benefit. This means that SSI recipients in our sample include SSI mothers as well as SSI children under 15. This complicates the analysis, since, as discussed in Section III, there have been changes in SSI regulations over time that affected children's rates of SSI participation, and children's rates of SSI receipt have increased dramatically over the 1990s. To control for this, we estimate our equations only on the sample of women with children. The effect of the changes in SSI should be nationwide, and once we control for income, should not affect married mothers differentially from single mothers.

Our sample consists of mothers over the age of 17 and under the age of 45, and includes 217,314 observations, of which 2,721 received SSI and 14,958 received AFDC. Summary statistics for our data set can be found in Table 1. Those women in our sample who are receiving SSI benefits are, on average, more likely to be single than women on average. They are generally more likely to be nonwhite, and have on average 1.7 fewer years of education. SSI recipients also live in states where the average maximum SSI benefit is higher than the mean AFDC benefit.²³

²¹ Loprest (1999).

²² Rupp and Stapleton (1995) suggest that the nature of the SSI program experienced a significant change beginning in the late 1980s.

²³ Our data on maximum SSI benefits by state is at the individual level, while our data on maximum AFDC benefits by state is for a family of four. This impedes direct comparisons of the benefit levels. However, to the extent that the benefit levels proxy for program generosity, a comparison is useful.

Summary statistics for AFDC recipients are also provided in Table 1, and illustrate many similarities between the SSI population and the AFDC population. Like SSI recipients, AFDC recipients are less likely to be white, and are also more likely to be Hispanic. On average they have 1.5 fewer years of education than the general population. They also live in states with higher unemployment rates. AFDC recipients differ from SSI recipients in that they are younger than the general population, and they live in states that have both higher average SSI and AFDC benefits.

A non-negligible number of women report having received both SSI and AFDC in the prior year. Since on an individual basis a woman cannot receive aid from both programs simultaneously, this likely represents some families where the mother receives aid from one program and a child receives aid from another program. A woman who is on SSI could have a child on AFDC as a child-only case. A child on SSI could have a mother and siblings on AFDC. The data also likely represents some cases where a woman received AFDC for several months and SSI for other months within the same calendar year. The number of women reporting both types of assistance likely reflects these interactions.

VI. Model Specification and Empirical Results

To test whether welfare reform aggressiveness is increasing SSI participation among female-headed households, we first estimate the following linear probability model of SSI participation:

$$SSI_PART_i = \alpha + \beta_1 X_i + \beta_2 Z_{jt} + \beta_3 (SSI\ Benefits)_{jt} + \beta_4 (AFDC\ Benefits)_{jt} + \beta_5 (Single)_i + \beta_6 (Waiver)_{jt} + \sum_j \delta_j S_j + \sum_t \delta_t T_t + \varepsilon_i$$

where i indexes the individual, j indexes the state, and t indexes the year. Our dependent variable, SSI_PART , is a binary variable that takes the value of one if the individual received SSI benefits in the year in question. The X vector includes individual level characteristics that affect participation in the SSI program. These include age, race, ethnicity, education, and veteran status. Previous research finds that blacks are more likely to have disabilities and to receive disability-related transfers. SSI receipt rises with age, and falls with level of education. Veterans are less likely to receive these benefits.²⁴ The Z vector contains state level economic variables that affect SSI participation, such as the annual unemployment rate and its lagged value. We control for the maximum level of SSI benefits by state, as higher benefits make a program more attractive and could lead to higher participation. Likewise, we control for the maximum level of AFDC benefits by state for a family of four. The dummy variable *Single* is an indicator of marital status of the individual, where women are classified as single if they are widowed, divorced, separated, or were never married.

To test our hypothesis, we need some source of identifying variation in welfare reform aggressiveness. The state waivers in the 1990s provide rich state level variation over time.^{25,26}

²⁴ See, for instance, Bound and Burkhauser (1998).

²⁵ Although the Family Support Act changed welfare participation rules from 1988, it is difficult to test what effect this had on SSI participation because there were not dramatic differences in the rules by state.

The number of states with major waivers by year is shown in Table 2.²⁷ *Waiver* is an indicator for whether state j had a major waiver in effect during year t .^{28,29} Since the welfare waivers should only affect the behavior of female-headed households, the coefficient on *Waiver* provides our first estimate of the effect of welfare reform aggressiveness on SSI caseloads.

