# FEDERALIZING BENEFITS: THE INTRODUCTION OF SUPPLEMENTAL SECURITY INCOME AND THE SIZE OF THE SAFETY NET*

Andrew Goodman-Bacon, Vanderbilt University and NBER
Lucie Schmidt, Williams College and NBER

June 2019, revised March 2020

## Abstract

In 1974, Supplemental Security Income (SSI) federalized cash welfare programs for the elderly, blind, and individuals with disabilities, imposing a national minimum benefit, and differentially raising payment levels in states that paid below its benefit floor. We show that this increased disability participation, but shrank non-disability cash transfer programs. For every four new SSI recipients, three came from other welfare programs. Each dollar of per capita SSI income increased total per capita transfer income by just over 50 cents. Federalizing part of a patchwork safety net need not increase redistribution by as much as traditional models of fiscal federalism suggest.

*Acknowledgements: This research was generously supported by the U.S. Social Security Administration (SSA) through grant #5 DRC12000002-06 to the National Bureau of Economic Research as part of the SSA Disability Research Consortium. The findings and conclusions expressed are solely those of the authors and do not represent the views of SSA, any agency of the Federal Government, or the NBER. Excellent research assistance was provided by Maria Hidalgo Romero, Boadjom MacCarthy, John Maruyama, Summiya Najam, Matt Pesner, and Teresa Yu. We are grateful for helpful comments from Marianne Bitler, Bill Collins, Manasi Deshpande, Dan Fetter, Hilary Hoynes, Hamish Low, and seminar participants at Vanderbilt University, University of Oxford, University of Illinois Urbana-Champaign, Williams College, the Center of Research in Health and Economics at Universitat Pompeu Fabra, the 2019 NBER DAE Spring Meeting, and the 2019 European Association of Labor Economists Meeting. All errors are our own.

Upon its introduction in 1974, the Supplemental Security Income (SSI) program was described as "the most fundamental new departure in U.S. public welfare policy since the 1930s" (Bickel and Wilcock 1974, p. vii). SSI replaced a set of highly variable state welfare programs for the elderly, blind, and individuals with disabilities with a federal system designed to be "more uniform and equitable" (Nixon 1974). It raised benefits up to a federal income floor, sought to remove "any stigma of being dependent on welfare" (Senator Wallace Bennet [R-UT] quoted in Berkowitz and DeWitt 2013, p. 40), and delivered "fiscal relief to State and local governments" (Nixon 1974).

Economic models of fiscal federalism (Brown and Oates 1987, Brueckner 2000, Oates 1999), predict that national income redistribution programs will pay higher benefits than local ones.[1] This suggests that SSI's introduction should have greatly increased the size of the safety net.[2] By federalizing just part of a patchwork of welfare programs, however, SSI created incentives for both states and individuals to "shift" cases away from less generous programs partly or wholly financed by the states (Schmidt and Sevak 2004). This kind of program substitution is not part of traditional models of federalism, which only consider one welfare program. When recipients can move between programs, federalizing part of the welfare system need not increase redistribution, at least not by as much as traditional models suggest.

This paper uses SSI's introduction to ask how federalizing just part of the cash safety net affects total income redistribution. To address these questions, we digitized state-by-month data on spending and participation in all categorical welfare programs from 1950 to 1980. These data cover more programs, outcomes, and time periods than existing administrative or survey datasets, and allow us to track the state-controlled welfare programs SSI replaced, as well as the other

[1] These predictions stem from local policymakers concerned with recipient migration but not redistribution preferences outside their jurisdiction.
[2] See Chernick (1998) for an analysis of SSI in a fiscal federalism framework.

programs that remained under state control (for single-parent families and, in some states, other poor adults without disabilities) for three decades surrounding SSI's 1974 introduction.

Our difference-in-differences research design exploits variation in benefit generosity in the pre-existing state programs which, combined with the federal nature of SSI, led to wide differences in benefit *changes* across states. As Social Security Administration historian Larry DeWitt put it: "SSI was a radical welfare reform in Mississippi and only an incremental reform in New York City" (Berkowitz and DeWitt 2013). We compare changes in payments per recipient and program participation before and after SSI's introduction in states with lower versus higher pre-SSI benefit levels. Crucially, though, we make these comparisons separately for two groups of states. Individuals in states with low benefits (binding states) before SSI experienced large increases in generosity because of SSI's income floor. States with high benefits before SSI (non-binding states) had no change in generosity because of a maintenance of effort provision that largely required them to hold benefits constant through supplemental payments. This distinct feature of SSI strengthens our research design by embedding a falsification test (null effects in non-binding states) that helps rule out concerns about confounding factors correlated with state generosity.

We find strong evidence of caseload shifting: SSI increased the size of disability transfer programs but shrank other adult programs, dampening its effect on the overall safety net. Trends in welfare participation rates were nearly identical for states with different pre-SSI benefit levels from 1950 to 1973, but immediately after SSI began, the lowest-benefit states saw the largest jumps in disability participation and relative reductions in participation in other programs. Three out of every four SSI recipients induced to participate because of benefit increases came from other welfare programs, and thus each dollar of per capita income transferred through SSI increased total per capita transfer income by just over 50 cents. (While we find statistically significant reductions

in non-disability programs, our two-stage least squares estimates of caseload shifting per new SSI case or net transfer per SSI dollar are not very precisely estimated.) We also apply our design to the distribution of welfare income and total income in the 1970 and 1980 censuses and find that, even with the substantial caseload shifting demonstrated by our analysis, SSI raised incomes among poor adults with disabilities.[3] Finally, we show that while almost all states saved in terms of cash welfare costs as a result of the introduction of SSI ("fiscal externalities", Mayshar 1990), these savings appear to be swamped by increases in Medicaid expenditures.

Our results are the first to show how SSI, one of the biggest welfare reforms of the 20th century, changed not only the size, but also the composition of welfare programs. Existing research focuses on smaller changes that "pushed" recipients off non-SSI programs in the 1990s (Bound, Kossoudji, and Ricart-Moes 1998, Kubik 2003, Schmidt and Sevak 2004). In contrast, we examine a large change to the adult SSI categories from a starting point of very low benefits. This context is essential to understanding the development of the safety net for adults with disabilities, and for understanding whether shifting behavior varies across potentially very different marginal populations. We also provide a unique analysis of SSI's effect on the income distribution. SSI raised average annual payments per recipient in binding states by about $1,700, but caseload shifting means that only about half of that represented *new* income.[4] Lastly, we connect shifting to cost-benefit analyses. SSI's effect on participation in *disability* welfare programs is four times as large as its effect on participation in any welfare program, so SSI's reduced form effects on well-being are likely much smaller than the program's size suggests. Failing to account for these program interactions inflates costs and may understate benefits.

[3] We find no relationship between benefit increases and the share of adults who self-reported a work-limiting disability, as we discuss below.
[4] We find no evidence of reductions in labor supply as a result of the introduction of SSI.

## I. DISABILITY TRANSFER PROGRAMS BEFORE AND AFTER SSI

In response to the Great Depression, in 1934 Franklin Roosevelt created the Committee on Economic Security (CES), which quickly provided recommendations to Congress that "sketch[ed] the need for additional safeguards against *the major hazards and vicissitudes of life*." The Committee's report led to the enactment of the Social Security Act of 1935, which for the first time committed the federal government of the United States to the economic security of many of its most vulnerable residents.

The Social Security Act outlined the structure of cash assistance in the US (Grundman 1985). Despite the fact that it was federal legislation, it created a structure of programs that were split in both funding and responsibility between the federal and state levels. Subject to rough federal guidelines on eligibility and program administration (but not on benefit levels), states obtained federal financial support ("grants-in-aid") that offset at least half of the cost of means-tested cash transfers for certain categories of recipients. In 1935 these included the elderly (through Old Age Assistance (OAA)), the blind (through Aid to the Blind (AB)), and single-parent families (through Aid to Families with Dependent Children (AFDC)). States controlled the baseline level of payments and other parameters such as the treatment of income and assets, which typically followed long-standing and highly persistent social welfare traditions (Fishback et al. 2010, Moehling 2007).

Benefits for individuals with disabilities were not part of the original Social Security Act. The Aid to the Permanently and Totally Disabled (APTD) program, structured in the same way as the 1935 programs, was created in 1950.[5] Disability policy in the United States then remained largely

[5] The unpublished studies produced by the CES include studies on both Invalidity Insurance and on Provisions for the Physically Handicapped (https://www.ssa.gov/history/reports/ces/cesvolsix.html). However, in his suggestions to the Advisory Council, Edwin Witte (executive director of the CES and later known as the "Father of Social Security") wrote, "Invalidity is the most serious of all economic hazards that can strike any individual, but fortunately affects

unchanged until the early 1970s, when SSI was introduced in reaction to more comprehensive proposals for universal basic income programs.[6] In 1969, President Richard Nixon proposed the Family Assistance Plan (FAP), a negative income tax for families with children that would have replaced AFDC (CQ Almanac 1971). For those in the other "adult" welfare categories (the aged, the blind, and those with disabilities), Nixon proposed to add a national minimum benefit level and eligibility criteria but otherwise leave states in control. Senator Russell Long (D-LA) strongly opposed the FAP, and in 1971 introduced SSI, a fully federal version of Nixon's plan for the non-AFDC categories, as a way to ensure FAP's failure.[7] The importance of SSI was largely missed at the time by both politicians and journalists.[8] It passed at the end of 1972, but was not implemented until January 1, 1974, to allow the Social Security Administration time to plan.

### *A. SSI's Benefit Provisions*

SSI provided a nominal minimum benefit ($G^{SSI}$) for a single adult beneficiary with no other income of $140 per month ($756 in 2017 dollars).[9] The federal benefit was set near the median of existing APTD/AB/OAA payments across states (Bickel and Wilcock 1974, pg. 16). Recipients in states

only a relatively small part of the population. Experience with invalidity insurance in this country has been very unsatisfactory and there is no basis now for a possible compilation of the costs. Consequently, it is suggested that there be no recommendation on invalidity insurance except that the National Welfare Administration shall collect statistics for the computation of costs and further study the possibilities of invalidity insurance" (Witte 1934). Disability Insurance (distinct from APTD) was not created until the 1956 Amendments to the Social Security Act (Grundman 1985).

[6] This paragraph draws heavily from Berkowitz and DeWitt (2013).

[7] Long and other conservatives were joined in their opposition to the FAP by welfare rights activists, who observed that benefit levels would fall under the FAP in many states and that the FAP would impose other restrictions on welfare recipients (Burke and Burke 1974). Long later said, "To keep them from coming back with something that was going to make the whole nation into a welfare state, I felt the way to spike their guns on that would be to take all the money they estimated on this family program and apply that to the aged" (quoted in Berkowitz and DeWitt 2013, pg. 35).

[8] A great deal of attention had been paid to the debate over FAP, and "only a few Congressman saw the significance" of SSI (Berkowitz and DeWitt 2013, pg. 43). The creation of a wholly federal program for the aged, blind, and those with disabilities "escaped detection because few read the plan, because few understood the welfare status quo well enough to appreciate the plan, and because [people] interpreted the triple endorsement of Richard Nixon, Wilbur Mills, and Russell Long as a guarantee that the plan was modest" (Burke and Burke 1974, pg. 197). But for the first time, the federal government of the United States committed to providing a guaranteed level of cash income to certain categories of adults who were considered unable to work.

[9] Benefits were indexed to inflation in December 1975. The 2018 individual benefit is $750.

with APTD benefits ($G_s^{APTD}$) below SSI's level experienced automatic benefit increases that were proportional to the distance between their APTD benefit and the new SSI level. We refer to these as "binding states," indicated by $B_s \equiv 1\{G_s^{APTD} < G^{SSI}\}$. However, the original legislation required that existing recipients not be made worse off by the move to SSI. As a result, states with APTD benefits above SSI's level—"non-binding states"—were required to supplement federal SSI payments up to their APTD levels (at least for recipients transferred from APTD).[10]

The attempt to shift from a "divergent array" of APTD programs to a "nationally standardized system of subsistence-income grants" under SSI had "highly uneven effects" on welfare benefits for adults with disabilities (Bickel and Wilcock 1974, pg. 15). Figure 1 maps the (real) difference between SSI's monthly benefit floor and each state's 1971 APTD maximum benefit, denoted $d_s \equiv G_s^{APTD} - G^{SSI}$.[11] Alabama, Mississippi, Louisiana, and West Virginia had benefits that were more than $300 below SSI's level, while Oregon's benefit was just $97 below it.[12] Wide differences existed between non-binding states as well (shown in white). Michigan's APTD benefit was $454 over SSI's minimum, while Wisconsin's was just $97 above. State supplementation, however, meant that these pre-existing benefit differences did not translate to post-SSI benefit changes, and prevented the new system from providing completely uniform benefits across all states.

The following equation approximates the change in statutory benefit levels before and after SSI as a function of its APTD payment in state $s$:[13]

[10] State supplements are reported separately from federal SSI benefits. Some states paid supplements to recipients who were not eligible for any federal benefit, and we include them in our counts of SSI recipients. In addition to mandatory supplementation in high-benefit states, any state could elect to supplement benefits.

[11] APTD benefit maxima are the "largest amount paid for basic needs" listed in "Public Assistance Programs: Standards for Basic Needs, July 1971" (DHEW 1972).

[12] One potential concern is that SSI-induced benefit increases were largest in the South, which is also an area with high disability rates. We address this concern in our robustness checks.

[13] When we discuss benefit policy we use monthly dollar amounts because this is the frequency at which participation is determined and how benefit policy is written. For benefit outcomes we use annual dollar amounts to be consistent with measurement in surveys and to compare to benchmark amounts like poverty thresholds.

$$\Delta G_s \approx |G_s^{APTD} - G^{SSI}| \times 1\{G_s^{APTD} < G^{SSI}\} = |d_s| \times B_s. \qquad (1)$$

This defines specific predictions about SSI's cross-state effects on benefit levels. Prediction 1: In binding states ($B_s = 1$), SSI increased maximum benefits by however much its national minimum exceeded the APTD benefit ($|d_s|$). Prediction 2: In non-binding states ($B_s = 0$), benefit levels did not change differentially in more versus less generous APTD states. SSI created a kinked relationship between pre-existing generosity and post-SSI benefit changes.

This approximation matches actual benefit changes quite well. In 1973, low-benefit states paid about $150 less on average than high-benefit states, but SSI cut this gap in half. Benefit changes by state also clearly show the kinked pattern predicted by equation (1). Panel A of Figure 2 plots the change in disability payments per recipient between 1973 and 1975 against the 1971 APTD benefit maximum, with each point in this figure representing one state.[14] Benefits in the least generous states grew by as much as $2,300 a year, while the average growth in non-binding states is close to zero. Benefits grew by $380 for each $100 difference in the maximum APTD benefit in the binding states (SE = 105) but there is no relationship in non-binding states.[15]

*B. SSI's Non-Benefit Provisions*

In addition to raising benefits, SSI also adopted the existing definition of disability status from the Social Security Disability Insurance (SSDI) program and sought to reduce stigma.[16] Referring to SSI's target populations, Republican Senator Wallace Bennett (R-UT) noted that Congress had "tried to raise their income in such a way that they would be free as far as possible from any stigma of being dependent on welfare" (Berkowitz and DeWitt 2013, pg. 40). SSI checks in all states were

[14] We discuss our data sources in Section III.

[15] The change is not one-for-one because recipients with other income got less than the maximum.

[16] The APTD medical eligibility criteria had been established by states with little federal guidance: "The most restrictive definition would cover only those individuals who are completely helpless, as determined by medical evidence alone. The Social Security Administration does not require or recommend that the States use such a restrictive definition" (Hill 1950, pg. 13).

designed to look like those paid to Social Security recipients and to be visually distinct from "welfare" checks (Berkowitz and DeWitt 2013, pgs. 51-52). Policy makers also took the opportunity to entrench a different notion of deservingness around the new SSI program's recipients vs. those on traditional welfare programs such as AFDC. In a signing statement, President Nixon called SSI recipients "especially deserving people" and wrote that his administration "worked hard to see that services are concentrated on those who are truly needy, rather than permitting funds to be spent with little regard for genuine need" (Nixon 1974). Senator Abe Ribicoff (D-CT) praised SSI because it took people "off welfare" (Burke and Burke 1974, pg. 196).

Indeed, even as recipients reported an improved administrative experience with SSI vs. APTD/AB programs, SSI also appeared to have the desired effect on lessening welfare stigma. Using 3,434 adults who responded to and received disability assistance in both waves of the from the Survey of Low Income Aged and Disabled (SLIAD; Social Security Administration 1992), we find that about 80 percent of SSI recipients felt it was "better" than APTD/AB and the likelihood that recipients felt either "bothered by having to accept aid" or would be "embarrassed to admit" receiving aid SSI fell by about 20 percentage points relative to APTD/AB.

Most SSI recipients also received public health insurance through Medicaid, but those who got categorical cash welfare before SSI had been eligible since Medicaid's inception in 1966. Moving to SSI from APTD, AB, OAA, or AFDC did not change Medicaid status. New SSI recipients who received no cash benefits likely represented new Medicaid cases and costs to states.[17] Medicaid was financed by the federal and state governments on the same basis as cash benefits: open-ended

[17] To the extent that Medicaid recipients who qualified because high medical bills ("medically needy") moved onto SSI, this also does not imply new Medicaid costs.

federal matching based on a cost-sharing rate that fell with state per-capita income. States paid between 17 and 50 percent Medicaid costs for any *new* recipients.

## II. Expected Effects on Take-Up and Caseload Shifting

Ashenfelter's (1983) canonical take-up model predicts that by raising benefits, SSI should increase take-up of disability transfers both because higher payments raise financial eligibility (mechanical effect), and because they lead to reductions in income in proportion to the compensated labor supply elasticity (behavioral effect).[18] Consistent with this, our raw outcome data highlight that participation in disability programs rose most where benefits rose most. Panel B of Figure 2 shows the same kinked relationship between disability participation growth from 1973 to 1975 and APTD benefits that we observe for benefit levels. Participation jumped by one percentage point in the lowest-benefit binding states, but by half as much across the non-binding states.

