

The New Safety Net? Supplemental Security Income after Welfare Reform[⊗]

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Abstract

Over the past twenty years, the Supplemental Security Income Program (SSI), which provides federally-funded income support for disabled individuals, has become one of the most important means-tested cash aid programs in the United States. This growth has been accompanied by growing concerns about the nature of the program and its role as a “new safety net.” In this paper, I use state panel data, exploiting variation both across states and over time, to examine the relationship between welfare reform and SSI disabled caseloads for both adults and children. I also examine whether the relationship between SSI participation and other factors (economic, health-related, and political) has been fundamentally altered in the aftermath of welfare reform. Results suggest that welfare reform significantly increased SSI participation, and changed the relationship between other conditions and SSI participation. Notably, the SSI program has become more responsive to business cycles for women and children since welfare reform.

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I. Introduction

Over the past twenty years, the Supplemental Security Income Program (SSI), which provides federally-funded income support for disabled individuals, has become one of the most important means-tested cash aid programs in the United States. The number of adult disabled SSI recipients increased by 89% between 1990 and 2010, and the number of child SSI cases quadrupled over this same time period. This growth has been accompanied by mounting concerns about the nature of the SSI program, as well as heightened media attention (see, for example, a series on SSI receipt among children in the *Boston Globe* called “The Other Welfare,” as well as a recent episode of *Planet Money* for *This American Life* called “Unfit For Work: The Startling Rise of Disability in America” (Wen, 2010; Joffe-Walt, 2013)).¹

If SSI is the “other welfare” or the “new safety net,” this has implications for the relationship between SSI and the “old safety net” of more traditional cash welfare programs. The passage of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) in 1996 replaced the Aid to Families with Dependent Children (AFDC) program with the Temporary Assistance for Needy Families (TANF) program, and was said by then-President Bill Clinton to “end welfare as we know it.” Welfare reform corresponded with unprecedented decreases in the number of AFDC/TANF recipients. However, research suggests that TANF now provides less protection against economic downturns than did its predecessor prior to welfare reform (e.g. Bitler and Hoynes, 2010 and 2013).

Similarities in economic and health-related characteristics between AFDC/TANF and SSI populations mean that welfare reform itself is likely to have directly affected SSI participation,

¹ Media attention to growth in the SSI program is not a new development of the past few years. Berkowitz and DeWitt (2013) note that the media tend to cycle between concerns about growth in disability programs and undeserving beneficiaries versus concern about disabled individuals unjustly denied benefits. For an earlier example of the former, see Woodward and Weiser (1994).

both by its implementation and by the wide variation across states in welfare policies such as time limits and sanctions for noncompliance. Furthermore, the relationship between SSI participation and a number of other factors (including economic conditions, health conditions, and political variables) may have been fundamentally altered in the aftermath of welfare reform.

In this paper, I use state panel data, exploiting variation both across states and over time, to examine the relationship between welfare reform and SSI disabled caseloads, analyzing adult disabled cases (by gender) and child disabled cases separately. I look at the implementation of welfare reform, as well as specific state welfare policies such as time limits and sanctions. I then examine how the effect of other factors on SSI participation has changed since the passage of major welfare reform in 1996. Results suggest that welfare reform significantly increased SSI participation, and that state policies that sanctioned welfare recipients for noncompliance had positive and significant effects on the SSI caseload. In addition, welfare reform appears to have changed the relationship between SSI participation and other variables. Notably, the SSI program has become more responsive to business cycles in the years following welfare reform for women and children, but not for men. These results suggest that the SSI program is playing the role of an alternative safety net for former welfare recipients. This could have important implications for their wellbeing, particularly given the sustained, high unemployment rates associated with the Great Recession.

II. Background

A. The Supplemental Security Income Program

SSI is a federal program that has provided income support to disabled individuals with limited financial resources since 1974.^{2,3} One of the original goals of the program was to

² SSI also provides means-tested income support for the elderly (ages 65 and older). This paper focuses entirely on the SSI-disabled program, since a very different set of factors is likely to affect SSI caseloads among the elderly.

combine a number of existing state programs aimed at helping the elderly and disabled poor into a federal program with minimum benefit amounts and national eligibility standards (Kennedy 1999). The monthly federal SSI benefit rate for an individual living alone with no other sources of income is \$674 in 2011, and individuals with assets in excess of \$2000 are generally ineligible.⁴

In addition to asset and income tests, SSI applicants must go through a five-step process to determine whether they have a qualifying disability.⁵ First, they must show that they do not earn more than the “Substantial Gainful Activity” (SGA) amount defined by the Social Security Administration (currently \$1010 per month). In the second step, those with “non-severe” disabilities or disabilities that are not expected to end in death or last at least 12 months are rejected. In the third step, those with impairments determined by an SSA list to be extremely severe are immediately allowed. In step 4, applicants who are able to work in jobs that they previously held are denied benefits. In step 5, applicants who are deemed able to work in any type of job (conditional on their age, education, and work history) are denied.⁶

As illustrated in Figure 1, both the number of adult SSI recipients (ages 18-64) and the number of child SSI recipients (ages 0-17), divided by the relevant population size, have increased substantially over the past thirty years.⁷ Not surprisingly, increases in the SSI-disabled caseload have led to significant increases in federal spending on the program. As illustrated in Figure 2, total federal dollars spent on the SSI-disabled program increased from 10.4 billion

³ The SSI program differs from the Social Security Disability Insurance (SSDI) program, a social insurance program which provides benefits to disabled workers who have a sufficient work history to qualify, independent of income and assets tests. The majority of former welfare recipients are not eligible for SSDI due to lack of sufficient work history.

⁴ Values of an individual’s home, automobile, and household goods and personal effects are excluded from the asset test.

⁵ This disability determination process is the same as the one used for the SSDI program.

⁶ See Lahiri et al. (1995) for a detailed description of the disability determination process.

⁷ Some of this growth is due to changes in SSA policy (and to legal challenges to SSA policies). See Garrett and Glied (2000), Schmidt (2004), and Daly and Burkhauser (2013) for more detail.

dollars in 1980 to 38.1 billion dollars in 2009 (all figures in real 2009\$). These figures compare with federal 2006 expenditures of \$21 billion on TANF, of \$30 billion on Food Stamps (also known as the Supplemental Nutrition Assistance Program (SNAP)), and of \$45 billion on the Earned Income Tax Credit (Moffitt, Scholz, and Cowan, 2009). However, these figures significantly *underestimate* total federal spending on SSI, since they do not include expenditures on Medicaid to SSI recipients, nor expenditures on the SNAP benefits that most SSI recipients also receive.

Figure 3 presents adult-disabled SSI caseloads (per 1000 population) for a selected group of states between 1980 and 2010. This graph makes clear that even among states in the same region, a great deal of variation exists in both levels and growth of the SSI program.⁸ Southern states tend to have some of the highest rates of SSI participation. However, while caseloads rose in West Virginia over the entire 1980–2010 period, they peaked in Mississippi in the mid-1990s and have fallen in most of the subsequent years. New England states Massachusetts and Rhode Island had similar rates of SSI participation in 1980, but diverged dramatically in the mid-1990s. Even states with the lowest SSI participation rates, such as New Hampshire and Wyoming, experienced different patterns in the timing of their caseload growth.

While SSI is a federally financed program, there are a number of reasons why we might expect to see such state-level variation in SSI participation. First, there may be large differences across states in the demand for SSI. The underlying health of the population varies dramatically by state (Subramanian, Kawachi, and Kennedy, 2001), and variation in economic conditions across states will affect the number of individuals who would qualify for SSI on the basis of means and asset testing. There could also be interactions between the two—evidence suggests that self-reports of disability, and therefore decisions to apply for SSI benefits, respond

⁸ Similar variation exists for child-disabled caseloads across states.

endogenously to economic conditions (Waidmann, Bound, and Schoenbaum, 1995). There are also differences across states in the generosity of other programs that could be considered substitutes for SSI, (for example, Bound, Kossoudji, and Ricart-Moes (1998) on General Assistance; and Kubik (1999) and Garrett and Glied (2000) on Aid to Families with Dependent Children).