This specification includes state fixed effects (S_j) to control for any time-invariant unobserved state characteristics that may influence SSI participation. We also control for national trends in SSI participation over time through the use of year fixed effects (T_t). This is important, as SSI participation among disabled individuals was increasing over this time period due to the national changes in policy governing the program described in Section III. In addition, the year fixed effects will absorb the effects of business cycles at the national level. The error term is represented by ε_i .^{30,31}

Results from the estimation of this regression equation are found in Column 1 of Table 3. Since our results are derived from a linear probability model, the coefficients can be interpreted as percentage-point changes. The probability of SSI receipt increases with age and decreases with education. Single and non-white women are significantly more likely to participate in the SSI program. All of these demographic variables are of the expected sign and are statistically significant at the one-percent level. The coefficient on the veteran variable is not significantly different from zero.³²

The coefficient on the unemployment rate is negative but not significant. However, the point estimate implies that higher unemployment leads to lower SSI participation. We expected it to be positive, as SSI participation has been found in the past to be countercyclical.³³ However, our findings are consistent with a more recent study by Garrett and Glied (1997), who

²⁶ Due to the limited data available in the post-PRWORA era, in this paper we choose to focus on the effects of state waivers rather than the state-level differences in TANF administration. As additional years of data become available, it will also be possible to test whether the changes in eligibility and participation rules under TANF have led to an increase in SSI participation.

²⁷ Major waivers include the following: time limits, expanded work requirements, family caps, JOBS exemptions, earnings disregards, and sanctions.

²⁸ We use the coding system described in Council of Economic Advisers (1997). We are grateful to Rebecca Blank for providing us with these data.

²⁹ Martini and Wiseman (1997) criticize the use of these waivers to identify welfare reform. The authors contend that using dates of waiver approval can cause significant specification errors, since in many cases there are non-negligible lags between the date of approval and the date of implementation. For our purpose, date of approval may be more appropriate, since individual and caseworker behavior may begin to change once there is knowledge of reform. However, we estimate all of our equations using waiver implementation dates, and find that our results are robust to this alternate specification.

³⁰ In general, OLS estimates of coefficients in a linear probability model will not be efficient, since the error term violates the homoskedasticity assumption of the linear regression model. Maddala (1983) suggests implementing a weighted least squares procedure to increase efficiency of the estimates. We have not corrected the estimated variances, and recognize that they may be biased upward.

³¹ We correct the standard errors for within state correlation, as per Moulton (1986). When the unit of observation is the individual but the independent variables of interest vary only across regions, the uncorrected standard errors can be severely understated, leading to misleading interpretations of the significance of coefficients.

³² We ran an alternate specification without the veteran status variable, and our results did not change.

³³ See Rupp and Stapleton (1995).

also find a significantly negative effect of unemployment on SSI receipt.³⁴

The point estimate β_6 , the coefficient on the waiver variable, is -0.0029, implying that welfare reform aggressiveness led to a .29 percentage point *decrease* in SSI participation, the opposite of what we would expect. Furthermore, the estimate is statistically insignificant. A possible explanation is that there may be systematic differences in SSI participation across states that are correlated with, but not caused by the waivers. One approach to estimating the effects of waivers, given this possible unobserved heterogeneity, involves identifying a treatment group (single mothers), for whom the waivers should have a direct effect, and a control group (married mothers) for whom they should not. This approach, analogous to differences-in-differences estimation, should allow us to estimate our parameter of interest without bias. Therefore, we next estimate the revised linear probability model including both a level variable for waivers and the interaction of the waiver and single mother variables:

$$SSI_PART_i = \alpha + \beta_1 X_i + \beta_2 Z_{jt} + \beta_3 (SSI\ Benefits)_{jt} + \beta_4 (AFDC\ Benefits)_{jt} + \beta_5 (Single)_i + \beta_6 (Waiver)_{jt} + \beta_7 (Single * Waiver)_{ijt} + \sum_j \delta_j S_j + \sum_t \delta_t T_t + \varepsilon_i$$

If there is unobserved heterogeneity, we would expect it to be reflected in β_6 , the coefficient on the major waiver variable. A priori, the direction of this correlation is unclear. If states pursuing welfare reform most aggressively also discourage public assistance receipt in general, β_6 would be negative. If, instead, those states that implemented waivers did so because of an unexplained increase in AFDC caseloads that was correlated with a similar increase in SSI caseloads, β_6 would be greater than zero. The results presented in Column 1 of Table 3 suggest that the estimate of β_6 will be negative.