### *A. Individual Incentives for Caseload Shifting*

SSI typically paid higher benefits than other adult programs on an individual basis (in some states, a household's AFDC benefit is bigger than an individual's SSI benefit because it covers children). This created new incentives to leave AFDC or GA and move onto SSI, a behavior known as caseload shifting. We expect strong caseload shifting for several reasons. First, AFDC and GA recipients have high rates of underlying health problems.[19] Second, because AFDC or GA recipients receive some welfare by definition, they have already incurred psychological "welfare stigma" (Moffitt 1983) and are already income eligible. (Among adults with disabilities and no welfare income in the 1970 Census, 56 percent made more than twice SSI's maximum annual

[18] SSI also typically treated other income, including earnings, as well as assets more generously than APTD. This reduction in the benefit tax rate also mechanically increases eligibility (Ashenfelter 1983).

[19] In 1967 AFDC administrative data, caseworkers report that 12 percent of AFDC mothers are on the program because they are "incapacitated." Data from the 1970 Census shows that 29 percent of mothers aged 25-64 with welfare income report a work limiting disability, compared to 8 percent of mothers without welfare income.

benefit.) The decision about whether to take AFDC or SSI conditional on receiving *some* benefit should therefore be much more sensitive to payment levels than the basic take-up decision.

If the non-working adult in an AFDC family were to switch to SSI, she would gain the $140 monthly SSI benefit plus any supplement paid by her state. Her children would remain on AFDC as a child-only case, and the family would lose only the adult portion of the monthly AFDC benefit. The first row of Table 1 shows that the gains to switching for an individual were generally highest in the binding states. For example, in Mississippi, a family that switched would gain $140 in federal SSI benefits, and lose only the $15 adult portion of the AFDC benefit. In annual 2017$ terms, this would represent a gain to the family of $7,392. On average, AFDC adults with no other income in states with APTD benefits under $500 stood to gain $5,067 per year by shifting to SSI.

On the other hand, in New York, a family that switched from AFDC to SSI would gain $140 plus a $61 state supplement, and lose the $152.50 adult portion of the AFDC benefit, resulting in only a $2,868 gain in annual 2017$. In contrast to the low-benefit states, AFDC adults in states with high-APTD benefits would only gain about $800 in annual family income by moving to SSI. The incentive for individuals to shift programs tracks SSI's benefit effects closely.[20]

### *B. State Incentives for Caseload Shifting*

SSI also created incentives for states to alter tax and spending policy and potentially shift cases. First, all states gained from federalization of APTD, AB, and OAA. The size of the windfall and states' income elasticities across expenditure and revenue items determine whether this "fiscal relief" aspect of SSI could generate differential caseload shifting across states. Figure A1 shows that in fiscal year 1973, binding states spent about $215 per adult on "public welfare" compared to $460 in non-binding states. While this amounts to between 5 and 10 percent of own-source

[20] Wiseman (1975) is a vivid account of navigating welfare bureaucracy for AFDC, local transfers, and SSI.

revenues per adult ($3,100 and $3,900), it includes all programs as well as expensive non-cash benefits like Medicaid.[21] The potential income effects were therefore fairly limited. Moreover, while direct fiscal relief from federalization may have mattered for state tax and expenditure policy, it did not correlate with pre-SSI benefit generosity.

Federalization had "price effects" in addition to income effects. States whose AFDC or GA benefits cost more than their SSI supplements had an incentive to steer recipients toward SSI. The second row of Table 1 reports estimated savings to the state from shifting one adult from AFDC to SSI. We calculate the difference between the state's share of the cost of paying AFDC to one adult (a function of benefit policy and federal matching) and the state's SSI supplementation cost, if any. (States paid for all of GA but we do not have information on its statutory benefit levels.) In contrast to the pattern of gains for individuals, we find, if anything, a weak positive relationship between state savings and APTD benefit levels. The seven lowest-benefit states, for example, stood to save just $1,200 from shifting a recipient out of a low-paying and highly subsidized AFDC program onto a fully federal SSI program. Generous APTD states typically paid a higher share of their larger AFDC benefits and so saved slightly more through caseload shifting.[22] It was clear that some of these states had recognized the benefits of caseload shifting even before SSI was implemented.[23]

[21] The Census Bureau digitized these data from a series called "Compendium of State Government Finances." State revenues and costs refer to total outlays on public welfare (or total state revenues) minus federal intergovernmental revenue. As discussed above, the federal government paid at least half of cash welfare costs, but cost-sharing rates varied inversely with per capita income. Typically richer non-binding states enjoyed about 55 percent federal cost sharing in their welfare programs, while the rate in the average binding state was almost two-thirds.

[22] The states that lost money through shifting were typically those that paid large SSI supplements so that moving a recipient onto SSI still required the state to pay some cash benefit.

[23] Berkowitz and DeWitt (2013) write: "Members of Congress had received reports that New York was manipulating its welfare rolls. Local officials there realized that it was far more advantageous for a woman to be on the SSI rolls than on the Aid to Families with Dependent Children (AFDC) rolls, since SSI benefits were much cheaper to the state and higher to the beneficiary than AFDC benefits. As a consequence, the state rushed to transfer women with disabilities from AFDC to SSI in the hope that they might be grandfathered into the new program" (Berkowitz and DeWitt 2013, pg. 62).

### *C. Evidence on Caseload Shifting*

Existing evidence on caseload shifting to SSI comes from changes to other programs in the 1980s and 1990s in the later years of the program. For example, SSI absorbed cases after related programs shrank. Bound, Kossoudji, and Ricart-Moes (1998) find that after Michigan eliminated its GA program, state outreach efforts increased SSI applications. Schmidt and Sevak (2004) find that state-level waivers reforming welfare prior to 1996 led to a significant increase in the likelihood that single-mother families reported SSI receipt. Shifting to SSI has also been strongest among those who expect low benefits in other programs. Garrett and Glied (2000) find that in the years following the Sullivan v Zebley decision liberalizing child SSI eligibility criteria, states with the highest AFDC benefits saw the smallest increases in child SSI participation. Kubik (2003) finds that families who were likely to receive high non-SSI benefits were less likely to apply for SSI.

Our analysis extends this work in three main ways. First, we study whether SSI generosity itself induces shifting, while the existing literature focuses on competing programs. The responsiveness to SSI policy is an open policy-relevant question. Second, shifting behavior around SSI's introduction reflects a different marginal population than in later periods when SSI was familiar and inframarginal households already received it. Third, we are able to examine the net effects of the introduction of SSI on the distribution of income in the presence any caseload shifting. Our findings show how welfare reforms for adults with disabilities affected the growth and development of the overall social safety net. Finally, our data and empirical strategy provide the most credible evidence on caseload shifting.[24]

[24] Most closely related to our work is Albritton (1979), who uses time-series methods to evaluate SSI's introduction. He finds large increases in disability participation as well as reductions in AFDC by extending pre-SSI time-series parameter estimates to the post-SSI period. Our paper is also related to two studies of SSI's introduction, neither of which consider caseload shifting. Chernick (1998) analyzes changes in SSI supplemental payments in the years after 1974 and draws analogy to TANF's block grant financing. Munnell (1977) describes the way that SSI affected state finances by using historical growth rates in APTD, AB, and OAA to calculate counterfactual welfare spending. Importantly, this ignores changes to AFDC and GA spending that come from caseload shifting.

## III. HISTORICAL DATA ON CASH TRANSFER PROGRAMS

One impediment to research on the development of the American safety net is the lack of detailed, high-frequency, local data on cash transfer programs throughout the 20th century.[25] To fill this gap we created a new state-month panel of the number of recipients and amount of benefit spending for the entire history of the modern cash safety net from 1936 through 1988. Primary source information comes from either the Department of Health, Education, and Welfare (DHEW) or the Social Security Administration (see data appendix for sources and details on data cleaning) and covers APTD, AFDC, General Assistance (GA), and Medical Vendor Payments (MVPs).[26,27] After the introduction of SSI, recipients who are elderly, blind or have a disability are recorded by these eligibility categories under SSI. Except for AFDC participation after 1959, these data are all new.

We create measures of participation and spending that refer to non-elderly adults only. Our data on APTD report the number of recipients. GA sometimes covered children, so we use the reported number of cases to capture adult participation. The number of AFDC adults equals the total number of recipients minus children. We also adjust recipient counts in some cases to exclude those who received medical care only (see Data Appendix). We collapse our data by year to avoid differences in seasonality across states. We study three outcomes for disability programs (APTD) and non-disability programs (AFDC plus GA): the average monthly adult participation rate

[25] Most survey datasets and one administrative dataset of AFDC recipients (see Moffitt 1987) only become available in the 1960s, and the census does not include welfare income until 1970. State-by-month data only exist for AFDC (Blank 2001), and county-by-year data exist only as aggregates across several programs (Almond, Hoynes, and Schanzenbach 2011). Research on the long-run development of the welfare system relies on periodic snapshots of policy variables (Fishback et al. 2010, Moehling 2007), or narrative evidence (Alston and Ferrie 1985). Other work focuses on watershed periods like the New Deal (Fishback, Haines, and Kantor 2007) or the War on Poverty (Bailey and Duquette 2014). Recent research exploits unique datasets from a point in time such as Mother's Pension case records (Aizer et al. 2014) or that of the full-count 1940 census (Fetter 2017, Fetter and Lockwood 2016).

[26] Starting in October 1950, states could claim federal reimbursement for medical payments made directly to providers (known as "vendor payments") on behalf of welfare recipients.

[27] We do not examine OAA, since the scope for shifting from other programs was limited, or AB which was by far the smallest program and sometimes had different policy parameters than APTD.

(recipients per adult aged 25–64 averaged across months), the average annual benefit (annual cash payments divided by average monthly number of recipients), and annual per capita transfer income (annual cash payments divided by adults aged 25–64).[28,29] Table 2 presents summary statistics for total participation and spending in panel A, and our outcome measures in panel B.

Our focus on disability transfers motivates several sample restrictions. First, our sample begins in 1950 when SSI's immediate predecessor for adults with disabilities, APTD, began, and it ends in 1980 because 1981 marked a major AFDC reform. Second, we exclude Nevada, which never enacted APTD, as well as Alaska, Hawaii, and the territories, which are inconsistently measured.

To measure multiple program participation, we also use administrative data on AFDC recipients that report the benefit status of everyone in a sample of 155,528 AFDC households in 1967, 1973, 1975, and 1977 (DHEW 2011). An AFDC household can include recipients of other programs, such as APTD/AB/SSI. For each state and year we calculate a measure of caseload shifting: the share of adults in an AFDC household who received disability benefits.

Finally, to quantify SSI's effect on the total income distribution we also use the 1970 and 1980 censuses. Both ask about disabilities that limit work, which allows us to compare adults with and without disabilities with plausibly different access to SSI. Furthermore, the 1970 and 1980 censuses are the first to record welfare income specifically, which we use as a check on our results in the administrative data.

## IV. Empirical Strategy: Difference-in-Differences Using Pre-SSI Benefits

Our research design builds on SSI's effects on benefits described in equation (1). Our outcomes $y_{st}$ for state $s$ in year $t$ include participation (recipients per number of adults) and transfer

[28] The SSA Bulletin's Annual Statistical Supplement separately tabulates state SSI supplemental payments, which we discuss below. Our recipient and payment outcomes include federal- and state-administered supplementation.
[29] Data on state populations come from census counts (Haines and ICPSR 2010) and the Surveillance, Epidemiology, and End Results (SEER) database (SEER 2013), and we convert all benefit values to 2017 dollars.

payments (dollars per recipient) for both the disability programs (APTD/AB and SSI) and non-disability programs (AFDC and GA). We estimate the following event-study specification:

$$y_{st} = \alpha_s + \left[\alpha_t + \sum_{t=1950}^{1972} \lambda_t^U \alpha_t |d_s| + \sum_{t=1974}^{1980} \gamma_t^U \alpha_t |d_s|\right] B_s + \left[\alpha_t + \sum_{t=1950}^{1972} \lambda_t^O \alpha_t |d_s| + \sum_{t=1974}^{1980} \gamma_t^O \alpha_t |d_s|\right] (1 - B_s) + \boldsymbol{\beta}' \boldsymbol{X_{st}} + \epsilon_{st}. \quad (2)$$

$\alpha_s$ are state fixed effects. $\alpha_t$ are year fixed effects and we allow them to differ for states that were above or below SSI's minimum benefit.[30] $\boldsymbol{X_{st}}$ includes the share of each year that a state operated an APTD program or an AFDC-UP program and year effects for groups of states that implemented Medicaid in different years.[31] We include these because they affect cross-state changes in the size of pre-SSI transfers either directly or potentially through caseload shifting.

The event-study interactions between year dummies and the distance to the SSI benefit floor ($|d_s|$) trace out changes in the relationship between outcomes and generosity in each year before and after SSI, with 1973 as the omitted year. (We scale $d_s$ by 100, so all coefficients refer to a \$100 difference between $G_s^{APTD}$ and $G^{SSI}$.) The interaction of these variables with $B_s$ and $1 - B_s$ reflects the prediction that pre-SSI generosity should have different effects in binding and non-binding states. The $\lambda_t$ coefficients are falsification tests that show whether trends in safety net outcomes were correlated with APTD generosity in the 1950s, 1960s, and early 1970s (prediction 2). The $\gamma_t^U$ coefficients test for relative changes in outcomes after SSI in the lowest-benefit states compared to states with APTD benefits just below the $G^{SSI}$ (prediction 1). The $\gamma_t^O$ coefficients

[30] Our year fixed effects nest the more standard single set of year FE, and are more conservative, ensuring that our coefficients are dose-response slopes within each group (binding and non-binding states). Otherwise, our binding coefficients could come from differences on average between the two groups of states.

[31] In 1962 states gained the option to extend AFDC to families that included a second, unemployed parent, creating AFDC-UP programs.

have a similar interpretation, but reflect relative changes in the highest-APTD-benefit states compared to states with APTD benefits just above $G^{SSI}$. Equation (1) and Figure 3 suggest that these coefficients should be close to zero because higher-benefit states did not experience differential benefit increases.

Motivated by the event-study results we also estimate specifications that omit the interactions for the "non-binding" states (whose coefficients are zero), and replace the event-study dummies for the binding states with a time-trend and post-SSI trend breaks interacted with $|d_s|$:

$$y_{st} = \alpha_s + \alpha_t + \boldsymbol{\beta}'\boldsymbol{X_{st}} + [\alpha_t + \Lambda_t^U(t-1973)|d_s| + \Gamma_t^U(t-1973)1\{t > 1973\}|d_s|]B_s + \epsilon_{st}. \quad (3)$$

$\widehat{\Lambda}_t^U$ test for differential linear pre-trends in binding states and $\hat{\Gamma}_t^U$ measures the difference in outcomes per year due to a $100 difference in APTD benefits. These reduced-form specifications increase power and provide a single parameter measuring SSI's state-level effect. For these estimates we present *p*-values from 500 random permutations of $d_s$ (and therefore $B_s$).

Finally, we use an instrumental variables (IV) model to present the magnitude of caseload shifting in terms of gross SSI take up. This approach simply uses the post-SSI trend-break in binding states from equation (3) as an instrument for the disability variables (participation rates or per capita transfers) using the non-disability variables as outcomes. The estimates equal the ratio of the non-disability to disability trend-breaks. For participation results they reflect the change in the number of non-disability or overall recipients for each new SSI recipient, and the per capita transfer results reflect the change in per capita transfer income for each $1 increase in per capita SSI income.

### *A. Correlates of 1971 APTD Benefit Levels*

Internal validity of our design requires that no other important determinants of changing safety net outcomes correlate with the level of APTD generosity in the specific way that SSI did. In fact, many changes in the 1970s could have affected the population targeted by SSI. For example, the 1970 Clean Air Act led to large changes in employment in regulated areas (Greenstone 2002), the introduction of the Earned Income Tax Credit in 1975 increased employment among single mothers (Bastian 2018), and President Nixon's War on Cancer may have reduced mortality rates among those on the margin of SSI participation (Honoré and Lleras-Muney 2006).[32]

Fortunately, our long time-series and SSI's unique structure go a long way toward ruling out these kinds of confounders. First, our event-study results show pre-trends directly and separately for binding and non-binding states. Second, if APTD generosity (across the whole range of benefit levels) was correlated with sudden unobserved changes in 1974, we would expect to see evidence of this in all states, not just the binding states directly affected by SSI. Specifically, it is hard to tell a story where higher APTD generosity would be correlated with unobserved changes in 1974 only up to the SSI floor, but not above that. Third, evidence of caseload shifting will show increases in SSI participation but *decreases* in other program participation, while confounding changes in factors like labor demand, program stigma, or bureaucratic burdens would tend to move participation in these programs in the same direction. Therefore any sources of bias must be correlated with benefit levels and outcomes only for low-benefit states, only after 1974, and in opposite directions for disability and non-disability programs.

We test for such confounders using data from the 1960 through 1980 censuses. We first regress APTD participation rates in 1960 on demographic and economic characteristics from the 1960

[32] In Appendix Figure A2 we test for these specific sources of bias by estimating equation (2) using as the outcomes coal consumption per adult (a proxy for air pollution, shared with us by Edson Severnini), log age-adjusted cancer mortality rates, and the employment-to-population ratio. We find no evidence of differential changes by APTD generosity after 1974.

census, and use the coefficients to predict participation rates in 1970 and 1980.[33] Figure A3 plots predicted participation rates in 1970 and the change in predicted participation rates from 1970 to 1980 against the 1971 APTD benefit. Predicted participation is slightly higher in states with very low benefits, but the relationship does not have the same kinked pattern that SSI predicts. More important for our design, *changes* in predicted participation do not vary systematically with APTD generosity. Changing economic and demographic characteristics were not the cause of the differential changes in program participation documented in Figure 2.