Differences also exist across states in the stringency of disability determinations. Even though the disability determination process is regulated by the federal Social Security Administration, initial disability determinations are made by state disability determination service agencies (DDS). State DDSs are responsible for gathering and obtaining medical evidence and making initial determinations on the disability status of an applicant. Evidence from a federal tightening of disability standards in the late 1970s suggests that states interpreted this tightening in different ways and as a result experienced significantly different changes in their allowance rates (Marvel 1982; Gruber and Kubik 1997). More recent evidence shows large differences in initial allowance rates across examiners (Maestas, Mullen, and Strand, 2013) and in denial rates across appeals judges (French and Song, 2011). In addition, there is evidence that suggests that the political party of a state's governor can affect disability application rates (Coe et al., 2011).

B. SSI and Welfare Reform

While SSI is targeted on the disabled and AFDC/TANF is targeted on single mothers, in practice there is significant overlap between the two programs. Both programs are means-tested and as such serve highly disadvantaged populations that tend to have low levels of education and minimal work history. In addition, AFDC/TANF recipients have high rates of both physical and

mental impairments (Loprest and Acs, 1995; Danziger et al., 2000; Nadel, Wamhoff, and Wiseman, 2003/2004).

There are advantages to both states and individuals from moving beneficiaries from AFDC/TANF to SSI. Because SSI is funded by the federal government and AFDC was historically funded by a matching grant, states benefited financially for moving recipients from AFDC to SSI.⁹ The block grants under PRWORA make these incentives even stronger. For individuals, monthly SSI benefits are larger than AFDC benefits in most states. SSI benefits are also increased each year to reflect changes in the cost of living, while TANF benefits tend to be decreasing in real terms over this time period. As a result, the gap between benefits in the two programs has increased. Wamhoff and Wiseman (2005/2006) note that in 2003 an SSI award to an adult in a three-person TANF family would increase family income by 115.4% on average, and this gain was 6% higher than it was in 1996. Even without the widening financial incentives, SSI is relatively more attractive post welfare-reform, given that TANF has stringent work requirements, time limits, and sanctions for not complying with rules. This is particularly true for women with barriers to employment.¹⁰ As TANF becomes relatively less attractive, more individuals may be willing to undergo the lengthy SSI eligibility determination process.

Existing research documented significant interactions between SSI and AFDC in the years prior to welfare reform. Garrett and Glied (2000) find that in the early 1990s, states with the highest AFDC benefits saw the smallest increase in SSI participation among children. Kubik (1999) finds that families who were likely to receive higher levels of cash benefits from other programs were less likely to apply for SSI. Schmidt and Sevak (2004) find that state-level

⁹ States have long been aware of this potential financial benefit. Berkowitz and DeWitt (2013) note that prior to the implementation of SSI in the early 1970s, local officials in New York State rushed to move AFDC recipients to the state disability program, hoping they would then be grandfathered into SSI.

¹⁰ The PRWORA legislation does allow states to exempt up to 20% of their caseload from the federal time limits for hardship reasons

welfare waivers that preceded welfare reform in 1996 led to a significant increase in the likelihood that single-mother families reported SSI receipt.

There is less literature documenting the relationship between SSI and TANF after welfare reform. Early studies of welfare leavers found low rates of SSI participation (Loprest, 2003; Wood and Rangarajan, 2003). In a sample of former welfare recipients, Schmidt and Danziger (2012) find that only 7% receive SSI, but another 21% reported unsuccessful applications for benefits. Wamhoff and Wiseman (2005/06) find that 16% of families receiving TANF in 2003 included a child or adult SSI recipient. They conclude that “a significant proportion of each year’s SSI awards to disabled non-elderly people go to TANF recipients (p 22).”

Despite this previous literature on the interactions between the two programs, no research to date has examined the direct effects of TANF implementation on SSI caseloads, nor has examined the effects of specific TANF policies such as time limits or sanctions on SSI participation. In addition, there is no current evidence on whether the passage of welfare reform led to structural changes in the relationship between SSI and other factors (economic, demographic, and political variables). The current paper will fill these gaps in the literature.

III. Methodology and Data

I estimate equations of the form:

$$\ln(Caseload)_{st} = WelfareReform_{st}\beta + X_{st}\theta + P_{st}\gamma + \delta_s + \lambda_t + \varepsilon_{st}$$

where Caseload is a dependent variable measuring the number of female adult SSI-disabled recipients, male adult SSI-disabled recipients, or child SSI-disabled recipients in state s during year t . I estimate regressions for female and male adult SSI-disabled recipients separately, since welfare reform should have had larger effects on the SSI participation of women.¹¹ These counts

¹¹ To more precisely estimate the effects of welfare reform, it would be useful to have information on SSI receipt by single mother families. However, this is not possible with the administrative data.

of SSI recipients come from Social Security Administration's administrative data, and as a result are not subject to the significant underreporting of transfer program participation that has been found in most household surveys (Meyer, Mok, and Sullivan, 2009). I divide these recipient totals by the relevant population to calculate a caseload share, and then take natural logs, as is consistent with much of the literature looking at program caseloads (e.g. Blank, 2001; Ziliak, Gundersen, and Figlio, 2003; Klerman and Haider, 2004).

I control for welfare reform in two ways. First, I include measures of the timing of the implementation of major welfare reform with an indicator for when a major state-wide waiver was enacted in the pre-PRWORA years, and an indicator for when a state's TANF plan is implemented post-PRWORA. These variables have been used by a number of researchers to estimate effects of welfare reform on a variety of outcomes, including but not limited to AFDC/TANF caseloads and labor force participation (e.g. Schoeni and Blank, 2000; Bitler, Gelbach, and Hoynes, 2006; Matsudaira and Blank, 2008).

The passage of PRWORA also led to a significant devolution of power to determine welfare policy from the federal government to the states. In the years since 1996, there has been a large increase in the variation across states in their welfare policies. In some localities, impending TANF time limits were an impetus to try to more actively move recipients to SSI (see, for example, Pavetti and Kauff (2006)), so looking at state-level variation in time limits could be important. In addition, families with disabilities were more likely to be sanctioned from TANF than other families (Goldberg and Schott, 2000; Cherlin et al., 2001), so sanction policies could lead to higher SSI caseloads. In a separate specification, I directly examine the effects of strict TANF time limits and sanction policies on SSI caseloads.

X is a vector of economic and demographic characteristics that vary by state and year, and P is a vector of policy variables. This specification controls for state fixed effects (δ_s) and year fixed effects (λ_t), causing model identification to be driven by changes across states and over time. The sample period consists of years 1990–2010. I calculate robust standard errors clustered by state.

Economic variables analyzed include the log of per capita personal income and the unemployment rate. Much of the previous literature that focuses on economic conditions and disability rates looks at the SSDI program, which given the nature of the two programs, is more likely to be tied to workers and therefore more likely to respond to economic conditions. The bulk of this literature finds that worsening economic conditions lead to an increase in SSDI participation (e.g., Black, Daniel, and Sanders, 2002; Autor and Duggan, 2003; Rothstein, 2013).

The corresponding literature on SSI is much more mixed. Black, Daniel, and Sanders (2002) exploit changes in coal prices as a shock to local earnings growth to examine effects of earnings on disability program participation, and find that SSI participation responds to earnings shocks. Work by Stapleton and co-authors (Rupp and Stapleton 1995; Stapleton et al. 1998; Stapleton et al. 1999) suggests that increased unemployment rates associated with the recession of the early 1990s played an important role in the growth of applications and awards during the pre-welfare reform years. However, papers by Garrett and Glied (2000), Schmidt and Sevak (2004), and Rutledge and Wu (2013) find a negative and significant relationship between unemployment rates and SSI caseloads.