We consider this to be our baseline model. The hypothesis that we test in this paper is that β_7 , the coefficient on the interaction of state level welfare reform aggressiveness and single motherhood, is positive. β_7 will provide an unbiased estimate of the effect of waivers on SSI participation, as long as the unobserved factors correlated with individual SSI receipt and state welfare reform do not affect single mothers differentially from married mothers.

Results from this full model including state and year fixed effects are presented in Column 2 of Table 3.³⁵ The estimate of β_6 , the coefficient on the waiver variable, is negative and strongly significant, implying that individuals in states with increased welfare reform aggressiveness were significantly less likely to receive SSI benefits. This is consistent with the simpler regression results presented above. States' attitudes towards various public assistance programs are likely to be correlated. This could mean that the states that are pushing welfare reform most aggressively are also the most likely to be unfriendly towards SSI recipients.

³⁴ Work by Klerman and Haider (2000) discusses the difficulties of using contemporaneous economic conditions to explain welfare caseloads (stocks) due to the dynamic processes of exit and entry that determine the number of public assistance recipients (flows). If SSI participation is an absorbing state, then it is likely that SSI participation is explained better by a combination of lagged economic conditions than by current ones. This might possibly explain the counter-intuitive sign on the contemporaneous unemployment rate.

³⁵ Column 3 of Table 3 reports results from the same specification but without the state and year fixed effects. Our results do not change substantively when these fixed effects are excluded.

Related explanations include the possibility that aggressive reform increases the stigma associated with participating in any public assistance program, or the possibility that women erroneously think that reform applies to SSI as well. Alternatively, the outreach efforts by SSA over the 1990s could mean a diversion of resources towards single mothers and away from other women, leading to the negative relationship between SSI receipt and other women in waiver states.

Our estimate of β_7 , our main parameter of interest, is 0.006, and is significant at the five-percent level. This implies that single mothers in states that implemented major waivers were 0.6 percentage points more likely than other mothers to receive SSI benefits. Since the weighted probability of SSI receipt among single mothers is 2.9%, this implies that the presence of a waiver increases the probability that a single mother receives SSI to 3.5%, a 21.6 percent increase, given our assumption that the true value of β_6 is zero.

In 1995, there were 465,787 single mothers receiving SSI. Our estimates imply that the probability of SSI receipt rose by 21.6 percent because of waivers. A rough back-of-the-envelope calculation implies that there would have been 82,778 fewer SSI cases in the absence of waivers. The total number of AFDC caseloads in 1995 was 4,876,240. The increase in SSI caseloads implied by our model suggests a shift of approximately 1.8 percent of the total AFDC caseload. Although the waiver effect is small in relation to the entire AFDC caseload, it is clear that a decrease in caseloads in one public assistance program cannot be interpreted as an equal-sized decrease in overall public assistance caseloads.

One concern with our treatment and control groups is that single mother families are different from married mother families, particularly in the resources available to the family. It is likely that the *Sullivan v. Zebley* decision affecting child participation had a greater effect on single mothers relative to married mothers, since SSI participation decreases with income and female-headed households have lower income. Thus, in Columns 2 and 3 of Table 4, we present analogous results that attempt to control for income. The results in Column 2 include a variable that measures all family income, and the results in Column 3 include an alternate variable measuring non-SSI income. It is clear that income and SSI participation are endogenously determined. However, these results show that our findings are robust to this alternate specification, as the coefficient on our variable of interest remains significant and of essentially the same magnitude.

As an additional test of the possibility that the increase in child SSI cases during the 1990s is driving our result, we modify our baseline regression to control for the number of children. Families with more children, holding all else constant, should face a higher probability that one family member reports SSI. If our results are entirely driven by the growth in child SSI cases, we would expect the magnitude of β_7 to fall when we control for the number of children. Results from this specification are presented in Column 4 of Table 4. As expected, the coefficient on the number of children variable is positive and significant at the one-percent level. However, the estimate of β_7 actually increases slightly relative to our baseline model, giving us added confidence that our results are not spuriously due to *Sullivan v. Zebley*.

The major waiver variable that we use to proxy welfare reform aggressiveness equals one if any of a series of waivers was approved by a state in a given year. These waivers include both “carrots” that encourage welfare recipients to work by increasing the financial incentive to do so,

and “sticks” that punish welfare recipients who do not meet a given set of rules. It is possible that only the waivers that could be considered as “sticks” induce shifting of families from AFDC to SSI. To test this, we re-run our baseline regression redefining the major waiver variable to exclude the “carrot” waiver of earnings disregards. Results from this alternate specification, reported in Column 2 of Table 5, show our findings to be robust. The estimate of β_7 is not statistically different from our baseline estimate of β_7 at the one-percent level.