We also fail to find evidence that changes to administrative procedure for verifying disabilities or to stigma vary systematically with APTD generosity. Appendix Figure A4 shows that disability rates were higher in the least generous APTD states in 1970, but that *changes* in self-reported disability rates between 1970 and 1980 are not correlated with APTD generosity.[34] Appendix Figure A5 plots the two SLIAD-based measures of stigma discussed above, and shows that self-reported stigma fell by as much in low-APTD benefit states as in higher ones. This supports our research design and suggests that it will not confound the financial incentives of higher benefits with other socioeconomic conditions or other aspects of SSI.

## V. Results: SSI's Differential Effect Across States

Figure 3 presents our main evidence that SSI's benefit floor increased disability benefit take-up partly at the expense of participation in other adult programs. We plot estimates of the event-study coefficients from equation (2) for the binding states and non-binding states. The flat pre-trends in panel A show that the evolution of disability program participation was uncorrelated with benefit

[33] Characteristics include the share of adults who are institutionalized, male, white, employed, out of the labor force, poor, veterans, married, living with parents, under age 40, or between age 40 and 49, or have either 12 or 16 years of education; average age; average individual income; and dummies for the year in which states implemented Medicaid.
[34] Schmidt and Sevak (2004) similarly find no response of adult disability rates to nonpecuniary changes in the relative value of SSI benefits in the 1990s, although childhood disability appears to change more in response to SSI policy (Garrett and Glied 2000).

levels during APTD's first 24 years. Immediately after SSI took effect, however, participation jumped in states with benefits lower than SSI's floor (prediction 1), but bore no relationship to APTD benefits where SSI did not bind (prediction 2). By 1980, states whose APTD benefits were an additional $100 below the SSI floor had added an additional 0.4 percent of adults to the SSI rolls. Whatever the average growth in SSI participation in the high-benefit states, it did not differ by APTD benefit generosity.[35]

This result confirms that SSI worked as intended—it raised benefits and participation the most in states that had been the least generous. Panel B shows that, consistent with strong caseload shifting, these same areas saw relative reductions in participation in the other adult assistance categories, AFDC and GA. We again find no evidence that other welfare participation trended differentially between 1950 and 1973.[36] Non-binding states did not have systematically different changes in other welfare participation according to their APTD generosity.

The first panel of Table 3 summarizes the event-study results using the reduced-form trend-break specification in equation (3). In each year after SSI started, states that were $100 farther below the benefit floor gained 0.049 additional percentage points of disability participation (column 1; SE = 0.013, permutation *p*-value = 0.000), but lost 0.038 percentage points in other welfare participation (column 2; SE = 0.021, permutation *p*-value = 0.052). We find no significant change in overall welfare participation, which is the difference in the other two estimates.

[35] Appendix Figures A6 and A7 present analogous event-study results for per-capita transfers and payment levels.

[36] APTD generosity is correlated with some changes in non-disability participation after 1962, when states gained the option to extend AFDC to two-parent families (AFDC-UP). While we control for the share of the year that states operated any such program, we have no way to control for the differential effect such programs had on changes in non-disability participation. We interpret these changes as stemming from heterogeneity in AFDC-UP programs. When using AFDC cases rather than adult recipients the pre-SSI shifts are much smaller. This makes sense because adding one AFDC-UP case actually adds two adults.

Panel B presents instrumental variables estimates that quantify the degree of caseload shifting and SSI's effect on total program participation rates relative to its direct effect on disability participation. To see how, note that if lower-benefit states added 0.049 percentage points per year in disability participation at the expense of 0.038 percentage points in other welfare participation, then 0.77 (0.038/0.049) recipients left non-disability programs for each person that got SSI. The just-identified IV estimate exactly equals this ratio (SE = 0.38, permutation *p*-value = 0.37). Column 3 again shows no strong evidence that SSI differentially affected adult welfare participation rates overall.

While SSI did not have large effects on overall welfare participation in the least generous states, it did raise benefits above AFDC levels and so may have boosted incomes by moving recipients onto a more generous program. To test this, Table 4 presents reduced-form and IV estimates for annual per capita transfer income (see appendix Figure A6 for corresponding event-study results). We find that reductions in income from non-disability programs are about half the size of the increases in disability transfer income due to SSI. Each $100 gap between APTD and SSI benefits translated to an additional $4 per year in per capita disability transfers after SSI (SE = 0.72), but $2.15 less in per capita transfers from other welfare programs (SE = 1.81). The IV estimates in panel B imply that for each dollar transferred by SSI, adults received $0.54 less from non-disability programs (SE = 0.41), raising per capita transfer income by just $0.47 (SE = 0.41). The confidence interval for total per capita transfers, however, includes both *reductions* and values as high as $1.27 (95% C.I.: -0.33, 1.27).

### *A. How do we know this is caseload shifting?*

Figure 4 shows that these findings do not depend strongly on the particular specification we use. The disability results are nearly identical without any covariates (except state and year fixed effects

and their interaction with $B_s$), or when we weight by 1950 adult population. As noted above, one potential concern with our analysis is that SSI-induced benefit increases were largest in the South, which is an area with high disability rates (in fact, the South had 12 out of the 13 states in the highest 1970 work-limiting-disability quartile). While the increases in disability participation are smaller when we control for separate year fixed effects by either region or by quartiles of the disability rate, Panel A shows that our three predictions about SSI's effects are still apparent even within these narrow groups of states. The results also do not change if we use an alternative measure of APTD benefits from Bickel and Wilcock (1974). Panel B shows similar robustness of the results for non-disability programs, although the differences across specifications mainly appear in the pre-period. The negative trend break in non-disability participation after 1974 cannot be explained by simple specification problems, regional factors, changes in the safety net correlated with pre-existing disability prevalence, or measurement error in the APTD benefit policy data.[37]

We also use the structure of AFDC to provide additional support for the claim that the participation declines actually represent shifting and not some other confounding trend in AFDC. Each parent who switched from AFDC to SSI would create one new SSI recipient and one fewer AFDC recipient, but because their children remained on AFDC, this would not change the number of AFDC *cases*. This suggests that shifting should have a larger effect on an AFDC measure that uses adult recipients in the numerator as opposed to cases. Table 5 shows that estimates using AFDC cases per adult are only about half as large as when we use adult recipients. This does not come from differences in the baseline means: there are actually more cases than adult recipients

[37] Panel C of Appendix Figure A2 suggests that labor demand changes, for example due to the 1973 recession, cannot explain our results, but also that SSI's introduction may not have had large employment effects (cf. Neumark and Powers 2005), although this conclusion is beyond the scope of this paper.

(for example, if the AFDC children lived in a foster home or parents received other programs). If the post-1974 reductions in non-disability participation came from new restrictions on eligibility, for example, we should see a reduction in cases and not just recipients.[38]

Our results based on state-level aggregates do not necessarily allow us to conclude that new SSI recipients came from other programs. We present direct evidence that disability benefit receipt grew specifically among AFDC families using the AFDC surveys described above. For each state and year we calculate the share of AFDC households that contain an adult who receives disability benefits. Nationwide this share rose from 5.5 percent in 1967 to 9.3 percent in 1977. Panel A of Figure 5 scatters the 1967–1977 change in this outcome for each state against APTD benefit levels. As in Panel B of Figure 2, we see a clear relationship between APTD generosity in binding states and movements onto SSI, this time *among* AFDC households, but no such relationship in non-binding states. Panel B is a falsification test that shows no relationship between APTD generosity and changes between two pre-SSI years, 1967 and 1973. Appendix Table A1 reports difference-in-differences estimates that summarize these results by interacting $|d_s|$ with a post-SSI dummy separately for binding and non-binding states. Our preferred specification (column 2) shows that disability participation among adults in AFDC families grew 2.2 percentage points more after SSI for each additional $100 below the benefit floor. The effects shrink after conditioning on region or pre-existing disability rates, but even within these narrow groups of states there is still a positive relationship between SSI-induced benefit increases and shifting from AFDC to SSI.[39]

[38] Appendix Figure A7 presents event-study results for payments per recipient and shows that while disability payment levels increased sharply after SSI in lower-benefit binding states, payment levels in other programs experienced no differential changes across states after SSI. Our shifting result therefore does not appear to come from either a confounding change in benefit policy or from states cutting benefits to induce recipients to move to AFDC. States make have taken actions to shift recipients, but these actions are not reflected in changing benefit levels.

[39] In the SLIAD, 31 percent of AFDC recipients with disabilities in 1973 moved onto SSI in binding states compared to 16 percent in non-binding states.

*B. Did SSI Affect the Income Distribution?*

Recall that in the binding states, the introduction of SSI mechanically increased income for APTD recipients who moved to the new program. Panel B of Table 1 shows how family income changed from the move from APTD to SSI. In the least generous APTD states, this move increased annual family income by $3,700 on average. In the most generous APTD states, the corresponding increase was less than $200. The preceding evidence points to substantial caseload shifting between non-disability and disability welfare programs, but to what extent did this shifting erode SSI's success in redistributing income? Figure 6 addresses this question using the 1970 and 1980 censuses. We estimate equation (3) on a series of variables that measure the share of adults with welfare income greater than or equal to a threshold, $x$. We move $x$ through the support of the income variables and collect the coefficients on the interaction of the benefit gap, the binding dummy, and the post-SSI dummy ($1\{t > 1973\}|d_s|B_s$). These "distribution regression" estimates trace out SSI's effect on the cumulative distribution of welfare income (Chernozhukov, Fernández-Val, and Melly 2013).

Figure 6 plots these estimates for adults with and without disabilities in binding states (panel A) and non-binding states (panel B). It is important to note that among non-elderly adults, SSI was only available to people with disabilities, and that SSI income has a much different distribution than other welfare income does. Appendix Figure A8 shows density estimates of SSI income from two mid-1970s surveys with a large hump between $6,000 and $7,000, just under the maximum real annual SSI payments for a single beneficiary with no other income of $9,072 ($756*12). (Table 2 shows average annual SSI benefits per recipient of around $6,000.) Income from other programs does not have this pattern. With this in mind, Figure 6 is striking. If caseload shifting fully offset SSI's benefits, we would expect no differences in welfare income distributions

across state groups. In contrast, we find increases in welfare income only in binding states, only for adults with disabilities, and only in the range of benefits characteristic of SSI.[40] We also find no change in the probability of having any welfare income (the left-most point on the *x*-axis), which matches the fact that caseload shifting is stronger when measured in terms of participation than in terms of dollars.

For adults with disabilities, this corresponds to an additional $24 per year in welfare income for each $100 that a state's APTD benefit fell below the SSI level.[41] In the 1976 Survey of Income and Education, 8 percent of adults with disabilities in binding states got SSI, which implies the average SSI recipient gained about $300 per year per $100 in the benefit gap. Recipients in the lowest-APTD-benefit states ($400 below $G^{SSI}$) thus gained $1,200; around one quarter of the maximum gain for a family with no other income reported in Table 2. This also corresponds closely to SSI's effect on disability benefits per recipient of about $600 per year per $100 in the benefit gap (Appendix Figure A7). That the census estimate implies just $300 of additional welfare income per SSI recipient matches our finding in Table 4 that half the cross-state growth in SSI income came at the expense of other welfare income.[42]

The increases in welfare income show up clearly in total income. Appendix Figure A9 plots comparable results for total personal income (in binding states). Adults with and without disabilities experienced relative income growth in lower- versus higher-benefit states. That this growth is apparent for adults without disabilities and because it extends to incomes as high as

[40] The effects appear slightly shifted down relative to the benefit distributions, which we would expect given that point-in-time surveys should oversample long SSI spells that are the most likely to get the maximum benefit.
[41] Because cumulative distributions integrate to the mean, multiplying the distribution regression coefficients by bin size and summing up approximates the regression coefficient on the mean of the outcome. In this case, $24 refers to the summing method, and the coefficient from a regression on average welfare income is $27 (SE = 12.1).
[42] We also re-estimate the distribution regression on all adult respondents, finding a similar pattern results and an increase of about $10 in welfare income per capita. The event-study estimates for per capita SSI income in Appendix Figure A3 show an increase of about $20 by 1980. This again suggests that SSI's net income transfer was about half as large as its gross income transfer, nearly identical to our IV estimate using only administrative data in Table 4.

$40,000 means that we cannot attribute it to SSI. The clear spike in income between $6,000 and $8,000 dollars for adults with disabilities, however, matches Figure 6 closely. While caseload shifting may have dampened SSI's redistributive effects, by moving recipients to a more generous program, these results show that it did successfully raise incomes for adults with disabilities. This income gain is in addition to the value recipients gained from reduced stigma and better administration.

*C. Did SSI Provide Fiscal Relief to the States?*

The Nixon administration intended for SSI to provide fiscal relief to the states by moving APTD, AB, and OAA recipients onto the (mostly) federal SSI. While higher-benefit states paid much of the cost of supplemental payments, the share of cash welfare costs borne by the federal government rose in all states except those with the highest supplemental payments (California and Massachusetts; Munnell 1977). Appendix Figure A10 show that states spent significantly less in total on cash transfer programs after 1973.

Across states, however, the amount saved varied quite a bit. Consider Mississippi and New York. In Mississippi, the maximum APTD monthly benefit (in 2017$) was $412.11 and its federal match rate was 83 percent. Therefore, Mississippi saved at most $70 for every APTD recipient moved to SSI. In New York, the APTD monthly benefit was $873.67, and the federal match rate was 50 percent. But, under SSI, New York paid all of a $300 supplement. New York saved $136 per recipient transferred from APTD.

Caseload shifting had similar qualitative effects, but these appear small because most shifting happened in states with high federal match rates before SSI. While Mississippi, for example, would have would have transferred relatively more AFDC recipients (per capita) than New York, the adult portion of its AFDC benefit was incredibly low and it paid just 17 percent of that amount.

Appendix Figure A11 plots event-study estimates that use a measure of state welfare costs (total public welfare outlays minus federal welfare reimbursements) as the outcome. We find some evidence that lower-benefit states experienced more fiscal relief, but the magnitude is not very large. By 1980 a $100 difference in the benefit gap translates to just $20 less in per-capita state welfare spending.

Lastly, while fiscal relief was automatic (if variable) for cash benefits, total state welfare spending actually grew in the 1970s because of rising Medicaid costs. The gray line in Appendix Figure A10 shows that total public welfare spending inclusive of Medicaid dipped slightly in 1974, but rebounded and leveled off until 1980. Klemm (2000) shows that from 1977-1981 the biggest driver of Medicaid cost growth was Medical inflation. To the extent that SSI brought more recipients onto the welfare rolls for the first time in lower-benefit states, Medicaid costs would have risen as the same time that cash costs fell, dampening any fiscal effects of caseload shifting.

## VI. DISCUSSION: SSI AND THE SIZE OF THE SAFETY NET

Our study is the first to evaluate how the differential cross-state effects of SSI's introduction affected safety net participation and spending.[43] SSI clearly increased participation and spending on disability programs. About 1.2 million disabled adults received APTD in 1973, while 2.2 million received SSI in 1980. But SSI did not increase overall adult welfare participation by nearly this much. Our cross-state design suggests that about three quarters of SSI recipients with disabilities who were induced to participate because of benefit increases left the AFDC or GA rolls. Therefore, SSI, "our first federal income guarantee (Burke and Burke 1974, pg 188)" represents a large shift in the composition of adult safety net assistance. Between 1973 and 1980,

[43] Albritton's (1979) results for SSI's introduction are also consistent with caseload shifting, but the validity of the time-series approach is hard to verify. He found that *more* recipients left AFDC than went on SSI, implying a rate of caseload shifting above one.

the share of all adult welfare recipients that were on a disability program rather than AFDC or GA grew from 25 to 36 percent. Our estimates imply that about 300,000 disabled SSI recipients "shifted" from other programs. Moving these cases from SSI back to (mainly) AFDC suggests that the share of welfare recipients on disability programs would have only reached 31.5 percent. However, despite the substantial shifting we document, the introduction of SSI did significantly redistribute income towards those individuals with disabilities.

This estimate is in line with results on caseload shifting to SSI in other contexts. Schmidt and Sevak (2004) find that AFDC waivers increased SSI participation among single mothers by 0.6 percentage points, while Schoeni and Blank (2000) find that they reduced AFDC participation by 0.86 percentage points. This implies that about 70 percent (0.6/0.86) of those who were "pushed" off of AFDC switched to SSI, very similar to our finding that 77 percent of those "pulled" onto SSI came from AFDC or GA.[44]

Accounting for shifting matters for assessing the value of these programs. Finkelstein, Hendren, and Luttmer (2015) conclude that the availability of charity care substantially reduces the value of Medicaid to its recipients. Accounting for substitution out of competing preschool programs moves the long-run benefit-cost ratio of Head Start to above one. Our estimated caseload shifting rate of 77 percent with respect to SSI's benefit increases would have provided a key input into any program evaluations. Instead, concerns about the rapid growth in disability beneficiaries over the 1970s directly led to reforms in the early 1980s that restricted eligibility and removed beneficiaries from the rolls (Berkowitz and DeWitt 2013).

[44] It is also on the upper end of a highly variable set of shifting estimates for other policies. Kline and Walters (2016) estimate that about one third of Head Start participants were drawn from other public preschools. Nikpay, Buchmueller, and Levy (2016) find an almost one-to-one relationship between increases in Medicaid hospital discharges and reductions in uninsured discharges after the Affordable Care Act's Medicaid expansion (also see Dranove, Garthwaite, and Ody 2016). Since only some uninsured patients receive uncompensated care, this is an upper bound on the rate of "shifting" between hospital charity programs and Medicaid.