One potential difficulty with examining the effect of the unemployment rate on disability caseloads is definitional. The unemployment rate measures the number of unemployed individuals divided by the labor force. To be included in the labor force, unemployed individuals

must be actively looking for work. But to be eligible for SSA's disability programs, one must show inability to work. The relationship between the unemployment rate and SSI caseloads might vary depending on whether the pool of entrants to SSI includes individuals who were working, versus those who were unemployed but actively looking for work, versus those who were out of the labor force entirely. Bound, Burkhauser, and Nichols (2003) report that only 30 percent of SSI applicants were employed three years prior to their application.

Demographic variables include the percentage of births that occur to unmarried mothers, the share of the population that is black, and the share of the population that consists of newly arrived immigrants. These variables have been shown to affect AFDC/TANF caseloads in previous literature. In addition, having an unmarried mother is significantly associated with SSI receipt for children (Duggan and Kearney, 2007).

Policy variables analyzed include measures that approximate the relative benefit generosity of SSI and AFDC/TANF. Since SSI benefits are set at the federal level, there is no cross-state variation in the main benefit amount. However, many states provide supplementary SSI benefits. I control for the maximum SSI state supplement for a disabled individual. I also control for the maximum AFDC/TANF benefit for a family of three. Both of these variables are entered in real 2000 dollars. For regressions on child SSI caseload share, I include a control for the cut-off (as a percent of the poverty line) for Medicaid/SCHIP eligibility for children under the age of 6. Given the important role played by states in administering their SSI programs, and the finding of Coe et al. (2011) that the governor's political party significantly affects SSDI-SSI concurrent applications, I include an indicator for whether the state has a Democratic governor. I also control for the share of the population that is obese, which previous research shows is a

contributing factor to disability rates (Lakdawalla, Bhattacharya, and Goldman, 2004; Butcher and Park, 2008).

Finally, if SSI is increasingly being viewed as “the new safety net” in the aftermath of welfare reform, it is possible that the 1996 legislation caused structural changes in the relationship between SSI caseloads and other variables. To test this possibility, I interact the indicator for TANF implementation with my main variables of interest. Table 1 presents summary statistics for all model variables. A detailed description of each variable and its source can be found in the Data Appendix.

V. Results

Table 2 presents results using adult disabled SSI caseload share as the dependent variable, estimated separately for female and male caseloads. The first two columns for each gender control for welfare reform by including indicators for whether a major welfare waiver was in place and for when TANF was implemented, while the second two columns replace those indicators with controls for TANF strict time limits and TANF sanction policies.

The results presented in Table 2 show that for both women and men, economic variables have significant effects on the SSI caseload share, but not always in the direction that would be expected if SSI is a substitute for employment. Higher per capita personal income is associated with a lower SSI caseload share, significant at the 1-percent level. The coefficient estimates suggests that a 10 percent increase in per capita personal income would be associated with a 5.7-6.8 percent decrease in SSI caseload share. However, higher unemployment rates are also associated with a significantly lower SSI caseload share, such that a one-percentage-point increase in the unemployment rate is associated with a 2.0-2.8 percent decrease in caseload

share.¹² This unemployment rate effect is consistent with work by Garrett and Glied (2000), Schmidt and Sevak (2004), and Rutledge and Wu (2013).

The share of births that are nonmarital is positively and significantly associated with the adult disabled SSI caseload share. A one-standard-deviation increase in the share of nonmarital births is associated with to an increase in SSI caseload share of approximately 10 percent. Neither the share of the population that is black nor the share of the population that is newly arrived immigrants is significantly associated with the adult disabled SSI share for either men or women.

For both women and men, higher AFDC/TANF benefits for a family of three are negatively associated with the SSI caseload share, consistent with the idea that individuals' program participation choices are influenced by relative benefit levels (Garrett and Glied, 2000). The level of the SSI state supplement is not significantly associated with adult SSI participation, nor is whether the governor is a Democrat. Obesity rates do not have statistically significant effects on SSI participation.

In the first column for each group, indicators for TANF implementation and the presence of welfare waivers are included. While the point estimate on TANF implementation is positive, it is not statistically different from zero for either men or women. However, the major welfare waivers implemented pre-PRWORA are positively and significantly associated with SSI caseload share, for women only, consistent with work by Schmidt and Sevak (2004). The second column for each group replaces the indicators for passage of welfare reform with variables for specific state welfare policies. The magnitudes and statistical significance of the other variables are largely unchanged. The presence of strict state TANF time limits is negatively and

¹² Regressions estimated without state fixed effects do find a significant positive correlation between unemployment rates and SSI caseload share, suggesting that in levels, states with higher unemployment rates have higher SSI participation.

significantly associated with SSI caseload share, which is the opposite of what would be expected.^{13,14} However, state sanction policies for TANF recipients are positively and significantly associated with higher SSI caseload share among adults, consistent with evidence that the disabled were more likely to be sanctioned from the TANF rolls. The presence of a TANF sanction policy is associated with a 5.8 percent increase in SSI caseload share for women.¹⁵

The remainder of Table 2 presents similar results, but for the SSI-disabled share among adult men. These results are largely similar in magnitude and statistical significance to the results for women presented in columns 1-2. The negative association between unemployment rates and SSI caseload shares is significantly stronger for women than for men (at the 5 percent level), and the positive association between the percentage of unmarried births and SSI participation is also significantly stronger for women. The estimated coefficients on welfare waivers are significantly different between men and women, with a positive and significant effect for women and no effect for men.

Results in Table 3 analyze child SSI caseload share. Economic conditions have similar effects on the child caseload share as on the adult caseload share, with both log per capita personal income and the unemployment rate negatively and significantly associated with child caseload share. Both the percent of unmarried births and the share of the population that is black are positively and significantly associated with child SSI caseload share. As with adult SSI

¹³ In regressions that are weighted by state population, this coefficient is no longer statistically significant. (Results available upon request).

¹⁴ Regressions that control for lagged time limits, or that control for the presence of binding time limits (where some segment of the TANF population could be dropped from the rolls for reaching the time limits) provide similar results.

¹⁵ In regressions not reported here, I allow the effects of sanction policies to vary depending upon whether they are immediate full family sanctions or gradual and partial sanctions. I find no evidence that the effects of TANF sanctions differ by type.

participation, higher maximum AFDC/TANF benefits are associated with a significantly lower SSI caseload share. The estimated coefficients on TANF implementation and the welfare waivers are not statistically significant for child SSI participation (although the waiver coefficient is positive). There is no significant effect of time limits, but, as in the adult regressions, TANF sanctions are positively and significantly associated with the child SSI caseload share.

Results in Tables 4 and 5 allow the effects of the model variables to differ in the post-PRWORA period by interacting variables with the indicator for TANF implementation. Results for adult females and adult males are presented in Table 4, while results for children are presented in Table 5. For each group, the first column displays baseline results with waivers and TANF implementation that constrain the effect of model variables to be constant throughout the entire sample period. The second column presents the coefficient for each model variable, as well as its interaction with the indicator for the implementation of TANF. The third column presents the baseline specification with time limits and TANF sanctions, and the fourth also includes the post-TANF interactions for that specification.

Looking first at the results for adults in Table 4, for most model variables, the effects remain relatively constant throughout the entire model period, as the interaction terms are not statistically different from zero. This is the case for log per capita personal income, which has relatively consistent effects throughout the 1990–2010 time period, as well as for many of the demographic and policy variables. However, there are some interesting differences that emerge when effects are allowed to differ by period. For instance, the effect of obesity rates on SSI participation has become more positive since the implementation of TANF.