This increase in SSI receipt among single mothers in states that are aggressively pursuing welfare reform could be due to two factors. First, it is possible that rates of self-reported disabilities among this group are endogenously responding to the changed program incentives.³⁶ Alternatively, self-reported disability rates could be constant and take-up rates among previously eligible populations could be changing.³⁷ To test which of these is happening, we regress self-reports of disability on the same set of independent variables specified in our earlier regression. Results are reported in Table 6. The point estimate of the coefficient on β_7 is positive, as would be expected if disability rates were endogenously changing in response to welfare reform. However, neither this coefficient nor the coefficient on the major waiver variable is significantly different from zero. Thus, we find no compelling evidence that our results are due to higher reported disability rates among single mothers.

VII. Conclusion

This paper finds evidence that changes in the relative costs and benefits of participating in two public assistance programs have a significant effect on probabilities of participation. In particular, we find that female-headed households in states approaching welfare reform with greater aggressiveness were 21.6 percent more likely to receive Supplemental Security Income. One policy implication of this finding is that a decrease in caseloads in one program cannot necessarily be interpreted as an equal-sized decrease in the number of families receiving public assistance. This analysis makes clear the importance of looking at the interactions among programs.

In addition, this finding has implications for the well being of women on welfare who are facing time limits. Acs and Loprest (1999) discuss the high prevalence of disability rates among those on AFDC during the 1990s, and find that few disabled recipients are able to leave AFDC for work. They conclude that disabled women on AFDC have a high likelihood of running up against any time limits imposed by welfare reform.³⁸ If disabled AFDC recipients are able to switch to SSI, then the negative effects of time limits and sanctions imposed by welfare reform on disabled women could be lessened. It is in this area that the need for further research is clear. Due to data constraints, we are unable to decompose the effect on adult SSI participation from the effect on child SSI participation. If our results are being driven by changes in *adult* SSI participation, then this “softening” of the welfare reform blow is possible. However, if our

³⁶ See Waidmann et al (1995).

³⁷ This distinction is analogous to that drawn in the AFDC literature between changes in take-up rates and changes in eligibility. See Blank and Ruggles (1996) and Blank (1997).

³⁸ See Acs and Loprest (1999).

results are being driven by changes in *child* SSI participation, the restrictions that the 1996 legislation placed on child SSI receipt might mean further hardship for these families over the next few years.

As more years of data become available, we plan to look directly at the welfare reform legislation of 1996, to determine if the shift of families to SSI continued after the passage of PRWORA.

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Table 1: Summary Statistics
 Comparison of Sample Means for SSI Recipients and AFDC Recipients

	Entire Sample	SSI Recipients	AFDC Recipients
Age	32.160 (7.040)	32.169 (7.066)	29.217 (6.662)
Single	0.320	0.699	0.828
Nonwhite	0.190	0.396	0.438
Hispanic	0.113	0.119	0.169
Disabled ³⁹	0.039	0.415	0.111
Veteran	0.009	0.009	0.009
Years of Education	12.811 (2.461)	11.145 (2.722)	11.337 (2.288)
SSI Maximum Monthly Benefit Level (\$)	438.543 (119.266)	460.614 (113.973)	473.832 (113.655)
Monthly AFDC Benefit for Family of Four (\$)	481.323 (190.961)	431.193 (190.756)	494.606 (196.013)
Unemployment Rate	6.222 (1.524)	6.306 (1.556)	6.333 (1.493)
Receives SSI	0.013	--	0.062
Receives AFDC	0.072	0.335	--
Number of Observations	217,314	2,721	14,958

Source: March CPS 1987-1997. Sample consists of women aged 18-44 with children.
 Summary statistics are weighted. Standard deviations are in parentheses.

³⁹ Disability is only consistently asked of all adults from 1988 on. Our total sample for 1988-1997 includes 175,041 observations (of which 2,404 receive SSI and 14,869 receive AFDC).

Table 2a: States with Major Waivers, 1991-1996
By Date of Waiver Approval

Year	States obtaining a Major Waiver	Total with a Major Waiver	Percent with Major Waiver	Percent of US Population in Waiver States
1991	0	0	0.0	0.0
1992	5	5	9.8	20.8
1993	4	9	17.6	29.3
1994	6	15	29.4	36.3
1995	11	26	51.0	51.6
1996	9	35	68.6	76.0

Source: Council of Economic Advisers.