Today, many of the social programs that overlap with SSI such as TANF and GA have already faced dramatic cuts, so that further shifting to the federal program is unlikely. But Levere et al. (2019) show that some families use SSI as a path onto Medicaid, since most SSI recipients are categorically eligible for Medicaid. As a result, proposals to limit federal Medicaid financing and grant states wide latitude in setting benefits and eligibility that could drastically shrink the program (Goodman-Bacon and Nikpay 2017).

Our results also have broad implications for social policy changes that would federalize just part of the cash safety net. A generous truly universal basic income (UBI) program, for example, would by design replace many tax and transfer programs. Hoynes and Rothstein (2018) point out, however, that the cost of this kind of program makes it politically infeasible, but that "a very small, possibly non-universal UBI could be funded." Our findings suggest that the way such a scheme is limited—whether groups who receive competing benefits can make themselves eligible—can influence its cost and effects.

The rate at which a dollar of per capita SSI spending translates to a dollar of per capita income, which both administrative data and census data show to be about 0.5, also plays a key role in models of fiscal federalism. In these models, altruistic taxpayers redistribute income until their marginal utility of income equals the marginal utility of per capita income for "the poor" times the cost of actually raising their per capita income by a dollar. Factors that make it more costly to redistribute income include the relative numbers of tax payers and poor people; changes in labor supply, in-migration of poor people from other jurisdictions (Brown and Oates 1987), or the effect of in-migration on wages (Brueckner 2000); higher local financing requirements (Orr 1976); or positive externalities from altruistic preferences among non-local taxpayers (Oates 1972). All of these costs are smaller from the point of view of the average national taxpayer, so this literature

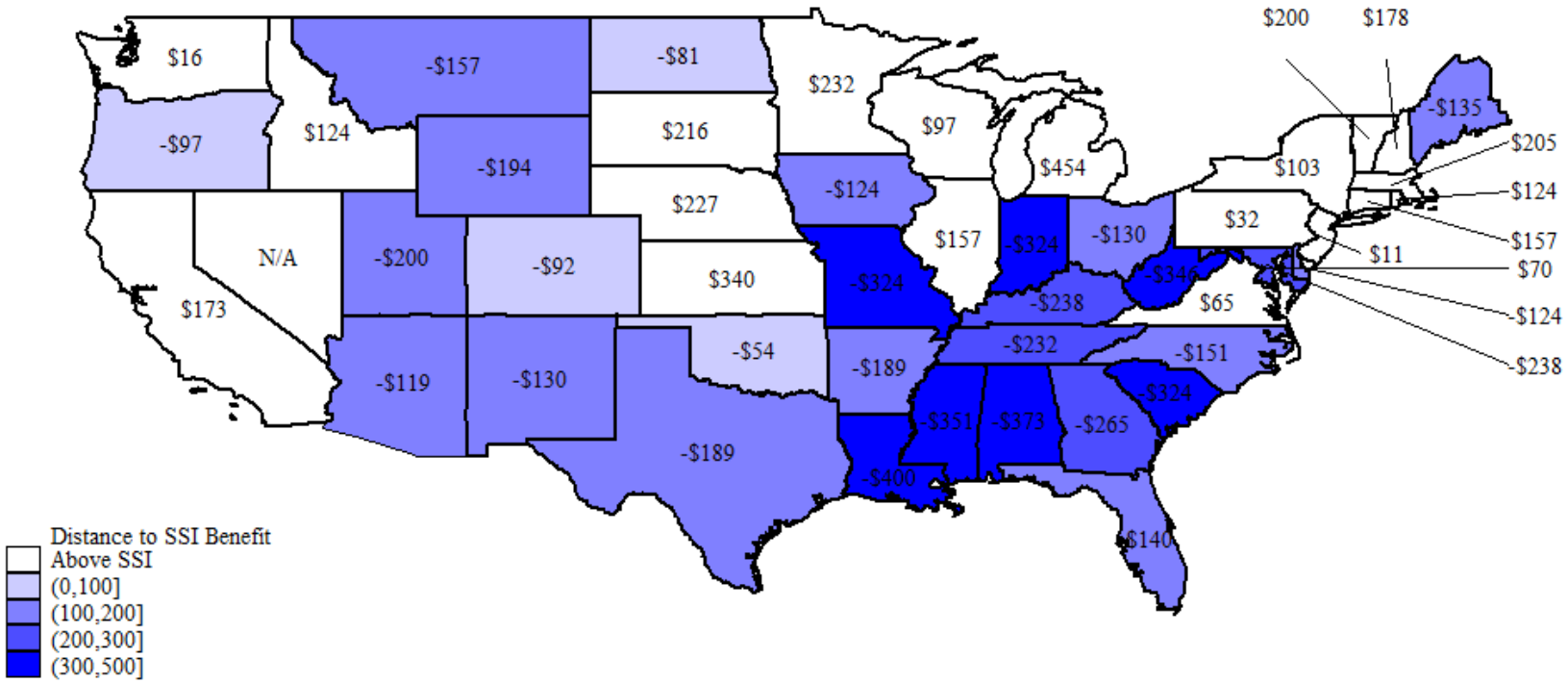
typically concludes that a national redistribution program would be larger than a series of local ones. But these models have only considered a single program. We find that federalizing just part of the safety net has a smaller effect on the size of cash transfer programs than it appears because recipients can switch programs to increase income or states can shift cases to save money.

Two important caveats apply to our results. First, we cannot identify effects of SSI that did not differ across states, including a potentially important role for widespread changes in stigma, time costs, or information. Therefore, our results on shifting apply to individuals who switched programs because of the benefit changes generated by SSI's national minimum. Second, while the confidence intervals for some key estimates, such as the caseload shifting "rate" in Table 3, rule out zero, they do not rule out very large or very small amounts of caseload shifting. Additional evidence with a higher-powered design (adding additional cross-section comparisons in microdata, for example) could provide a more accurate estimate of the extent of caseload shifting. Our state-by-year design, however, clearly shows that it took place.

## VII. CONCLUSION

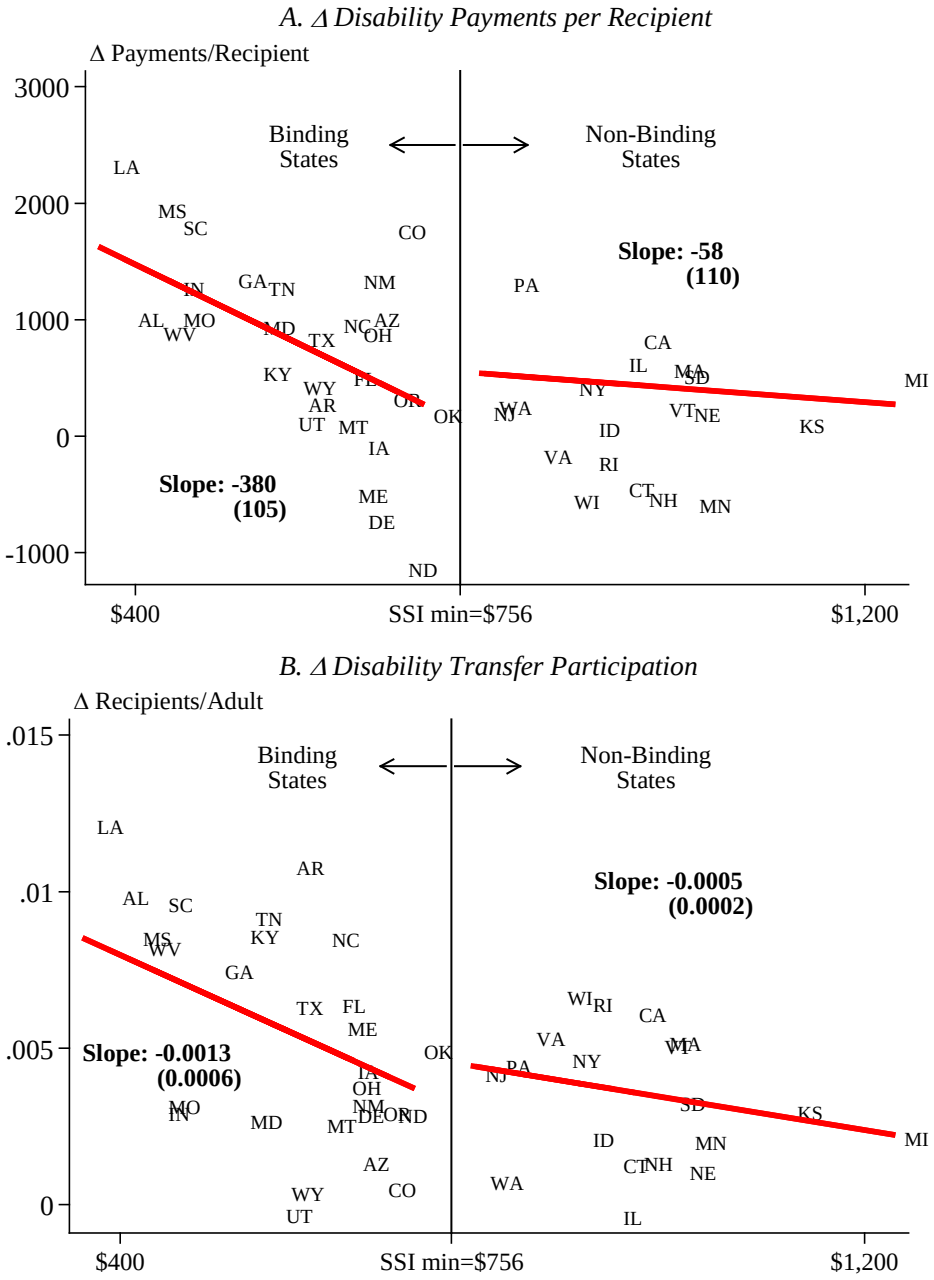
SSI's introduction is a watershed moment connecting the birth of the modern safety net in 1935 to its current split into either state block grants or federal entitlements. As intended, SSI led to large increases in benefit levels and participation in disability transfer programs, particularly in states that had been the least generous. However, federalizing only part of the social safety net led to unintended consequences. Many adults left non-disability programs that continued to pay low benefits and cost states money in order to get on the new, generous, federally funded SSI program. These findings have important implications for the literature on fiscal federalism, and show that simple cost-benefit analyses of new federal programs can be quite misleading in the presence of caseload shifting.

**Figure 1. The Gap Between Pre-Existing Disability Benefit Levels and SSI's Benefit Floor**



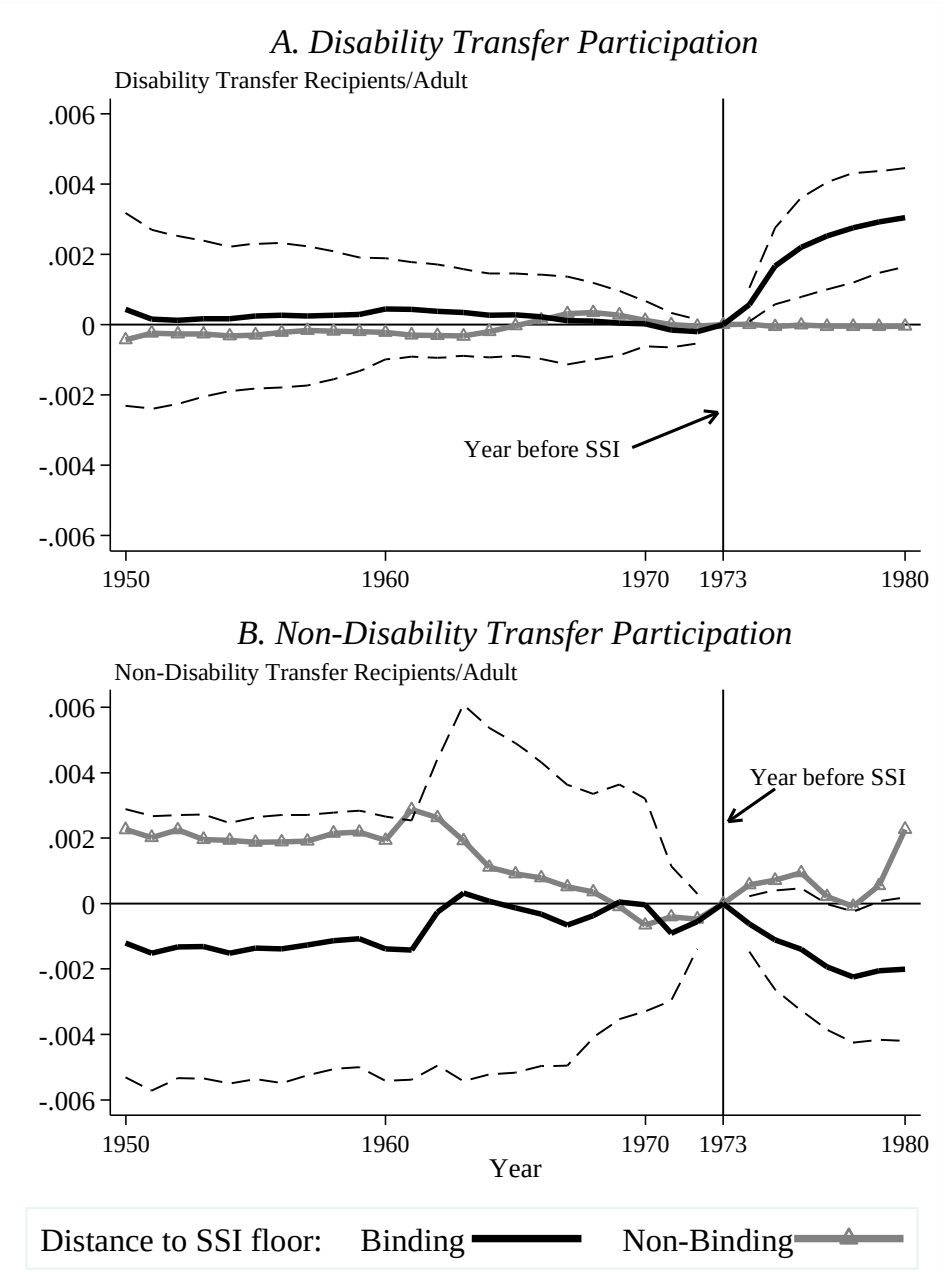

Notes: The figure maps the difference between the benefit for a single adult on APTD in 1971 and SSI's initial minimum benefit. Positive numbers indicate non-binding states where APTD benefits exceeded SSI benefits (shown in white), and negative numbers indicate binding states where SSI raised benefits (shown in darkening shades of blue). Source: "Public Assistance Programs: Standards for Basic Needs, July 1971" (DHEW 1972)

**Figure 2. The Kinked Relationship Between Changes in Disability Payments per Recipient and Disability Recipients per Adult and pre-SSI APTD Benefit Levels**



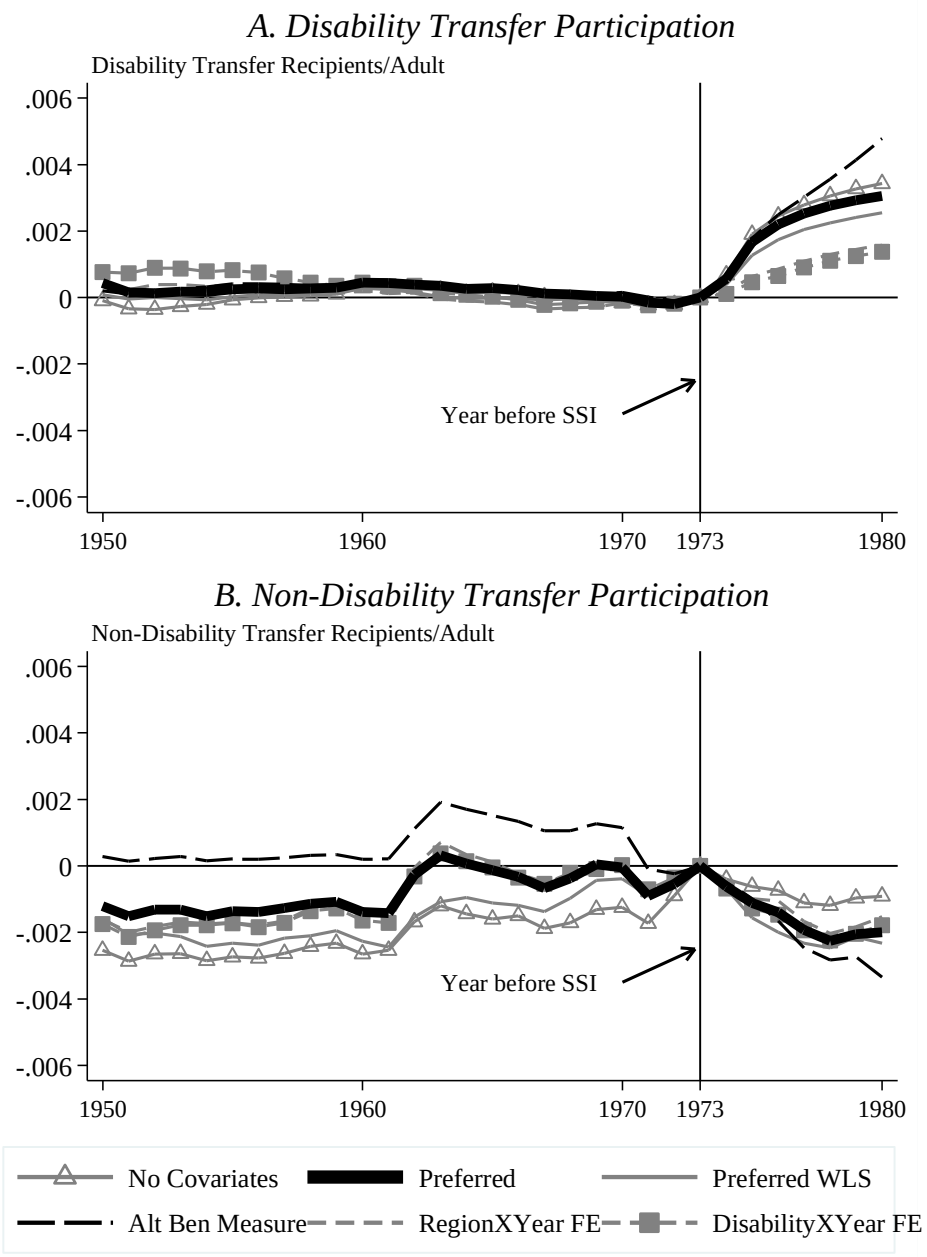

Notes: The figure plots the change between 1973 (pre-SSI) and 1975 (post-SSI) in annual payments per recipient (panel A) and participation rates (Panel B) in disability welfare programs (ATPD and AB) against the maximum monthly APTD benefit in 1971 expressed in 2017 dollars. Panel A shows convergence in benefits per recipient after SSI for states previously below its minimum, but not for those above. Panel B shows that the change in participation was largest in the lowest-APTD-benefit states, but had no relationship with APTD benefits above SSI's minimum. Source: DHEW and the Social Security Administration (see data appendix for sources and details), DHEW (1972), Haines and ICPSR (2010), and SEER (2013).