In addition, results suggest that for both men and women, the Table 2 finding that having a Democratic governor had no effect on SSI participation masks a great deal of variation pre- and post-welfare reform. Over the full sample, the estimated coefficient on the Democratic governor variable is negative and significant, while the post-TANF interaction is positive and statistically significant. Work by Blank (2001) on AFDC caseloads in the 1990s, pre-welfare reform, found that Democratic governors were associated with higher AFDC caseloads, and argued that Democratic governors were traditionally associated with less restrictive welfare policies. The shift in the relationship between SSI participation and Democratic governors over time could reflect changes in the political and fiscal costs of SSI relative to AFDC/TANF.

For women only, the interaction between the unemployment rate and the post-TANF indicator is positive and statistically significant, suggesting that the relationship between SSI caseloads and the business cycle has become *more* cyclical after the passage of welfare reform in 1996. This is not the case for adult men. Looking directly at the TANF variables, the counterintuitive negative coefficient on time limits loses its statistical significance after other model variables are allowed to have differential post-1996 effects. The TANF sanction variable remains large, positive, and statistically significant.

Table 5 presents results from the same exercise for child SSI caseload share. Results suggest that the relative magnitudes of AFDC/TANF benefits and SSI supplements matter less after welfare reform for children, which would be consistent with both the weakening of the safety net provided through TANF, as well as less of an effect of relative benefit levels as non-pecuniary factors become more important. The Democratic governor effects found for adults in Table 4 are not significant for the child SSI caseload share. However, the pattern found for women in Table 4 – that SSI participation has become more responsive to the business cycle, is

also found for children. The interaction between the unemployment rate and post-TANF indicator is positive and significant, and there is additional evidence that the negative relationship between per capita personal income and SSI participation is stronger after welfare reform.

These results are robust to a number of specification tests. Models with a dependent variable in levels instead of logs provide similar results, as do models that add controls for the educational level of the population. Excluding the years of the Great Recession does not substantially change estimates, suggesting that the post-welfare reform results are not driven by the extremely high and sustained levels of unemployment seen during and after 2008. Business cycle effects are similar when using the employment-to-population ratio instead of the unemployment rate, and unemployment rate effects are robust to excluding per capita personal income.¹⁶

VI. Discussion and Conclusion

This paper provides new evidence about the relationship between welfare reform and adult and child SSI-disabled caseloads. Results suggest that welfare reform mattered – particularly for SSI participation among adult disabled women and disabled children. The welfare waivers implemented in the early 1990s had a significant effect on SSI participation among adult women, and TANF sanction policies significantly increase SSI caseload share for both adults and children. In addition, results from a specification that allows effects to vary post-TANF-implementation suggest that the role of a number of key variables has changed significantly since 1996. SSI participation has become more cyclical post-welfare reform for adult women and children, but not for men. The presence of a Democratic governor is more

¹⁶ Results are also robust to accounting for spatial correlation (see Foote 2007), both by calculating Cameron-Gelbach-Miller (2006) standard errors that account for this correlation and by interacting year fixed effects with dummies for census regions (Foote 2007).

positively associated with SSI caseload share after welfare reform, as are obesity rates. The relative magnitude of AFDC/TANF and SSI benefits matters less for child SSI caseloads post-welfare reform, consistent with TANF being less of an option for low-income families.

How important was welfare reform in explaining trends in SSI participation? One way to answer this question is to look at how much of the time trends can be explained by caseload models that include welfare reform. In Figures 4a-c, I graph the year fixed effects from four specifications: 1) year effects with no control variables; 2) year effects that remain after including all model variables *except* the welfare reform variables; 3) year effects from the specification that controls for time limits and sanctions; 4) year effects from the specification that allows welfare reform to have structurally changed the relationship between all explanatory variables and SSI caseloads. Figure 4a provides the year effects for adult disabled women, Figure 4b for adult disabled men, and Figure 4c for disabled children.

Figure 4b (for adult men) shows no clear pattern. However, in Figures 4a and 4c (for adult women and for children) a similar pattern emerges. While the model specification excluding welfare reform variables does provide some explanatory power for trends in SSI caseloads, the specification that includes welfare policies does a better job, and the specification that allows for a structural change post-welfare reform does even better than that.¹⁷ Welfare reform clearly plays an important role in explaining changes in SSI participation.

The evidence presented here suggests a direct relationship between elements of welfare reform and SSI participation among women and children. Furthermore, the increased cyclicity of the SSI program is consistent with existing evidence that suggests that cash benefits through AFDC/TANF provide less recessionary protection after passage of welfare reform than

¹⁷ Including economic conditions actually predicts SSI participation *less* well in the latter years of the sample, since the estimated coefficient on unemployment rates is negative but SSI participation and unemployment rates were both rising during the Great Recession.

previously and with evidence that other programs such as Food Stamps have become more cyclical post welfare reform (Bitler and Hoynes 2010, 2013). These findings suggest that SSI is, to some extent, playing the role of an alternative safety net in the post-welfare reform era. As a result, the program could have important implications for the wellbeing of low-income families with disabilities. This might be particularly important in the current economic climate, given the sustained high unemployment rates and decreases in participation rates during and following the Great Recession.

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Data Appendix

Number of SSI recipients: Data on the number of adult disabled and child disabled SSI recipients come from the *Social Security Bulletin's Annual Statistical Supplement* (various years) and are counts of the number of recipients of federally administered payments in December of the given year. Data on the number of female and male disabled SSI recipients are unpublished counts and were obtained directly from the Social Security Administration.

Population; Percent Black: from U.S. Census Bureau.

Unemployment rate: from Bureau of Labor Statistics Local Area Unemployment Statistics.

Per capita personal income: from Bureau of Economic Analysis's Regional Economic Accounts, converted to 2000\$.

Percent nonmarital births: from National Center of Health Statistics Vital Statistics Reports.

Share newly arrived immigrants: Number of newly admitted immigrants by state of intended residence provided by Department of Homeland Security. Denominated by Census population counts.

Maximum AFDC/TANF benefit for a family of 3: Data from 1997-2010 come from Urban Institute Welfare Rules Data Base, Table IIA4. When multiple values were given for a state (CA, MA, WI) the highest was used. Data from 1980-1996 come from the Green Book (various years), collected by the University of Kentucky's Center for Poverty Research, converted to 2000\$.

Maximum SSI state supplement: Data from 2002-2010 come from *State Assistance Programs for SSI Recipients* and measure the maximum state supplement available to a disabled individual living alone. Data from 1999-2001 come from the 2004 Green Book. Data from 1990-1998 come from the Green Book, various years, collected by the University of Kentucky Center for Poverty Research, converted to 2000\$.

Medicaid/SCHIP eligibility cutoff for children under 6: Data are expressed as a percent of the poverty line, divided by 100, and were provided by Lara Shore-Sheppard.

Governor is Democrat: Data collected by the University of Kentucky Center for Poverty Research.

Obesity Rates: Author-generated from Behavioral Risk Factor Surveillance System microdata.

Welfare reform variables: Provided by Rebecca Blank and Jordan Matsudaira, later years updated from the Welfare Rules Database at the Urban Institute

Major welfare waiver: Indicator that a major state-wide welfare reform waiver was implemented in a state pre-PRWORA. Variable turns on when waiver is implemented,

then turns off when TANF is implemented. If the waiver is only in effect for part of the year, the dummy variable is replaced with the fraction of the year in which the plan was in effect.

TANF implementation: Indicator that the state has implemented TANF. If TANF is only in effect for part of the first year, the dummy variable is replaced with the fraction of the year in which the plan was in effect.

TANF strict time limits: Indicator that the state has implemented a time limit of less than 60 months.

TANF sanctions: Indicator that state has implemented a sanction policy for noncompliance with TANF rules.