Table 2b: States with Major Waivers, 1991-1996
By Date of Waiver Implementation

Year	States obtaining a Major Waiver	Total with a Major Waiver	Percent with Major Waiver	Percent of US Population Affected
1991	0	0	0.0	0.0
1992	3	3	5.9	18.9
1993	4	7	13.7	26.4
1994	4	11	21.6	30.4
1995	8	19	37.3	43.0
1996	10	29	56.9	67.4

Source: U.S. Department of Health and Human Services.
http://aspe.hhs.gov/hsp/Waiver-Policies99/Table_A.htm

Table 3: Regression Results: Dependent Variable is Individual SSI Receipt

<i>Variable</i>	<i>No Control Group</i>		<i>Baseline Model</i>		<i>No Fixed Effects</i>	
Age	0.00073	***	0.00073	***	0.00074	***
	(0.00008)		(0.00008)		(0.00008)	
Veteran Status	0.00037		0.00038		0.00039	
	(0.00385)		(0.00385)			
Single	0.02166	***	0.02068	**	0.02121	**
	(0.00115)		(0.00136)		(0.00139)	
Major Waiver	-0.00290		-0.00487	**	-0.00397	**
	(0.00185)		(0.00153)		(0.00154)	
Single*Major Waiver	--		0.00597	**	0.00566	*
	--		(0.00282)		(0.00286)	
NonWhite	0.01072	***	0.01077	**	0.00992	**
	(0.00178)		(0.00177)		(0.00175)	
Hispanic	-0.00387	*	-0.00388	*	-0.00686	**
	(0.00204)		(0.00206)		(0.00230)	
Years of Education	-0.00371	***	-0.00371	**	-0.00370	**
	(0.00058)		(0.00056)		(0.00058)	
Log Maximum SSI benefit	0.00523		0.00521		0.01750	**
	(0.00365)		(0.00363)		(0.00286)	
Log Maximum AFDC	0.00013		0.00018		-0.01006	**
	(0.00854)		(0.00850)		(0.00264)	
Unempl. Rate	-0.00072		-0.00071		-0.00146	**
	(0.00044)		(0.00044)		(0.00042)	
Unempl Rate (lagged once)	-0.00001		0.00002		0.00184	**
	(0.00041)		(0.00041)		(0.00040)	
Log Family Income	--		--		--	
	--		--		--	
Log Non-SSI Family						
Number of Children	--		--		--	
State fixed effects	Yes		Yes		No	
Year fixed effects	Yes		Yes		No	
R-squared	0.0211		0.0212		0.0192	
Number of Observations	217,314		217,314		217,314	

*** Significant at 1% level. ** Significant at 5% level. * Significant at 10% level. Dependent variable is equal to one if woman (or her children under 15) receive SSI income. Results are from linear probability model. Standard errors are corrected for within state correlation. Regression includes a constant term.

Table 4: Regression Results: Dependent Variable is Individual SSI Receipt

<i>Variable</i>	<i>Baseline Model</i>		<i>Control for Family Income</i>		<i>Control for non-SSI Income</i>		<i>Including # Kids</i>	
Age	0.00073	***	0.00077	**	0.00079	**	0.00068	**
	(0.00008)		(0.00008)		(0.00008)		(0.00008)	
Veteran Status	0.00038		-0.00034		-0.00104		0.00038	
	(0.00385)		(0.00391)		(0.00398)		(.00383)	
Single	0.02068	**	0.01723	**	0.00874	**	0.02150	**
	(0.00136)		(0.00138)		(0.00108)		(0.00144)	
Major Waiver	-0.00487	**	-0.00495	**	-0.00436	**	-0.00493	**
	(0.00153)		(0.00157)		(0.00138)		(0.00154)	
Single*Major Waiver	0.00597	**	0.00627	**	0.00598	*	0.00605	**
	(0.00282)		(0.00283)		(0.00301)		(0.00281)	
NonWhite	0.01077	**	0.00908	**	0.00487	**	0.01013	**
	(0.00177)		(0.00174)		(0.00136)		(0.00166)	
Hispanic	-0.00388	*	-0.00517	**	-0.00711	**	-0.00443	**
	(0.00206)		(0.00194)		(0.00147)		(0.00207)	
Years of Education	-0.00371	**	-0.00313	**	-0.00180	**	-0.00355	**
	(0.00056)		(0.00054)		(0.00037)		(0.00056)	
Log Maximum SSI benefit	0.00521		0.00511		0.00456		0.00498	
	(0.00363)		(0.00360)		(0.00424)		(0.00364)	
Log Maximum AFDC	0.00018		-0.00032		-0.00019		-0.00006	
	(0.00850)		(0.00853)		(0.00764)		(0.00850)	
Unempl. Rate	-0.00071		-0.00068		-0.00079	*	-0.00075	*
	(0.00044)		(0.00047)		(0.00042)		(0.00044)	
Unempl Rate (lagged once)	0.00002		-0.00016		-0.00020		0.00001	
	(0.00041)		(0.00042)		(0.00034)		(0.00040)	
Log Family Income	--		-0.00565	**	--		--	
	--		(0.00057)		--		--	
Log Non-SSI Family			--		-0.01388		--	
					(0.00122)	**		
Number of Children	--		--		--		0.00332	**
							(0.00065)	
State fixed effects	Yes		Yes		Yes		Yes	
Year fixed effects	Yes		Yes		Yes		Yes	
R-squared	0.0212		0.0235		0.0301		0.0219	
Number of Observations	217,314		214,900		214,698		217,314	