**Figure 3. The Effect of SSI's Benefit Floor on Participation in Disability and Non-Disability Transfer Programs**




Notes: The figure plots estimates of $\lambda_t^U$ and $\gamma_t^U$ (in black with 95-percent confidence intervals based on standard errors clustered by state in dashed lines) and $\lambda_t^O$ and $\gamma_t^O$ (in gray) from equation (2). In addition to fixed effects for states and years (and their interaction with an above-SSI dummy), the model also controls for the share of each year that states operated APTD or AFDC-UP programs, and separate year fixed effects for each Medicaid timing group. Source: DHEW and the Social Security Administration (see data appendix for sources and details), DHEW (1972), Haines and ICPSR (2010), and SEER (2013).

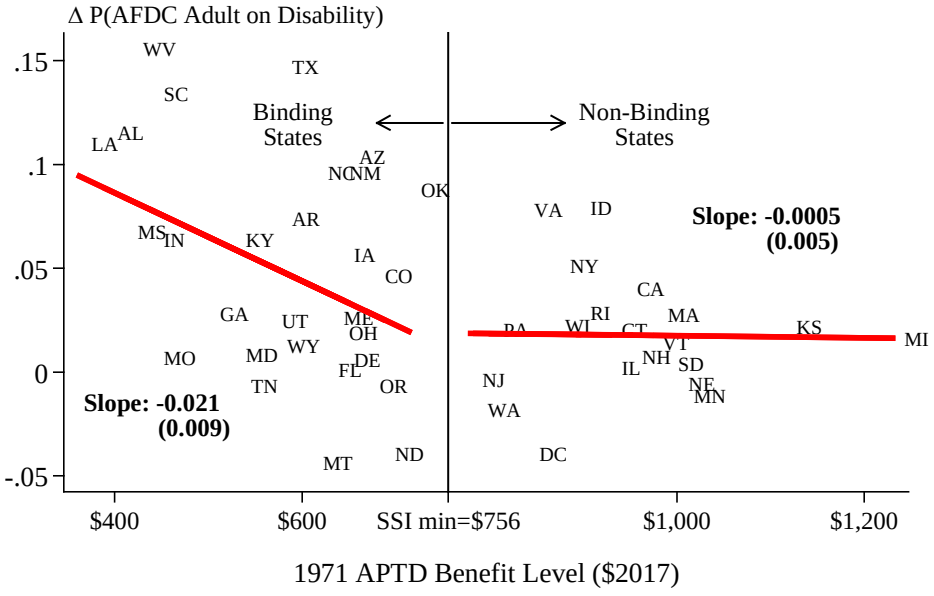
**Figure 4. Robustness of the Estimates Across Specifications for Binding States**



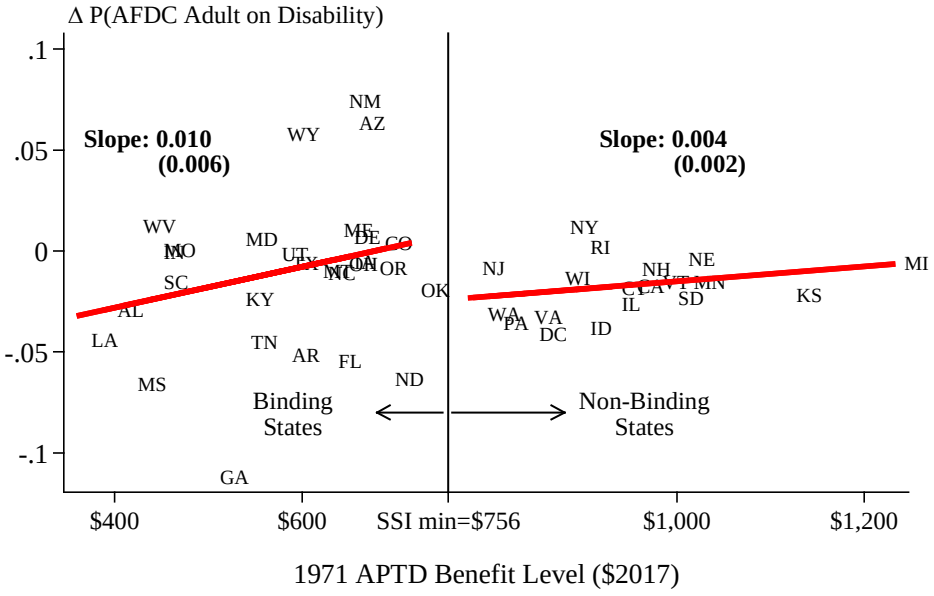

Notes: The figure plots estimates of $\lambda_t^U$ and $\gamma_t^U$ from alternative specifications of equation (2). In addition to fixed effects for states and years (and their interaction with an above-SSI dummy), the model also controls for the share of each year that states operated APTD or AFDC-UP programs, and separate year fixed effects for each Medicaid timing group, except for the "No covariates" specification, which refers to equation (2) without $\boldsymbol{X_{st}}$. WLS results are weighted by the 1950 adult population. The "Disability X Year" controls are interactions of year fixed effects with quartiles of states disability rates in 1970. The alternative benefit measure uses reported APTD maximum benefits from Bickel and Wilcock (1974) which differ mainly for Michigan and Connecticut. The correlation between the two measures is 0.84. Source: DHEW and the Social Security Administration (see data appendix for sources and details), DHEW (1972), Haines and ICPSR (2010), and SEER (2013).

**Figure 5. Direct Evidence of Shifting: The Relationship Between APTD Benefits and Changes in the Probability That AFDC Adults Received Disability Transfer Income**

*A. Intention-to-Treat Effect: 1967 versus 1977*




*B. Falsification Test: 1967 versus 1973*




Notes: The figure plots change in the share of AFDC households where an adult (either the AFDC mother or father) received disability income (APTD or AB in 1967 and 1973, SSI in 1975 and 1977). Panel A is a scatter plot and smoothed fit for the change before and after SSI in 1967 and 1977. Panel B is a falsification test that plots the changes between two pre-SSI years, 1967 and 1973. Source: DHEW (2011) and DHEW (1972)

**Figure 6. The Effect of SSI on the Distribution of Welfare Income for Adults With and Without Disabilities, 1970 and 1980 Censuses**


Notes: This figure plots coefficient estimates from difference-in-differences specifications like equation (1) but with only two time periods: the 1970 and 1980 censuses. Each point comes from a regression whose outcome is the share of adults, with disabilities (panel A) or without disabilities (panel B), in state $s$ in year $t$ who report welfare income greater than $x$, indicated on the horizontal axis. The disability distinction comes from the self-reported work-limiting-disability question. We find no effect of SSI on the probability of reporting a disability, which supports stratifying by disability status. Source: Ruggles et al. (2010) and DHEW (1972).

**Table 1. Changes in Annual Family Income and State Welfare Costs from Caseload Shifting**

| 1971 APTD Benefit: | $0-$499 | $500-$755 | $756-$899 | $900-$1,200 |
|---|---|---|---|---|
| *A. Moving one adult from AFDC to SSI* | | | | |
| Change in Family Income | $5,067 | $2,940 | $815 | $841 |
| State Savings | $1,167 | $1,905 | $2,253 | $1,742 |
| *B. Moving one adult from APTD to SSI:* | | | | |
| Change in Family Income | $3,703 | $1,830 | $1,176 | $194 |
| State Savings | $1,511 | $2,310 | $2,081 | $2,061 |

Notes: Panel A presents the potential gain to families and the potential savings to states from moving one adult from AFDC or APTD to SSI. Family income gains equal 12 times the difference in the total monthly SSI benefit (federal plus state supplement) minus the maximum APTD benefit or the adult portion of the maximum AFDC benefit. We estimate the adult portion of the maximum benefit by comparing the total benefit for a family of four to a family of two, and subtracting half the differences from the two-person benefit level. The individual supplementation policy comes from Rigby and Morrison (1975), and does not include supplements given to recipients living with others or in institutions, or who receive supplements for "special" needs. By using the maximum benefit, we assume that the family has no other income. Panel B presents annual state savings, which equal twelve times the state's share of the ATPD benefit or adult portion of the AFDC benefit in 1973 minus its supplementation amount for basic needs for an individual beneficiary with a disability living alone. The federal/state cost sharing rate equaled the federal medical assistance percentage (FMAP) for most states. Family income gains from shifting are largest in the lowest-APTD-benefit states, but state savings are much less strongly related to APTD generosity. Source: DHEW (1972), Rigby and Morrison (1975), United States Social and Rehabilitation Service Assistance Payments Administration (1972).

**Table 2. Summary Statistics: Adult Welfare Participation and Spending**

| | 1950 | 1960 | 1970 | 1980 |
|---|---|---|---|---|
| *A. Participation and Spending* | | | | |
| Adult Population (millions) | 87.72 | 93.69 | 106.82 | 128.85 |
| Adult Recipients | | | | |
| APTD/SSI | 73,368 | 329,611 | 854,767 | 2,247,739 |
| AFDC | 562,221 | 633,438 | 2,176,230 | 3,278,039 |
| GA | 388,329 | 390,632 | 497,667 | 754,644 |
| Annual Spending (Billions of $2017) | | | | |
| APTD/SSI | $0.37 | $1.79 | $5.69 | $14.19 |
| AFDC | $5.00 | $7.52 | $27.86 | $35.13 |
| GA | $1.97 | $2.51 | $3.64 | $4.07 |
| *B. Outcome Measures* | | | | |
| Participation Rate | | | | |
| APTD/SSI | 0.0008 | 0.0035 | 0.0080 | 0.0174 |
| AFDC | 0.0064 | 0.0067 | 0.0203 | 0.0253 |
| GA | 0.0044 | 0.0042 | 0.0046 | 0.0058 |
| Annual Benefits per Recipient | | | | |
| APTD/SSI | $5,130 | $6,018 | $6,455 | $6,110 |
| AFDC | $9,556 | $12,564 | $12,429 | $10,019 |
| GA | $4,456 | $5,647 | $5,935 | $4,671 |
| Annual Per-Capita Benefits | | | | |
| APTD/SSI | $4.18 | $19.04 | $53.11 | $109.68 |
| AFDC | $56.93 | $80.13 | $260.00 | $271.57 |
| GA | $22.44 | $26.71 | $34.01 | $31.44 |

Notes: This table presents summary statistics from the basic items in our source data, participant counts and spending totals, and for the main outcomes we consider, adult participation rates, benefit levels, and per capita benefits. Source: DHEW and the Social Security Administration (see data appendix for sources and details), Haines and ICPSR (2010), and SEER (2013).

**Table 3. SSI and Transfer Participation Rates: Post-SSI Trend Breaks and IV Estimates of the Effect of Each SSI Recipient on Other Transfer Program Recipients**

| | (1) Disability Transfer Program | (2) Non-Disability Transfer Programs | (3) Any Transfer Program |
|---|---|---|---|
| Post-SSI Trend x Benefit Gap, Binding States | 0.00049 | -0.00038 | 0.00011 |
| | [0.00013] | [0.00021] | [0.00022] |
| *Permutation, one-sided p-value* | *0.000* | *0.052* | *0.346* |
| *Permutation, two-sided p-value* | *0.002* | *0.114* | *0.664* |
| IV: Disability Transfer Recipients | | -0.77 | 0.23 |
| | | [0.38] | [0.38] |
| *Permutation, one-sided p-value* | | *0.368* | *0.590* |
| *Permutation, two-sided p-value* | | *0.712* | *0.920* |
| Mean Dependent Variable | 0.010 | 0.024 | 0.034 |

Notes: This table presents estimated effects of SSI on adult transfer program participation rates. Panel A contains estimates of $\Gamma^U$ from equation (3), and panel B contains IV estimates that use the post-SSI trend break as an instrument for disability program participation. These estimates equal the ratio of the trend break estimates in columns (2) and (3) to the estimate in column (1). We present standard errors clustered by state in brackets and *p*-values from 500 permutations of the gap between APTD and SSI benefit in italics. One-sided *p*-values equal the share of draws that exceed the point estimate in magnitude and have the same sign. Two-sided *p*-values equal the share of draws that exceed the point estimate in absolute value. Source: DHEW and the Social Security Administration (see data appendix for sources and details), DHEW (1972), Haines and ICPSR (2010), and SEER (2013).

**Table 4. SSI and Per Capita Transfer Income: Post-SSI Trend Breaks and IV Estimates of the Effect of Each Per Capita SSI Dollar on Other Per Capita Transfer Income**

| | (1) Disability Transfer Program | (2) Non-Disability Transfer Programs | (3) Any Transfer Program |
|---|---|---|---|
| Post-SSI Trend x Benefit Gap, Binding States | 4.02 | -2.15 | 1.87 |
| | [0.72] | [1.81] | [1.88] |
| *Permutation, one-sided p-value* | *0.000* | *0.180* | *0.260* |
| *Permutation, two-sided p-value* | *0.000* | *0.320* | *0.454* |
| IV: Disability Transfer Recipients | | -0.54 | 0.47 |
| | | [0.41] | [0.41] |
| *Permutation, one-sided p-value* | | *0.452* | *0.566* |
| *Permutation, two-sided p-value* | | *0.846* | *0.888* |
| Mean Dependent Variable | $ 59 | $ 284 | $ 343 |

Notes: This table presents estimates effects of SSI on annual per capita transfer income. Panel A contains estimates of $\Gamma^U$ from equation (3), and panel B contains IV estimates that use the post-SSI trend break as an instrument for disability program participation. These estimates equal the ratio of the trend break estimates in in columns (2) and (3) to the estimate in column (1). We present standard errors clustered by state in brackets and one-sided *p*-values from 500 permutations of the gap between APTD and SSI benefit in italics. Source: DHEW and the Social Security Administration (see data appendix for sources and details), DHEW (1972), Haines and ICPSR (2010), and SEER (2013).

**Table 5. IV Estimates of the Effect of Each SSI Recipient on the Number of AFDC Recipients and Cases**

| | (1) AFDC Recipients | (2) AFDC Cases |
|---|---|---|
| *Panel A* | | |
| Post-SSI Trend x Benefit Gap, Binding States | -0.00031 | -0.00014 |
| | [0.00022] | [0.00014] |
| *Permutation, one-sided p-value* | *0.058* | *0.786* |
| *Panel B* | | |
| IV: Disability Transfer Recipients | -0.63 | -0.28 |
| | [0.23] | [0.21] |
| *Permutation, one-sided p-value* | *0.343* | *0.582* |

Notes: See notes to Table 3. The table shows trend breaks (panel A) and IV estimates (panel B) for participation rates per adult based on adult AFDC recipients (column 1) and AFDC cases (column 2). Source: DHEW and the Social Security Administration (see data appendix for sources and details), DHEW (1972), Haines and ICPSR (2010), and SEER (2013).

## VIII. REFERENCES


Aizer, Anna, Shari Eli, Joseph P. Ferrie, and Adriana Lleras-Muney. 2014. "The Long Term Impact of Cash Transfers to Poor Families." *National Bureau of Economic Research Working Paper Series* No. 20103. doi: 10.3386/w20103.

Albritton, Robert B. 1979. "Measuring Public Policy: Impacts of the Supplemental Security Income Program." *American Journal of Political Science* 23 (3):559-578. doi: 10.2307/2111029.

Almond, Douglas, Hilary W. Hoynes, and Diane Whitmore Schanzenbach. 2011. "Inside the War On Poverty: The Impact of Food Stamps on Birth Outcomes." *The Review of Economics and Statistics* 93 (2):387-403. doi: 10.2307/23015943.

Alston, Lee J., and Joseph P. Ferrie. 1985. "Labor Costs, Paternalism, and Loyalty in Southern Agriculture: A Constraint on the Growth of the Welfare State." *The Journal of Economic History* 45 (1):95-117. doi: 10.2307/2122009.

Ashenfelter, Orley. 1983. "Determining Participation in Income-Tested Social Programs." *Journal of the American Statistical Association* 78 (383):517-525. doi: 10.2307/2288113.

Bailey, Martha J., and Nicolas J. Duquette. 2014. "How Johnson Fought the War on Poverty: The Economics and Politics of Funding at the Office of Economic Opportunity." *The Journal of Economic History* 74 (2):351-388. doi: 10.1017/S0022050714000291.

Berkowitz, Edward D., and Larry DeWitt. 2013. *The other welfare : supplemental security income and U.S. social policy*. Ithaca: Cornell University Press.

Bickel, Gary, and David Wilcock. 1974. The Supplemental Security Income Program: Esimated Impact, By State; Effects of the Transition To a Semi-Federalized Welfare System for the Aged, Blind, and Disabled; State Costs and Cost-Sharing. In *Legal Action Support Project*, edited by Inc. Bureau of Social Science Research. Washington, D.C.

Blank, Rebecca M. 2001. "What Causes Public Assistance Caseloads to Grow?" *The Journal of Human Resources* 36 (1):85-118. doi: 10.2307/3069671.