Table 1: Summary statistics

	<i>Mean</i>
SSI adult female disabled share (*100)	2.24 (0.91)
SSI adult male disabled share (*100)	2.54 (1.14)
SSI child disabled share (*100)	1.25 (0.68)
Unemployment rate	5.48 (1.80)
Log per capita personal income	10.23 (0.18)
Percent nonmarital births	33.90 (7.97)
Share black	11.19 (11.63)
Share newly arrived immigrants	0.236 (0.217)
Maximum AFDC/TANF benefit for a family of three (in 100s)	4.18 (1.67)
SSI state supplement (in 100s)	0.325 (0.708)
Poverty cut-off for Medicaid/SCHIP eligibility for children under 6	1.89 (0.57)
Governor is Democrat	0.47
Obesity rate	19.90 (5.70)
Major welfare waiver	0.05
TANF implemented	0.67
TANF strict time limits	0.42
TANF sanctions	0.73

Notes: Standard deviations are in parentheses. Detailed descriptions and source information can be found in the data appendix. All dollar amounts are converted to real 2000 dollars.

Table 2: Effects of welfare reform on SSI caseloads, disabled adult women and men

	Women		Men	
	(1)	(2)	(3)	(4)
Unemployment rate	-0.028*** (0.007)	-0.028*** (0.007)	-0.021*** (0.006)	-0.020*** (0.006)
Log per capita personal income (2000\$)	-0.569*** (0.180)	-0.598*** (0.173)	-0.643*** (0.176)	-0.678*** (0.169)
Percent nonmarital births	0.012*** (0.003)	0.012*** (0.003)	0.008*** (0.003)	0.009*** (0.003)
Share black	0.008 (0.016)	0.010 (0.015)	0.011 (0.017)	0.012 (0.015)
Share newly arrived immigrants	0.031 (0.051)	0.037 (0.049)	-0.011 (0.059)	-0.003 (0.058)
Maximum AFDC/TANF benefit for family of 3	-0.036* (0.019)	-0.034* (0.019)	-0.048** (0.019)	-0.045** (0.019)
Maximum state SSI supplement	-0.033 (0.031)	-0.040 (0.031)	-0.029 (0.037)	-0.036 (0.037)
Governor is Democrat	-0.001 (0.010)	-0.004 (0.010)	0.001 (0.010)	-0.002 (0.010)
Obesity rate	-0.001 (0.004)	-0.000 (0.004)	-0.006 (0.004)	-0.005 (0.003)
TANF implemented	0.010 (0.035)		0.011 (0.037)	
Major welfare waiver implemented	0.040** (0.019)		0.017 (0.018)	
TANF strict time limits		-0.042** (0.019)		-0.045** (0.020)
TANF sanction		0.058*** (0.021)		0.043** (0.017)
Observations	1,036	1,036	1,036	1,036
R-squared	0.978	0.979	0.983	0.984

Dependent variable is log of caseload share. Robust standard errors clustered by state in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 3: Effects of welfare reform on SSI caseloads, disabled children

	(1)	(2)
Unemployment rate	-0.045*** (0.008)	-0.046*** (0.008)
Log per capita personal income (2000\$)	-1.056*** (0.248)	-1.046*** (0.239)
Percent nonmarital births	0.015*** (0.004)	0.015*** (0.004)
Share black	0.038** (0.018)	0.039** (0.018)
Share newly arrived immigrants	-0.024 (0.034)	-0.029 (0.036)
Maximum AFDC/TANF benefit for family of 3 (2000\$)	-0.083*** (0.022)	-0.085*** (0.022)
Maximum state SSI supplement (2000\$)	0.041 (0.028)	0.043 (0.029)
Poverty cut-off for Medicaid/SCHIP eligibility for children under 6	0.024 (0.017)	0.026 (0.016)
Governor is Democrat	0.006 (0.016)	0.006 (0.016)
Obesity rate	-0.002 (0.005)	-0.002 (0.005)
TANF implemented	-0.008 (0.065)	
Major welfare waiver implemented	0.021 (0.039)	
TANF strict time limits		0.004 (0.026)
TANF sanction		0.076** (0.029)
Observations	1,036	1,036
R-squared	0.973	0.973

Dependent variable is log of caseload share. Robust standard errors clustered by state in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 4: Determinants of SSI caseloads, with differential effects post-welfare reform, disabled adult women and men

	Women				Men			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Unemployment rate	-0.028*** (0.007)	-0.037*** (0.008)	-0.028*** (0.007)	-0.036*** (0.008)	-0.021*** (0.006)	-0.026*** (0.008)	-0.020*** (0.006)	-0.024*** (0.008)
* reform		0.016* (0.008)		0.014 (0.008)		0.007 (0.008)		0.004 (0.008)
Log per capita personal income (2000\$)	-0.569*** (0.180)	-0.606*** (0.200)	-0.598*** (0.173)	-0.494*** (0.157)	-0.643*** (0.176)	-0.759*** (0.197)	-0.678*** (0.169)	-0.643*** (0.157)
* reform		0.170 (0.131)		-0.016 (0.015)		0.176 (0.137)		-0.013 (0.014)
Percent nonmarital births	0.012*** (0.003)	0.011*** (0.003)	0.012*** (0.003)	0.012*** (0.003)	0.008*** (0.003)	0.009*** (0.003)	0.009*** (0.003)	0.009*** (0.003)
* reform		-0.001 (0.002)		-0.002 (0.002)		-0.000 (0.002)		-0.001 (0.002)
Share black	0.008 (0.016)	0.018 (0.014)	0.010 (0.015)	0.022* (0.013)	0.011 (0.017)	0.017 (0.013)	0.012 (0.015)	0.021* (0.012)
* reform		-0.004*** (0.002)		-0.003** (0.001)		-0.004** (0.002)		-0.003** (0.001)
Share newly arrived immigrants	0.031 (0.051)	0.017 (0.044)	0.037 (0.049)	0.015 (0.046)	-0.011 (0.059)	-0.007 (0.054)	-0.003 (0.058)	-0.007 (0.057)
* reform		-0.077 (0.067)		-0.019 (0.061)		0.012 (0.078)		0.073 (0.078)
Max AFDC/TANF for fam of 3 (2000\$)	-0.036* (0.019)	-0.030 (0.018)	-0.034* (0.019)	-0.036** (0.018)	-0.048** (0.019)	-0.033 (0.022)	-0.045** (0.019)	-0.039* (0.020)
* reform		0.004 (0.014)		0.004 (0.014)		0.012 (0.017)		0.013 (0.016)
Maximum state SSI supplement (2000\$)	-0.033 (0.031)	-0.011 (0.023)	-0.040 (0.031)	-0.023 (0.024)	-0.029 (0.037)	-0.011 (0.026)	-0.036 (0.037)	-0.023 (0.028)
* reform		0.008 (0.017)		0.014 (0.018)		-0.003 (0.019)		0.003 (0.020)
Governor is Democrat	-0.001 (0.010)	-0.033** (0.015)	-0.004 (0.010)	-0.035** (0.015)	0.001 (0.010)	-0.025* (0.014)	-0.002 (0.010)	-0.027* (0.014)
* reform		0.037**		0.041**		0.028*		0.032**

		(0.017)		(0.017)		(0.015)		(0.015)
Obesity rate	-0.001	-0.009*	-0.000	-0.008	-0.006	-0.010**	-0.005	-0.009*
	(0.004)	(0.005)	(0.004)	(0.005)	(0.004)	(0.005)	(0.003)	(0.005)
* reform		0.012**		0.010*		0.010*		0.008
		(0.005)		(0.005)		(0.005)		(0.005)
TANF implemented	0.010	-1.937			0.011	-1.968		
	(0.035)	(1.300)			(0.037)	(1.348)		
major welfare waiver implemented	0.040**	0.038**			0.017	0.024		
	(0.019)	(0.017)			(0.018)	(0.016)		
TANF strict time limits			-0.042**	-0.024			-0.045**	-0.021
			(0.019)	(0.017)			(0.020)	(0.015)
TANF sanction			0.058***	0.055***			0.043**	0.044**
			(0.021)	(0.020)			(0.017)	(0.018)
Observations	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036
R-squared	0.978	0.982	0.979	0.981	0.983	0.986	0.984	0.986