*** Significant at 1% level. ** Significant at 5% level. * Significant at 10% level. Dependent variable is equal to one if woman (or her children under 15) receive SSI income. Results are from linear probability model with state and year fixed effects. Standard errors are corrected for within state correlation. Regression includes a constant term.

Table 5: Modifications of Waiver Variable

<i>Variable</i>	<i>Baseline Model</i>		<i>Excludes earnings disregard</i>	
Age	0.00073 (0.00008)	***	0.00073 (0.00008)	***
Veteran Status	0.00038 (0.00385)		0.00043 (0.00384)	
Single	0.02068 (0.00136)	***	0.02119 (0.00125)	***
Major Waiver	-0.00487 (0.00153)	***	-0.00239 (0.00062)	***
Single*Major Waiver	0.00597 (0.00282)	**	0.00171 (0.00095)	**
NonWhite	0.01077 (0.00177)	***	0.01071 (0.00178)	***
Hispanic	-0.00388 (0.00206)	*	-0.00389 (0.00205)	*
Years of Education	-0.00371 (0.00056)	***	-0.00371 (0.00058)	***
Log Maximum SSI benefit	0.00521 (0.00363)		0.00766 (0.00513)	
Log Maximum AFDC	0.00018 (0.00850)		0.00210 (0.00819)	
Unempl. Rate	-0.00071 (0.00044)		-0.00078 (0.00044)	*
Unempl Rate (lagged once)	0.00002 (0.00041)		-0.00007 (0.00040)	
State fixed effects	Yes		Yes	
Year fixed effects	Yes		Yes	
R-squared	0.0212		0.0212	
Number of Observations	217,314		217,314	

*** Significant at 1% level. ** Significant at 5% level. * Significant at 10% level.

Dependent variable is equal to one if woman (or her children under 15) receive SSI income. Results are from linear probability model with state and year fixed effects. Standard errors are corrected for within state correlation. Regression includes a constant term.

Table 6: Self-Reported Disability Results

<i>Variable</i>		
Age	0.00236 (0.00012)	***
Veteran Status	0.01243 (0.00698)	*
Single	0.03301 (0.00198)	***
Major Waiver	-0.00160 (0.00258)	
Single*Major Waiver	0.00198 (0.00384)	
NonWhite	0.00353 (0.00168)	**
Hispanic	-0.02224 (0.00372)	***
Years of Education	-0.00702 (0.00083)	***
Log Maximum SSI benefit	0.01608 (0.00996)	
Log Maximum AFDC benefit	-0.01526 (0.01409)	
Unempl. Rate	0.00046 (0.00103)	
Unempl Rate (lagged once)	-0.00129 (0.00114)	
State fixed effects	Yes	
Year fixed effects	Yes	
R-squared	0.0184	
Number of Observations	175,039	