Bound, John, Sherrie Kossoudji, and Gema Ricart-Moes. 1998. "The Ending of General Assistance and SSI Disability Growth in Michigan." In *Growth in Disability Benefits: Explanations and Policy Implications*, edited by Kalman Rupp and David C. Stapleton, pp. 223–248, 275–279. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

Brown, Charles C., and Wallace E. Oates. 1987. "Assistance to the poor in a federal system." *Journal of Public Economics* 32 (3):307-330. doi: https://doi.org/10.1016/0047-2727(87)90035-1.

Brueckner, Jan K. 2000. "Welfare Reform and the Race to the Bottom: Theory and Evidence." *Southern Economic Journal* 66 (3):505-525. doi: 10.2307/1061423.

Bureau of Public Assistance. 1936-1937. Public Assistance: Monthly Statistics for the United States. edited by United States Social Security Board Division of Assistance Analysis. Washington D.C.

Bureau of Public Assistance. 1948-1970. Advanced Release of Statistics of Public Assistance. edited by Social Security Administration Division of Statistics and Analysis. Washington D.C.

Burke, Vincent J., and Vee Burke. 1974. *Nixon's good deed: Welfare reform*. New York,: Columbia University Press.

Chernick, Howard. 1998. "Fiscal Effects of Block Grants for the Needy: An Interpretation of the Evidence." *International Tax and Public Finance* 5 (2):205-233. doi: 10.1023/A:1008694405571.

Chernozhukov, Victor, Iván Fernández-Val, and Blaise Melly. 2013. "Inference on Counterfactual Distributions." *Econometrica* 81 (6):2205-2268. doi: 10.3982/ECTA10582.

CQ Almanac. 1971. "Welfare Reform: Disappointment for the Administration." *CQ Almanac 1970*.

Department of Health, Education and Welfare. 1972. Public Assistance Programs: Standards for Basic Needs, July 1971. edited by Program Statistics and Data Systems Social and Rehabilitation Service, National Center for Social Statistics. Washington, D.C.

Department of Health, Education, and Welfare. 2011. Surveys of Recipients of Aid to Families with Dependent Children, 1967-1977. edited by National Center for Social Statistics Social and Rehabilitation Service, Population Surveys Branch: National Archives and Records Administration. Social Security Agency.

Fetter, Daniel. 2017. "Local government and old-age support in the New Deal." *Explorations in Economic History* 66:1-20. doi: https://doi.org/10.1016/j.eeh.2017.02.003.

Fetter, Daniel K., and Lee M. Lockwood. 2016. "Government Old-Age Support and Labor Supply: Evidence from the Old Age Assistance Program." *National Bureau of Economic Research Working Paper Series* No. 22132. doi: 10.3386/w22132.

Finkelstein, Amy, Nathaniel Hendren, and Erzo F. P. Luttmer. 2015. "The Value of Medicaid: Interpreting Results from the Oregon Health Insurance Experiment." *National Bureau of Economic Research Working Paper Series* No. 21308. doi: 10.3386/w21308.

Fishback, Price V., Samuel Allen, Jonathan Fox, and Brendan Livingston. 2010. "A Patchwork Safety Net: A Survey of Cliometric Studies of Income Maintenance Programs in the United States in the First Half of the Twentieth Century." *Journal of Economic Surveys* 24 (5):895-940. doi: doi:10.1111/j.1467-6419.2010.00638.x.

Fishback, Price V., Michael R. Haines, and Shawn Kantor. 2007. "Births, Deaths, and New Deal Relief during the Great Depression." *The Review of Economics and Statistics* 89 (1):1-14.

Garrett, Bowen, and Sherry Glied. 2000. "Does state AFDC generosity affect child SSI participation?" *Journal of Policy Analysis and Management* 19 (2):275-295. doi: 10.1002/(SICI)1520-6688(200021)19:2<275::AID-PAM6>3.0.CO;2-7.

Goodman-Bacon, Andrew J., and Sayeh S. Nikpay. 2017. "Per Capita Caps in Medicaid — Lessons from the Past." *New England Journal of Medicine* 376 (11):1005-1007. doi: 10.1056/NEJMp1615696.

Grundman, Herman. 1985. "Adult Assistance Programs Under the Social Security Act." *Social Security Bulletin* 48 (10).

Haines, Michael R., and ICPSR. 2010. Historical, Demographic, Economic, and Social Data: The United States, 1790-2002. ICPSR [distributor].

Hill, Phyllis. 1950. "Aid to the Permanently and Totally Disabled." *Social Security Bulletin* 13 (12).

Hoynes, Hilary, and Jesse Rothstein. 2018. "Universal Basic Income in the US and Advanced Countries." *Working Paper*.

Klemm, John D. 2000. "Medicaid Spending: A Brief History." *Health care financing review* 22 (1):105-112.

Kubik, Jeffrey D. 2003. "Fiscal Federalism and Welfare Policy: The Role of States in the Growth of Child SSI." *National Tax Journal* 56 (1):61-79.

Levere, Michael, Sean Orzol, Lindsey Leininger, and Nancy Early. 2019. "Contemporaneous and long-term effects of children's public health insurance expansions on Supplemental Security Income participation." *Journal of Health Economics* 64:80-92. doi: https://doi.org/10.1016/j.jhealeco.2019.02.003.

Mayshar, Joram. 1990. "On measures of excess burden and their application." *Journal of Public Economics* 43 (3):263-289. doi: https://doi.org/10.1016/0047-2727(90)90001-X.

Moehling, Carolyn M. 2007. "The American Welfare System and Family Structure An Historical Perspective." *Journal of Human Resources* 42 (1):117-155.

Moffitt, Robert. 1983. "An Economic Model of Welfare Stigma." *The American Economic Review* 73 (5):1023-1035. doi: 10.2307/1814669.

Moffitt, Robert. 1987. "Historical Growth in Participation in Aid to Families with Dependent Children: Was There a Structural Shift?" *Journal of Post Keynesian Economics* 9 (3):347-363. doi: 10.2307/4538017.

Munnell, Alicia. 1977. "Federalizing Welfare: The Fiscal Impact of the SSI Program." *New England Journal of Economics* Sept/Oct 1977:3-28.

Neumark, David, and Elizabeth Powers. 2005. "The Effects of Changes in State SSI Supplements on Preretirement Labor Supply." *Public Finance Review* 33 (1):3-35.

Nixon, Richard M. 1974. Annual Budget Message to the Congress, Fiscal Year 1975.

Oates, Wallace E. 1972. *Fiscal federalism, The Harbrace series in business and economics*. New York,: Harcourt Brace Jovanovich.

Oates, Wallace E. 1999. "An Essay on Fiscal Federalism." *Journal of Economic Literature* 37 (3):1120-1149.

Orr, Larry L. 1976. "Income Transfers as a Public Good: An Application to AFDC." *The American Economic Review* 66 (3):359-371.

Rigby, Donald, and Malcolm Morrison. 1975. The Supplemental Security Income Program forthe Aged, Blind, and Disabled: Selected Characteristics of State Supplementation Programs. edited by Education and Welfare Department of Health. Baltimore, Md. : Office of Supplemental Security Income.

Ruggles, Steven , J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. 2010. Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]. Minneapolis: University of Minnesota.

Schmidt, Lucie, and Purvi Sevak. 2004. "AFDC, SSI, and Welfare Reform Aggressiveness: Caseload Reductions versus Caseload Shifting." *The Journal of Human Resources* 39 (3):792-812. doi: 10.2307/3558997.

Schoeni, Robert F., and Rebecca M. Blank. 2000. "What has Welfare Reform Accomplished? Impacts on Welfare Participation, Employment, Income, Poverty, and Family Structure." *National Bureau of Economic Research Working Paper Series* No. 7627. doi: 10.3386/w7627.

Social Security Administration. 1947-1980. Social Security Bulletin. edited by Office of Research and Statistics. Washington, D.C.
Social Security Administration. 1992. Survey of Low Income Aged and Disabled, 1973-1974. Inter-university Consortium for Political and Social Research [distributor].
Social Security Board. 1936-1946. Social Security Bulletin. edited by Office of Research and Statistics. Washington, D.C.
Surveillance, Epidemiology, and End Results (SEER). 2013. Surveillance, Epidemiology, and End Results (SEER) Program Populations (1969-2011). edited by DCCPS National Cancer Institute, Surveillance Research Program, Surveillance Systems Branch.
U.S. Bureau of Labor Statistics. All Employees, Total Nonfarm [PAYEMS], retrieved from FRED. edited by Federal Reserve Bank of St. Louis.
U.S. Census Bureau. Various Years. Annual Survey of State Government Finances and Census of Governments.
United States Department of Commerce, and Bureau of the Census. 2006. Survey of Income and Education, 1976. ICPSR [distributor].
United States Social and Rehabilitation Service Assistance Payments Administration. 1972. Characteristics of State public Assistance Plans under the Social Security Act: General provisions, Eligibility, Assistance, Administration 1971. edited by Education and Welfare Department of Health. Washington, D.C.: Government Printing Office.
Wiseman, Frederick. 1975. Welfare. New York, NY: Zipporah Films.
Witte, Edwin. 1934. Suggestions for a Long-Term and Immediate Program for Economic Security. edited by Committee on Economic Security. Washington, D.C.

## IX. DATA APPENDIX

### *A. Sources*

For 1936 and 1937 we collected "Public Assistance: Monthly Statistics for the United States" published by the Social Security Board (Bureau of Public Assistance 1936-1937). From 1938 to 1947 and 1971 to 1980 we collected the "Current Operating Statistics" appendix to the monthly *Social Security Bulletin* (Social Security Board 1936-1946, Social Security Administration 1947-1980). From June 1948 to December 1970, we collected "Advanced Release of Public Assistance Statistics" published by DHEW's Division of Research (Bureau of Public Assistance 1948-1970).

### *B. Cases versus Recipients*

Before 1961, the GA data only record the number of cases, but in 1971 and 1973 they only record the number of recipients. Because recipients sometimes include children and to extend a consistent GA measure back to 1950, we prefer to use GA cases. To fill in missing values for GA cases we predict cases using the observed value of recipients based on an interpolation of number of recipients per case.

### *C. Adjusting for Medical Vendor Payments*

Starting in October 1950, states could claim federal reimbursement for medical payments made directly to providers (known as "vendor payments") on behalf of welfare recipients. Medical vendor payments (MVPs) are included in participation and spending data starting in July 1953 and ending either in October 1966 or in the month when a state began its Medicaid program (which replaced MVPs). We subtract our separate measure of MVP spending from the combined spending variable to create cash benefit spending. Some states, however, allowed some recipients to get medical payments only. The beginning and the end of MVP reporting, however, provide two pieces of information about the size of this population. We infer the number of medical-only recipients by calculating the change in caseloads in the first month that medical-only recipients are reported

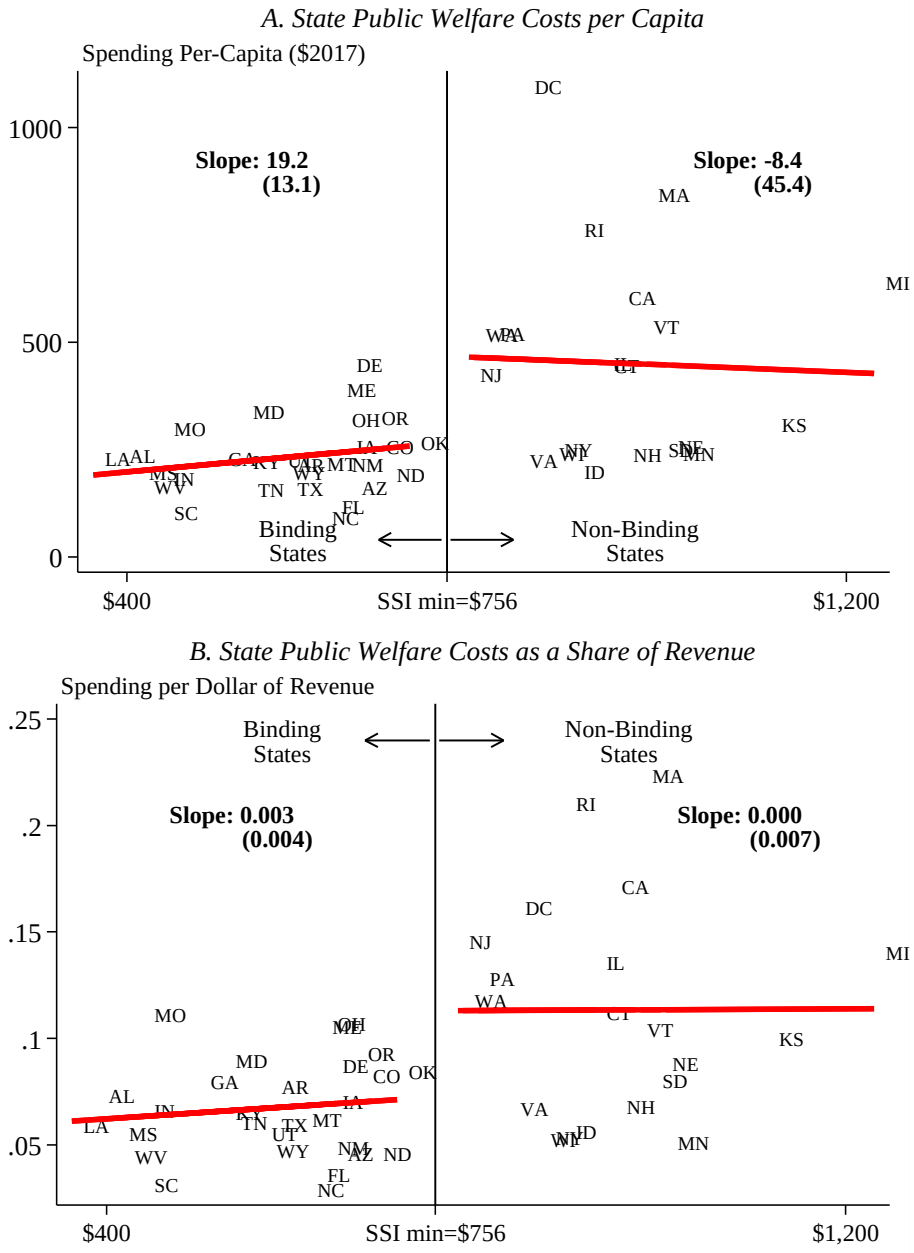
(the earlier of July 1953 or the date when an MVP program starts) and the last month (the earlier of the month Medicaid began or October 1966). We linearly interpolate between these two estimates to obtain a guess about the number of medical-only recipients and subtract this from reported participation data. This procedure appears to work well, although we make similar adjustments based on discontinuities in participation (that correspond to spikes in MVP spending) for a handful of states that appear to have let on medical-only recipients sometime after starting to report MVP spending. In some cases (CT, ID, OR, UT, WA), the shift is large and there is a similarly sized shift in some earlier period. We calculate the size of these two shifts, interpolate between the two, and remove that number of cases.

### *D. State Budget Data*

We use data on state budget items published in the Compendium of State Finances and digitized by the Census Bureau (U.S. Census Bureau Various Years). We create a variable for state welfare costs by subtracting federal intergovernmental revenue for public assistance from total public assistance outlays. This includes federal/state categorical cash programs, state GA programs, Medicaid, and other types of welfare expenditures such as emergency assistance and child support enforcement (these are not separately tabulated).