Dependent variable is log of caseload share. Robust standard errors clustered by state in parentheses. *** p<0.01, ** p<0.05, * p<0.1

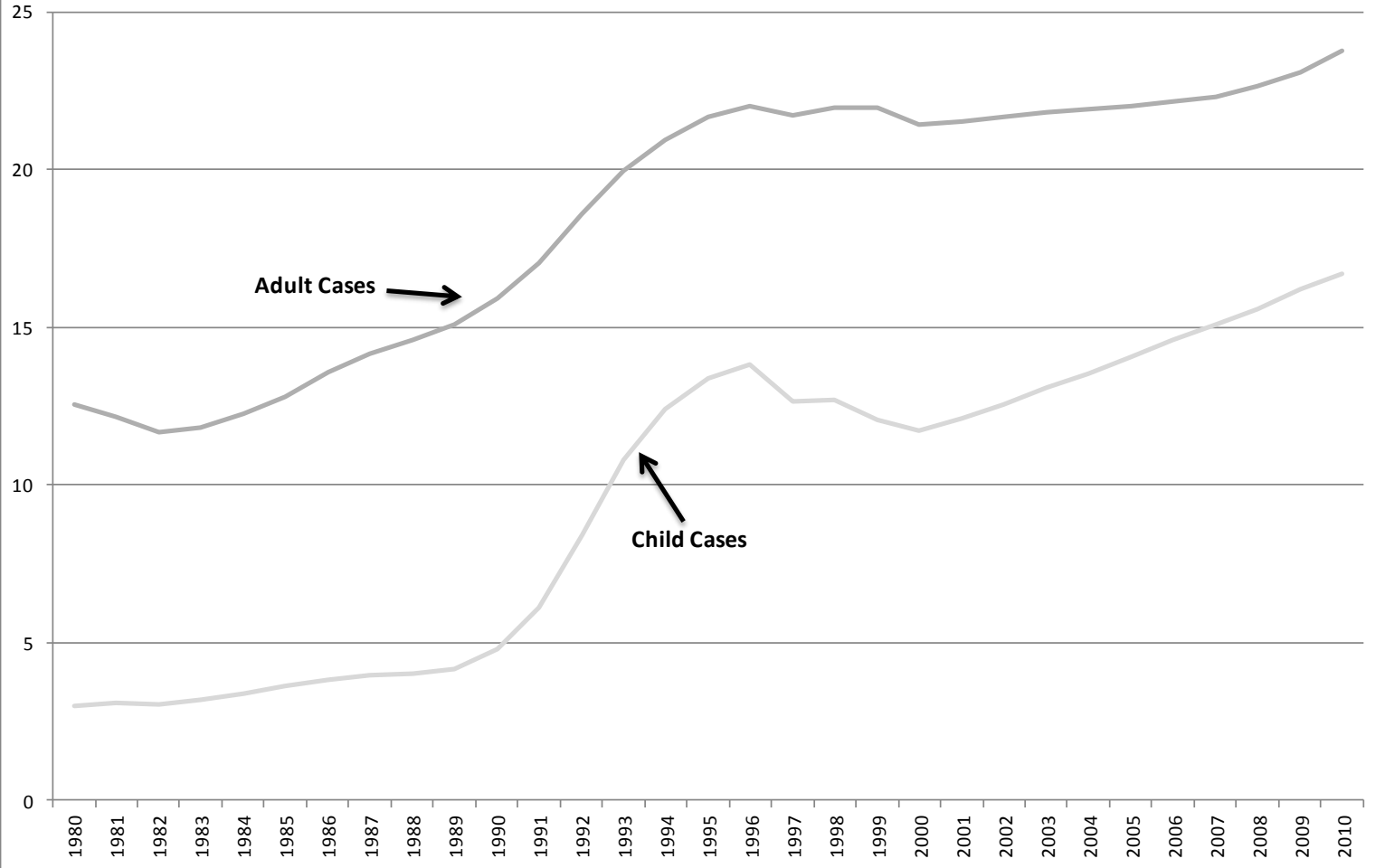
Table 5: Determinants of SSI caseloads, with differential effects post-welfare reform, disabled children

	(1)	(2)	(3)	(4)
Unemployment rate	-0.045*** (0.008)	-0.064*** (0.008)	-0.046*** (0.008)	-0.064*** (0.008)
* reform		0.039*** (0.010)		0.037*** (0.009)
Log per capita personal income (2000\$)	-1.056*** (0.248)	-0.739*** (0.245)	-1.046*** (0.239)	-0.610*** (0.225)
* reform		0.084 (0.163)		-0.055** (0.024)
Percent nonmarital births	0.015*** (0.004)	0.014*** (0.004)	0.015*** (0.004)	0.014*** (0.004)
* reform		0.005* (0.003)		0.005 (0.003)
Share black	0.038** (0.018)	0.039** (0.016)	0.039** (0.018)	0.042*** (0.015)
* reform		-0.002 (0.002)		-0.002 (0.002)
Share newly arrived immigrants	-0.024 (0.034)	0.015 (0.031)	-0.029 (0.036)	0.006 (0.034)
* reform		0.167* (0.097)		0.194** (0.085)
Maximum AFDC/TANF benefit for family of 3 (2000\$)	-0.083*** (0.022)	-0.090*** (0.023)	-0.085*** (0.022)	-0.098*** (0.021)
* reform		0.026 (0.017)		0.034* (0.018)
Maximum state SSI supplement (2000\$)	0.041 (0.028)	0.049* (0.026)	0.043 (0.029)	0.051* (0.028)
* reform		-0.051* (0.027)		-0.052* (0.027)
Poverty cut-off for Medicaid/SCHIP eligibility for children under 6	0.024 (0.017)	0.010 (0.023)	0.026 (0.016)	0.012 (0.022)
* reform		0.003 (0.021)		0.009 (0.020)

Governor is Democrat	0.006 (0.016)	-0.012 (0.022)	0.006 (0.016)	-0.012 (0.022)
* reform		0.019 (0.025)		0.021 (0.025)
Obesity rate	-0.002 (0.005)	-0.003 (0.006)	-0.002 (0.005)	-0.003 (0.006)
* reform		0.003 (0.009)		0.003 (0.009)
TANF implemented	-0.008 (0.065)	-1.377 (1.548)		
major welfare waiver implemented	0.021 (0.039)	0.025 (0.029)		
TANF strict time limits			0.004 (0.026)	0.028 (0.030)
TANF sanction			0.076** (0.029)	0.066** (0.028)
Observations	1,036	1,036	1,036	1,036
R-squared	0.973	0.977	0.973	0.977