*** Significant at 1% level. ** Significant at 5% level. * Significant at 10% level.

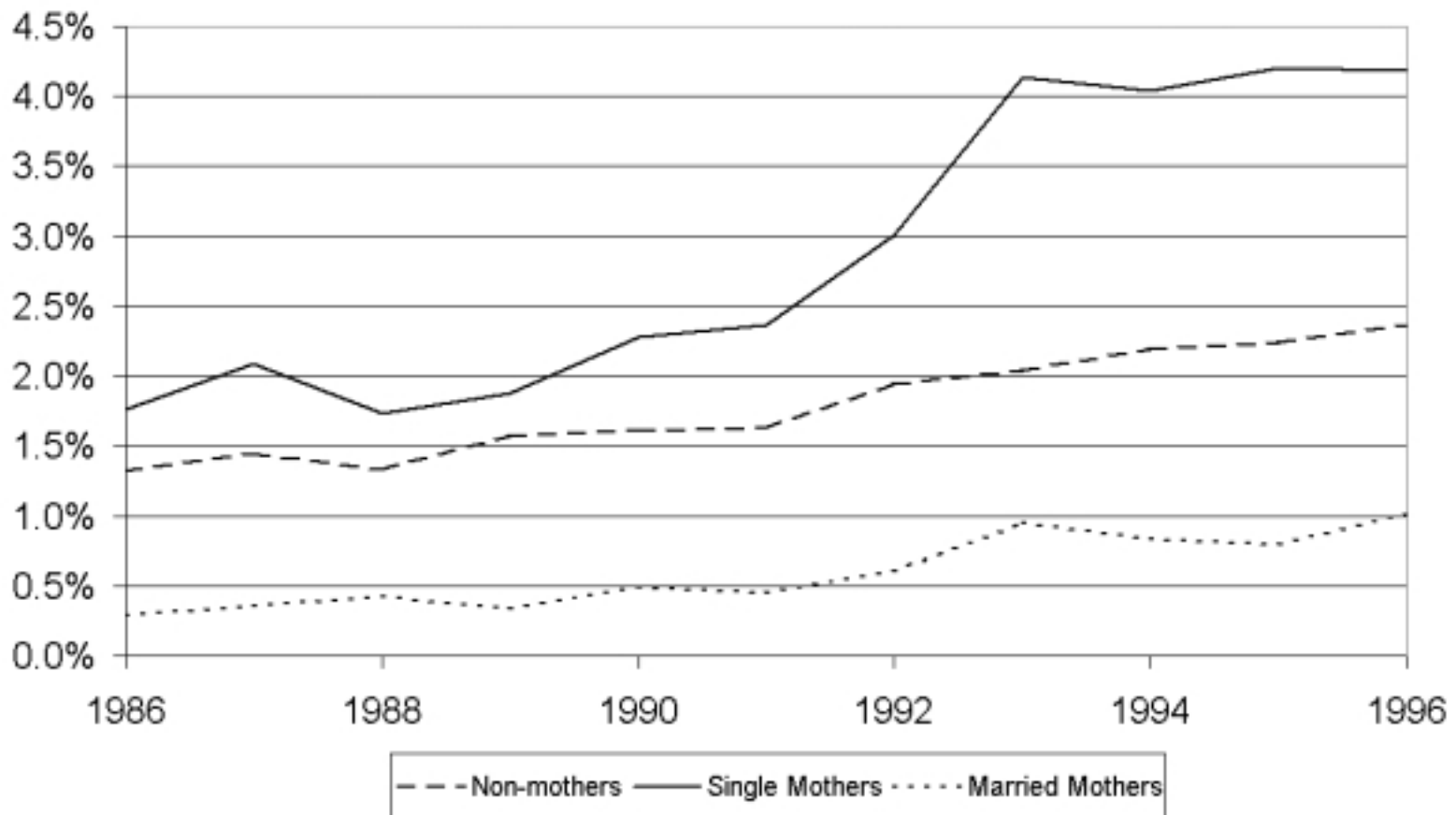
Dependent variable is equal to one if woman reports a disability that prevents her from working. Results are from linear probability model with state and year fixed effects. Standard errors are corrected for within state correlation. Regression includes a constant term.