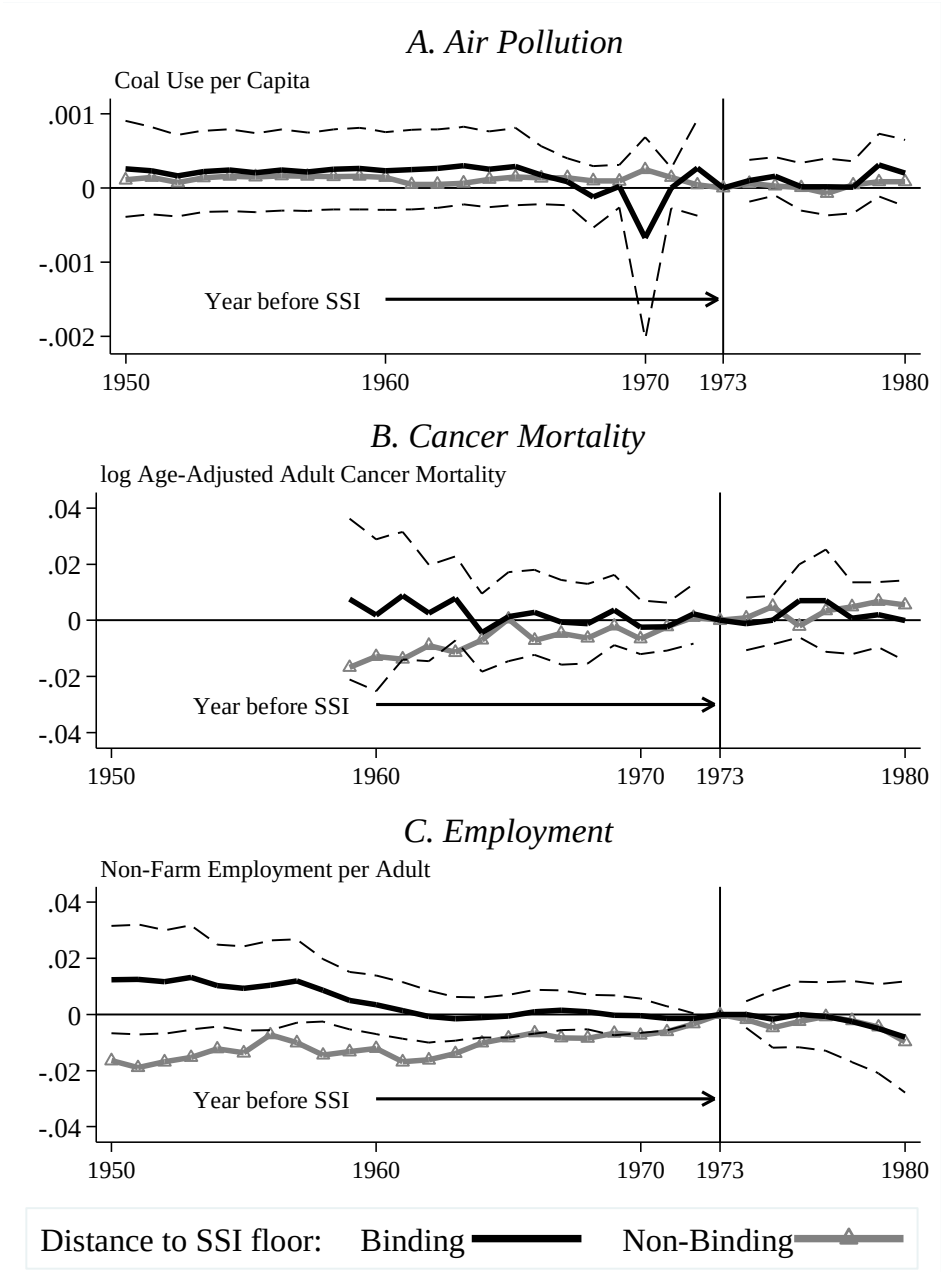
## X. RESULTS APPENDIX

### Figure A1. Per Capita Public Welfare Costs and APTD Benefits, FY 1973



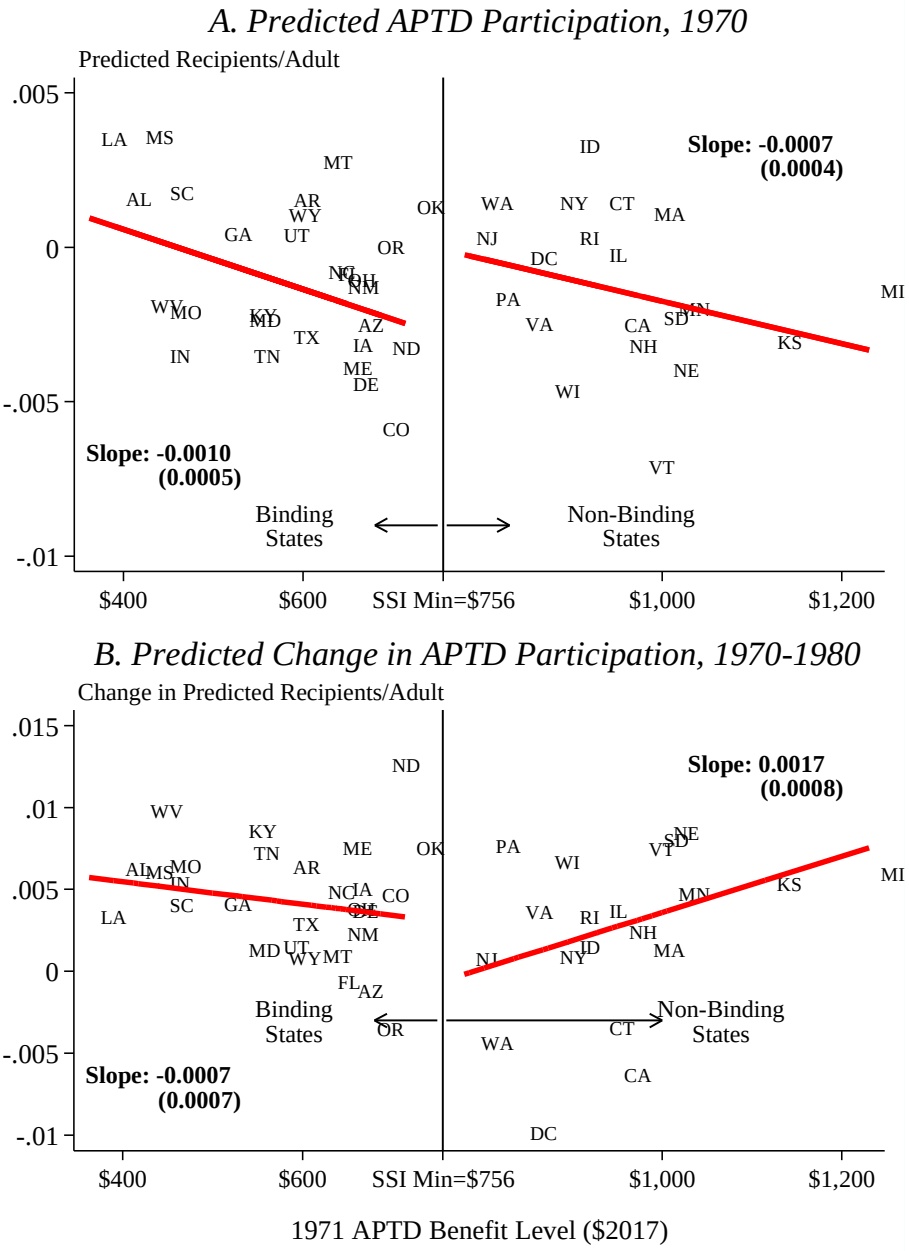

Notes: This figure uses data on state budgets to plot per capita public welfare costs in FY 1973 against 1971 APTD benefits. The public welfare category includes cash assistance, Medicaid, and other state-level programs not separately enumerated. We subtract from total outlays the federal intergovernmental revenue for the same category. What is left is the state's cost. The denominator in panel B is state revenues minus intergovernmental revenue. Red lines are linear regression estimates on either side of the original SSI federal minimum benefit ($756 in 2017 dollars). Slopes are per $100 of APTD benefits. Source: U.S. Census Bureau (Various Years)

**Figure A2. Balance Test: No Relationship between APTD Generosity and Changes in Air Pollution, Cancer Mortality, or Employment Rates**



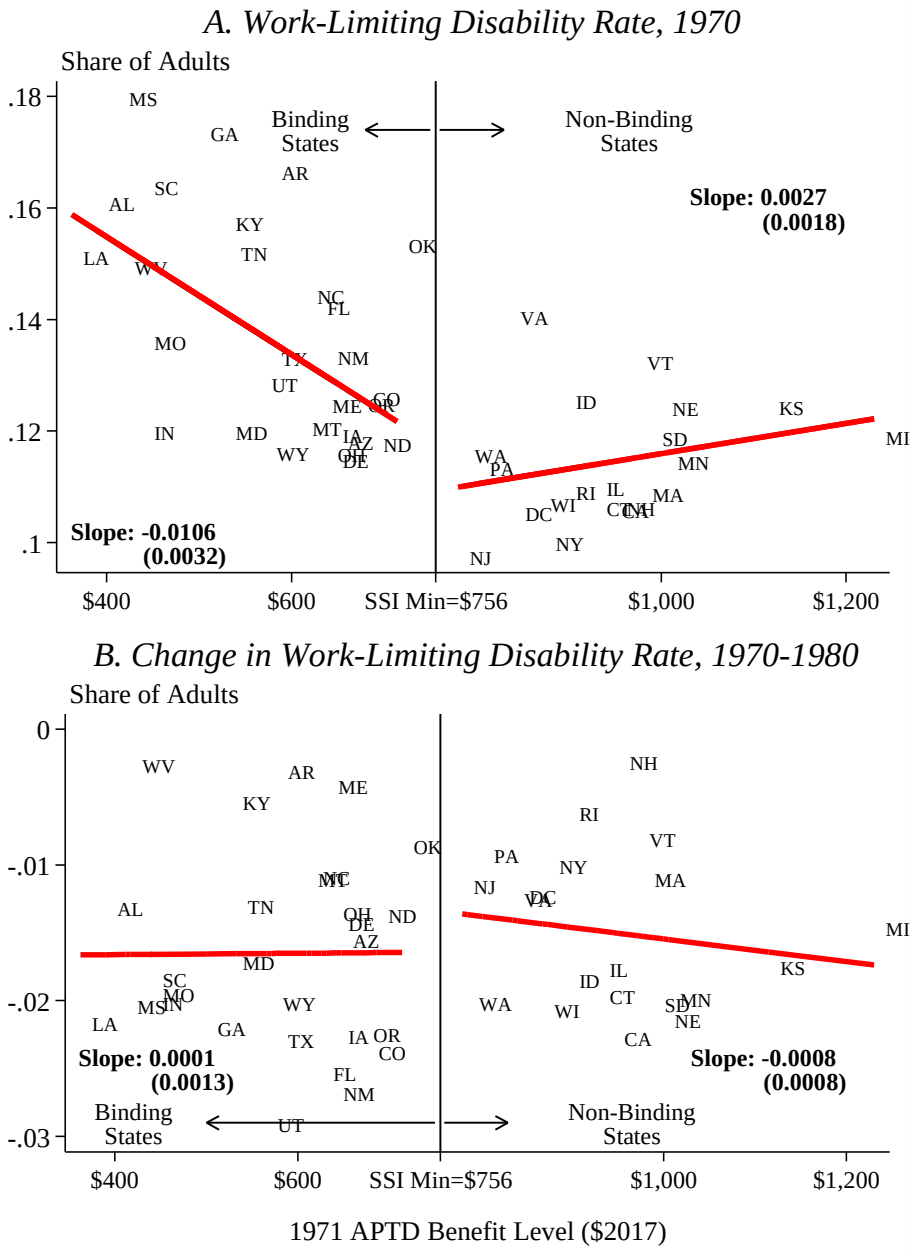

Notes: The figure plots estimates of $\lambda_t^U$ and $\gamma_t^U$ (in black with 95-percent confidence intervals based on standard errors clustered by state in dashed lines) and $\lambda_t^O$ and $\gamma_t^O$ (in gray) from equation (2). In addition to fixed effects for states and years (and their interaction with an above-SSI dummy), the model also controls for the share of each year that states operated APTD or AFDC-UP programs, and separate year fixed effects for each Medicaid timing group. The outcome in panel A is tons of coal consumption per adult (shared by Edson Severnini). The outcome in panel B is the age-adjusted cancer mortality rate for people ages 24-64. The outcome in panel C is the ratio of total non-farm employment to the adult population. Source: DHEW and the Social Security Administration (see data appendix for sources and details), DHEW (1972), U.S. Bureau of Labor Statistics .

**Figure A3. Predicted Participation in 1970 and Predicted Change in Participation from 1970 to 1980 Based on 1960 Characteristics Are Not Related to APTD Benefit Levels**



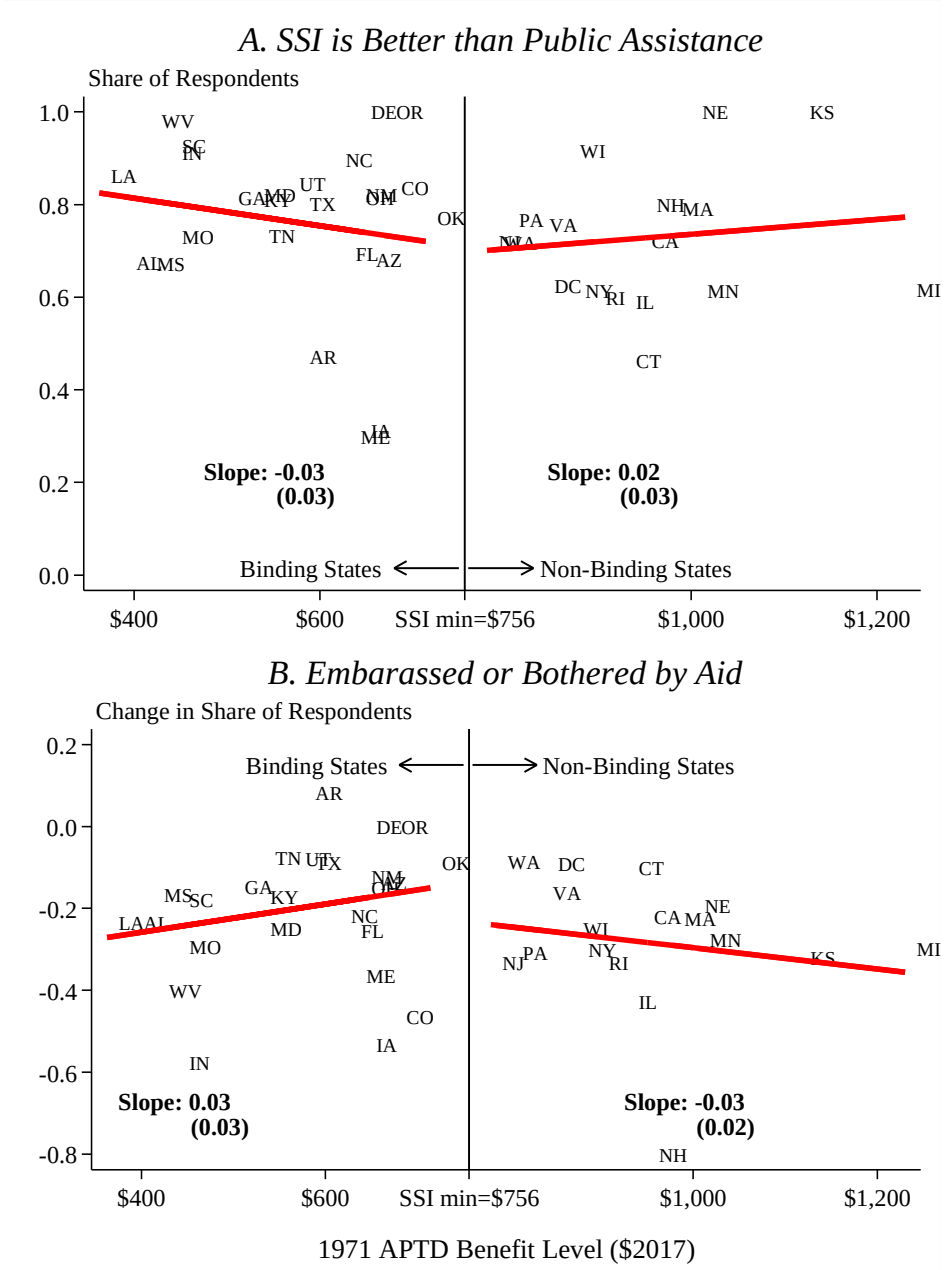

Notes: The figure plots predicted disability transfer participation in 1970 and the change in predicted participation from 1970 to 1980 against the 1971 APTD benefit level. Predictions come from a cross-sectional regression of 1960 state APTD participation rates on the share of adults who are institutionalized, male, white, employed, out of the labor force, poor, veterans, married, living with parents, under age 40, or between age 40 and 49, or have either 12 or 16 years of education; and the average age, average individual income, and dummies for the year in which states implemented Medicaid. Red lines are linear regression estimates on either side of the original SSI federal minimum benefit ($756 in 2017 dollars). Slopes are per $100 of APTD benefits. Source: Ruggles et al. (2010) and DHEW (1972).

**Figure A4. Work-Limiting Disability Rates in 1970 and Changes from 1970–1980**



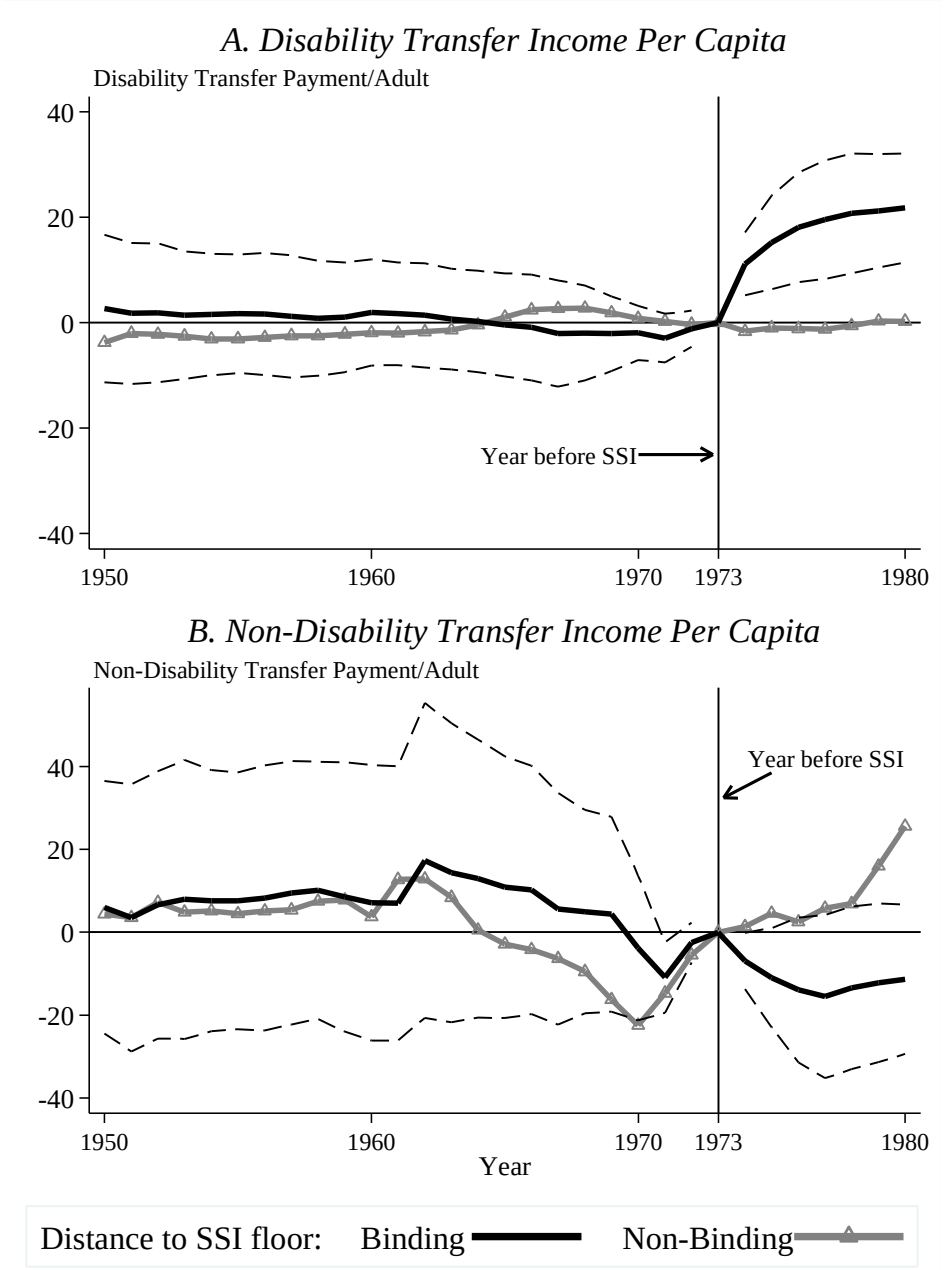

Notes: The figure plots self-reported work-limiting-disability rates from the 1970 census and the change in disability rates from 1970 to 1980 against the 1971 APTD benefit level. In 1970 respondents were asked, "Does this person have a health or physical condition which limits the kind or amount of work he can do at a job?" In 1980 respondents were asked, "Does this person have a physical, mental, or other health condition which has lasted for 6 or more months and which… Prevents this person from working at a job?" Red lines are linear regression estimates on either side of the original SSI federal minimum benefit ($756 in 2017 dollars). Slopes are per $100 of APTD benefits. Source: Ruggles et al. (2010) and DHEW (1972).