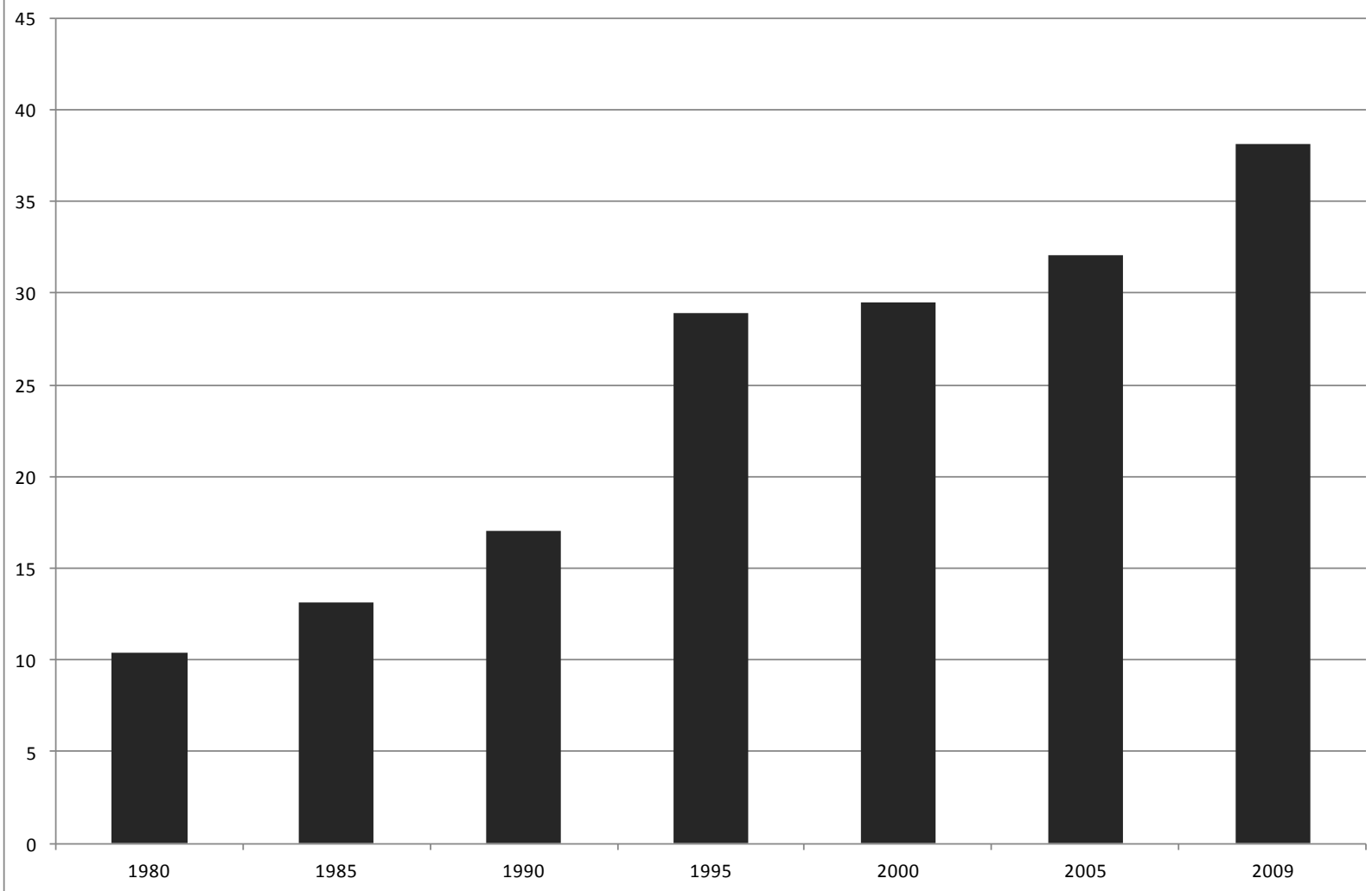
Dependent variable is log of caseload share. Robust standard errors clustered by state in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Figure 1: SSI-disabled recipients (per 1000 population): 1980-2010



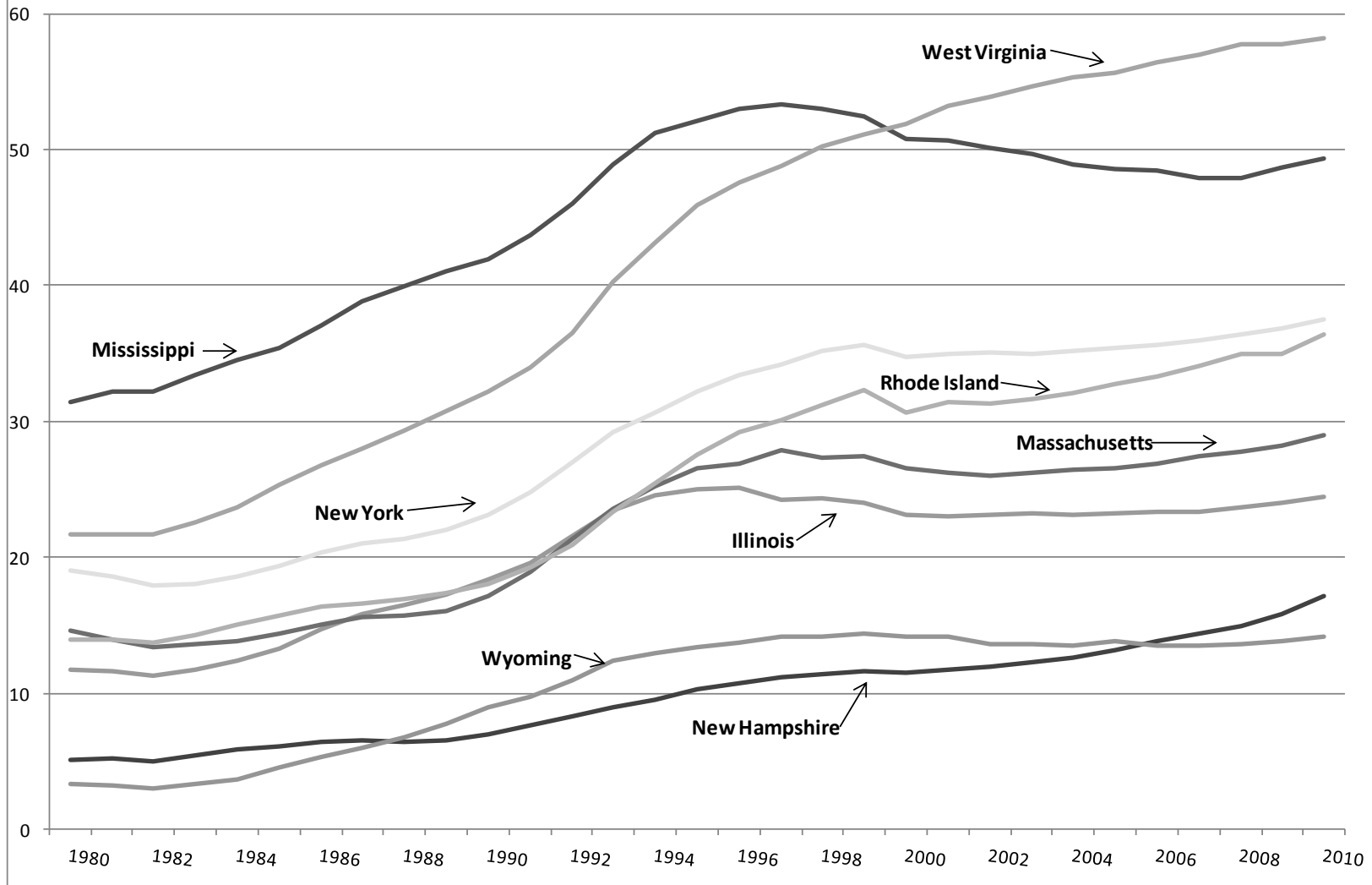
Source: *Annual Statistical Supplement to the Social Security Bulletin*, various years, and Census Bureau population estimates, various years.

**Figure 2: Total federal SSI-blind and SSI-disabled payments,
(in billions of 2009\$)**



Source: *Annual Statistical Supplement to the Social Security Bulletin*, various years.

**Figure 3: SSI-disabled adults (per 1000 population)
selected states, 1980-2010**



Source: *Annual Statistical Supplement to the Social Security Bulletin*, various years, and Census Bureau population estimates, various years.