**Figure 1: AFDC/TANF Caseloads (in millions)
1987-1999**



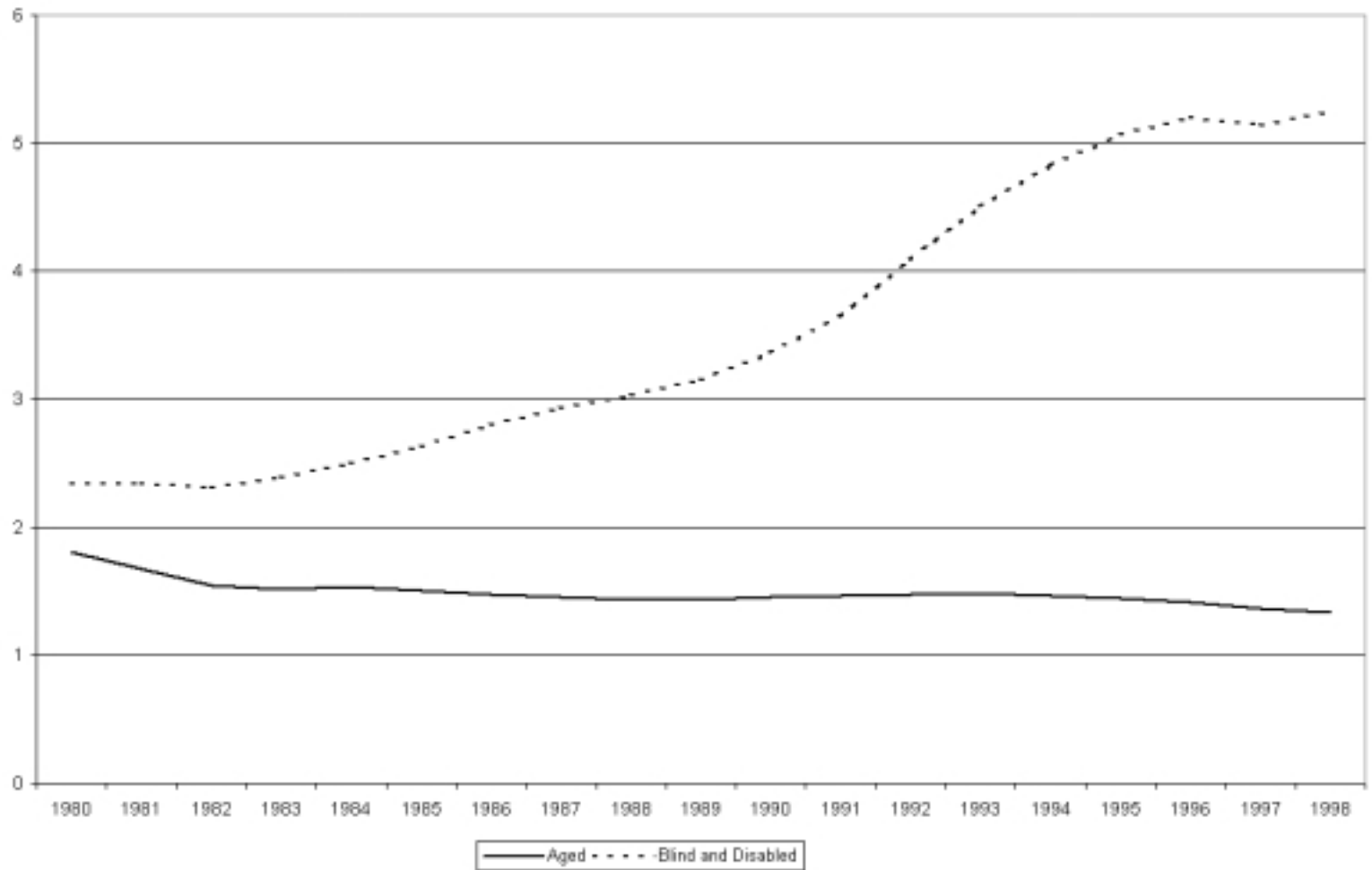
Source: Department of Health and Human Services, Administration for Children and Families

**Figure 2: SSI Participation Rates among Women 18-44
1986-1997**



Source: Authors' Tabulations of March CPS Data

Figure 3: SSI Caseloads (in millions)



Source: Social Security Bulletin, Annual Statistical Supplement (1989, 1999)

Appendix: Data Sources

1. Individual level variables
Individual level variables on demographic characteristics (age, marital status, race, number of children, veteran status, education) and SSI participation are from the Current Population Survey, March Supplement (years 1987-1998).
2. Federal SSI benefit amounts
Social Security Bulletin Annual Statistical Supplement (Office of Research, Evaluation, and Statistics, SSA; various years).
3. State SSI supplement data
State Assistance Programs for SSI Recipients (Office of Research, Evaluation, and Statistics, SSA; various years) and *The 1996 Green Book* (U.S. House of Representatives).
4. AFDC maximum benefit by state for a family of four
Data from various editions of *The Green Book* (U.S. House of Representatives).
5. State unemployment rate
U.S. Bureau of Labor Statistics Web Site (<http://www.bls.gov>).
6. Major welfare waivers
Variable equals 1 if any of six major waivers were in place in a given state for the entire year. Major waivers include the following: time limits, expanded work requirements, family caps, JOBS exemptions, earnings disregards, and sanctions. For waivers granted in the middle of a year, the variable equals the share of the year after the waiver was approved. Waivers were originally coded by the Council of Economic Advisers.