Figure 4a: Year effects on SSI participation, adult disabled women

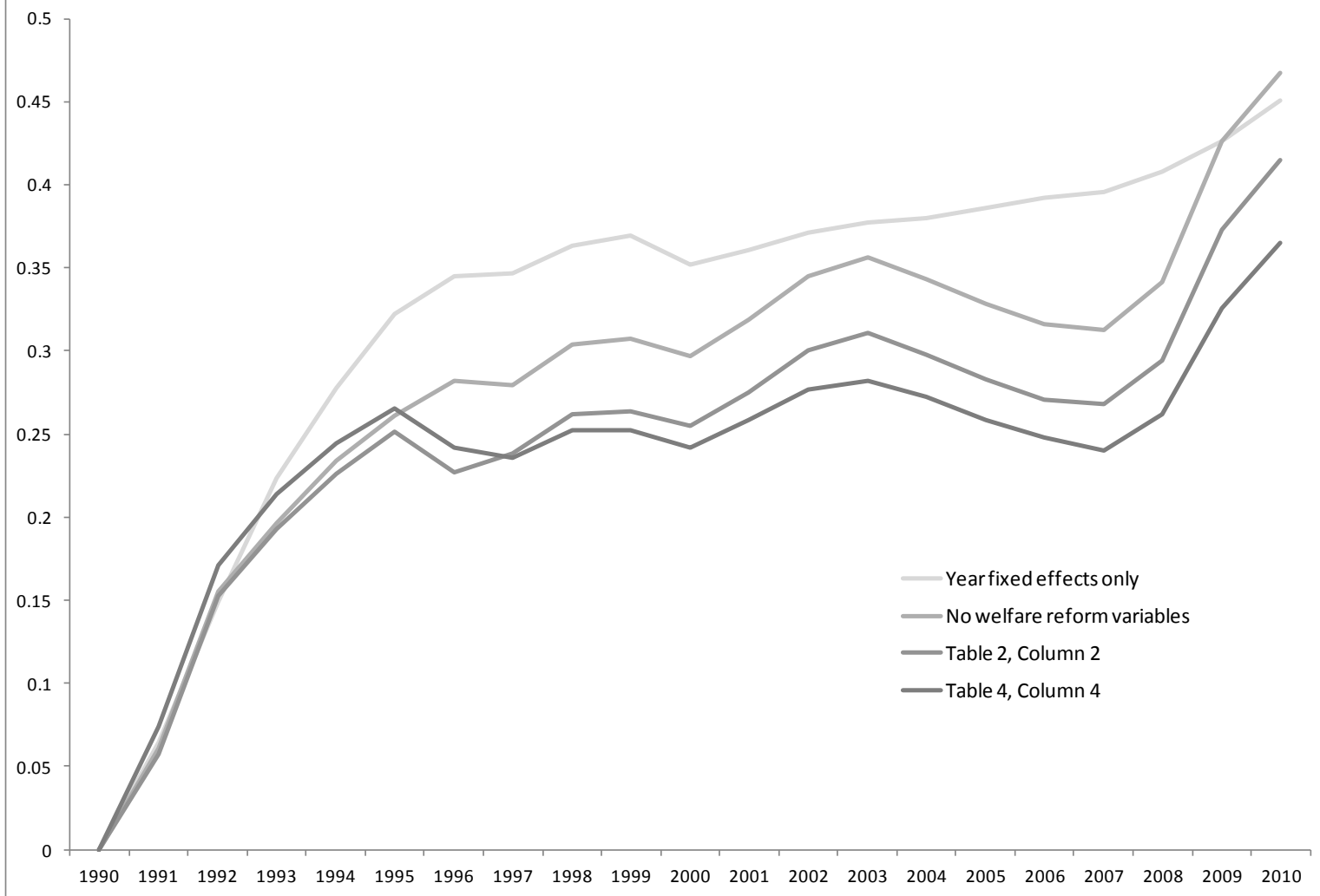


Figure 4b: Year effects on SSI participation, adult disabled men

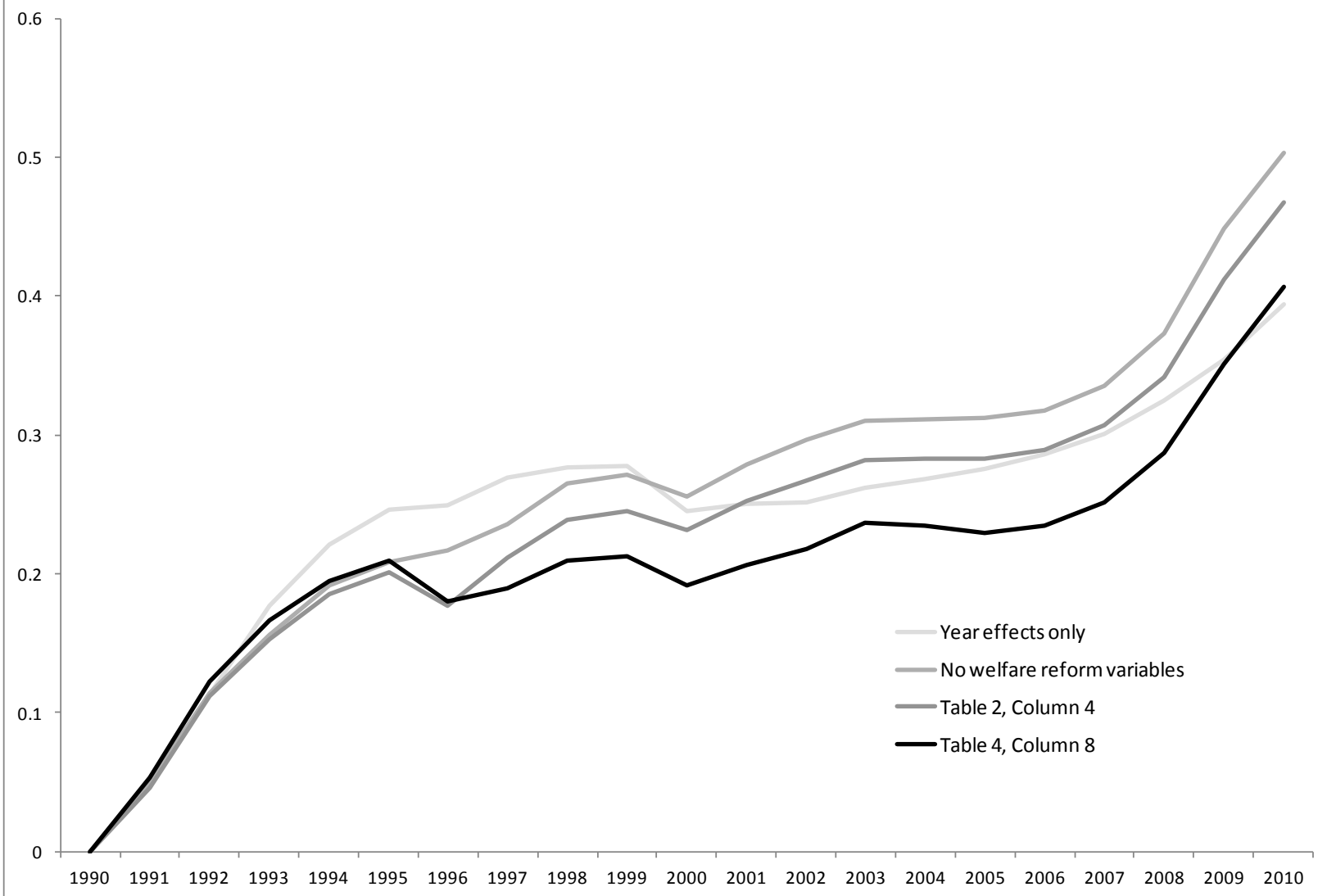


Figure 4c: Year effects on SSI participation, disabled children