**Figure A5. No Relationship Between APTD Benefit Levels and Changes in Recipient's Assessment of Program Quality or Stigma**



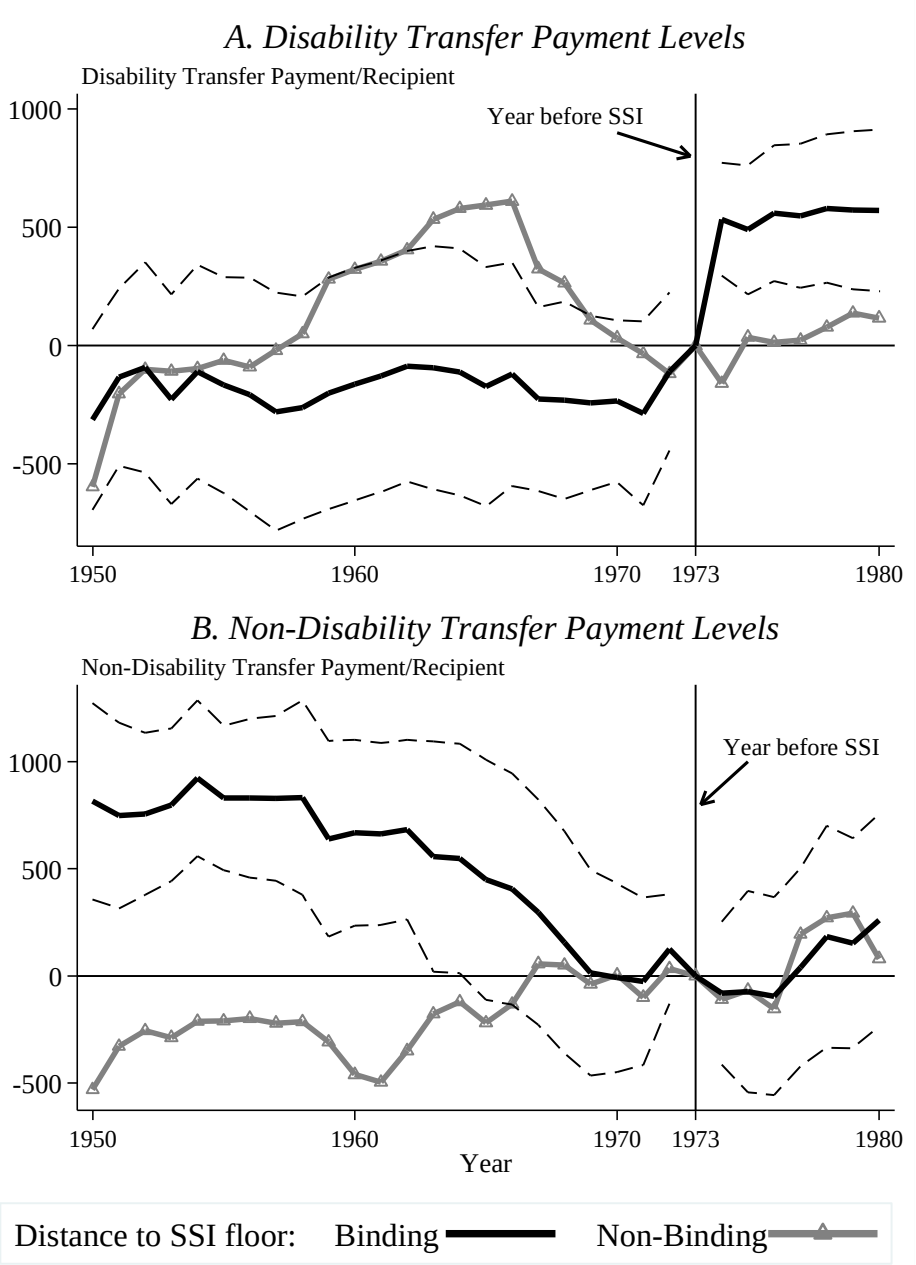

Notes: The figure plots recipients' assessment of SSI relative to APTD/AB in panel A and the change from 1973 to 1974 in disability recipients' likelihood of feeling "bothered" or "embarrassed" about receiving benefits. Red lines are linear regression estimates on either side of the original SSI federal minimum benefit ($756 in 2017 dollars). Slopes are per $100 of APTD benefits. Source: "Survey of Low Income Aged and Disabled" (Social Security Administration 1992) and DHEW (1972).

**Figure A6. The Effect of SSI's Benefit Floor on Payments per Capita in Disability and Non-Disability Transfer Programs**




Notes: The figure plots estimates of $\lambda_t^U$ and $\gamma_t^U$ (in black with 95-percent confidence intervals based on standard errors clustered by state in dashed lines) and $\lambda_t^O$ and $\gamma_t^O$ (in gray) from equation (2). In addition to fixed effects for states and years (and their interaction with an above-SSI dummy), the model also controls for the share of each year that states operated APTD or AFDC-UP programs, and separate year fixed effects for each Medicaid timing group. Source: DHEW and the Social Security Administration (see data appendix for sources and details), DHEW (1972), Haines and ICPSR (2010), and SEER (2013).

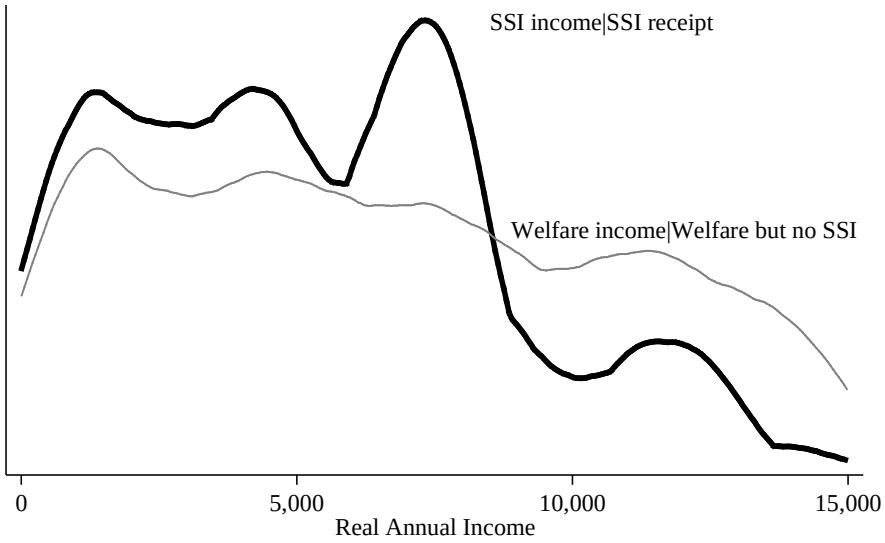
**Figure A7. The Effect of SSI's Benefit Floor on Payments per Recipient in Disability and Non-Disability Transfer Programs**



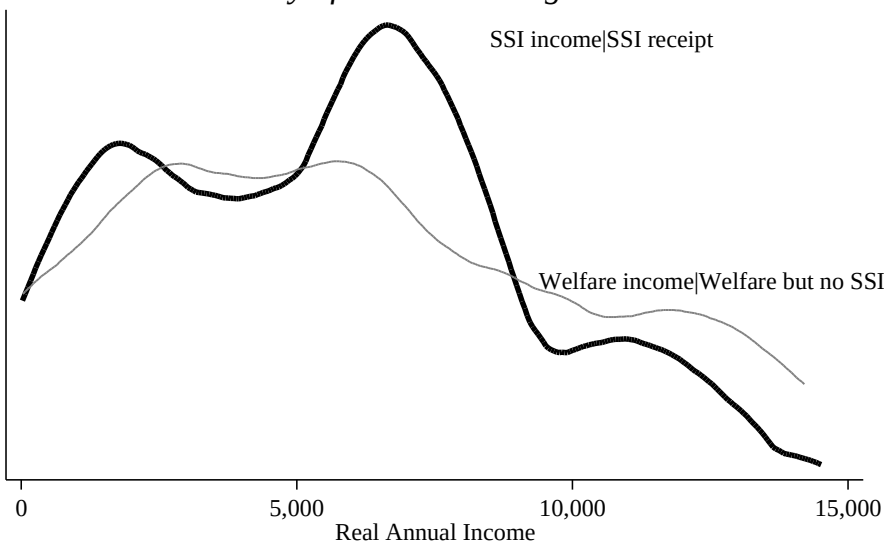

Notes: The figure plots estimates of $\lambda_t^U$ and $\gamma_t^U$ (in black with 95-percent confidence intervals based on standard errors clustered by state in dashed lines) and $\lambda_t^O$ and $\gamma_t^O$ (in gray) from equation (2). In addition to fixed effects for states and years (and their interaction with an above-SSI dummy), the model also controls for the share of each year that states operated APTD or AFDC-UP programs, and separate year fixed effects for each Medicaid timing group. Source: DHEW and the Social Security Administration (see data appendix for sources and details), DHEW (1972), Haines and ICPSR (2010), and SEER (2013).

**Figure A8. SSI and Other Welfare Income Distributions**

*A. 1976 Survey of Income and Education*

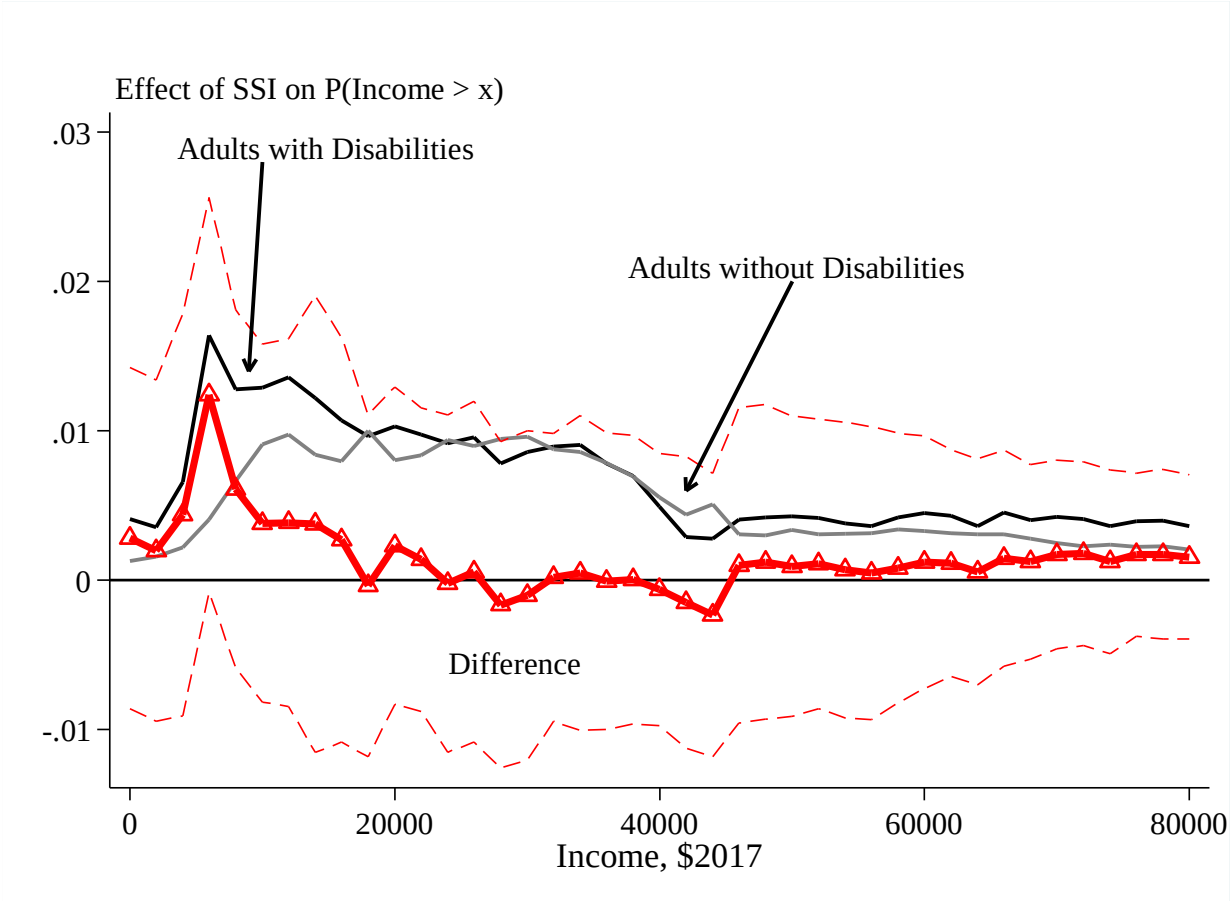



*B. 1974 Survey of Low Income Aged and Disabled*



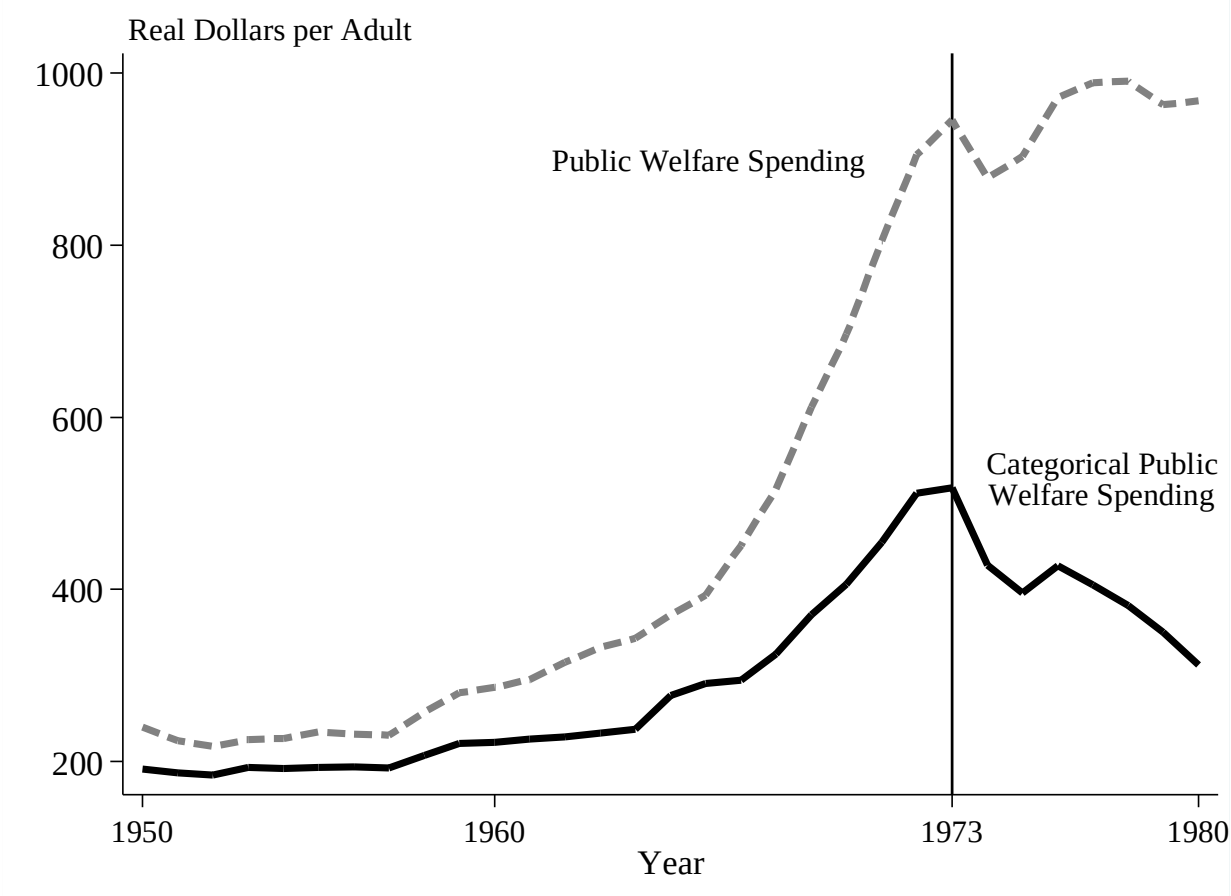

Notes: The figures show kernel density estimates of the distribution of SSI income among SSI recipients (black line) and welfare income among non-SSI welfare recipients (gray line). Income is in 2017 dollars and both data sources show that SSI benefits are concentrated around $7,000. Sources: United States Department of Commerce and Bureau of the Census (2006) and Social Security Administration (1992).

**Figure A9. The Effect of SSI on the Distribution of Total Income for Adults With and Without Disabilities, Binding States in the 1970 and 1980 Censuses**



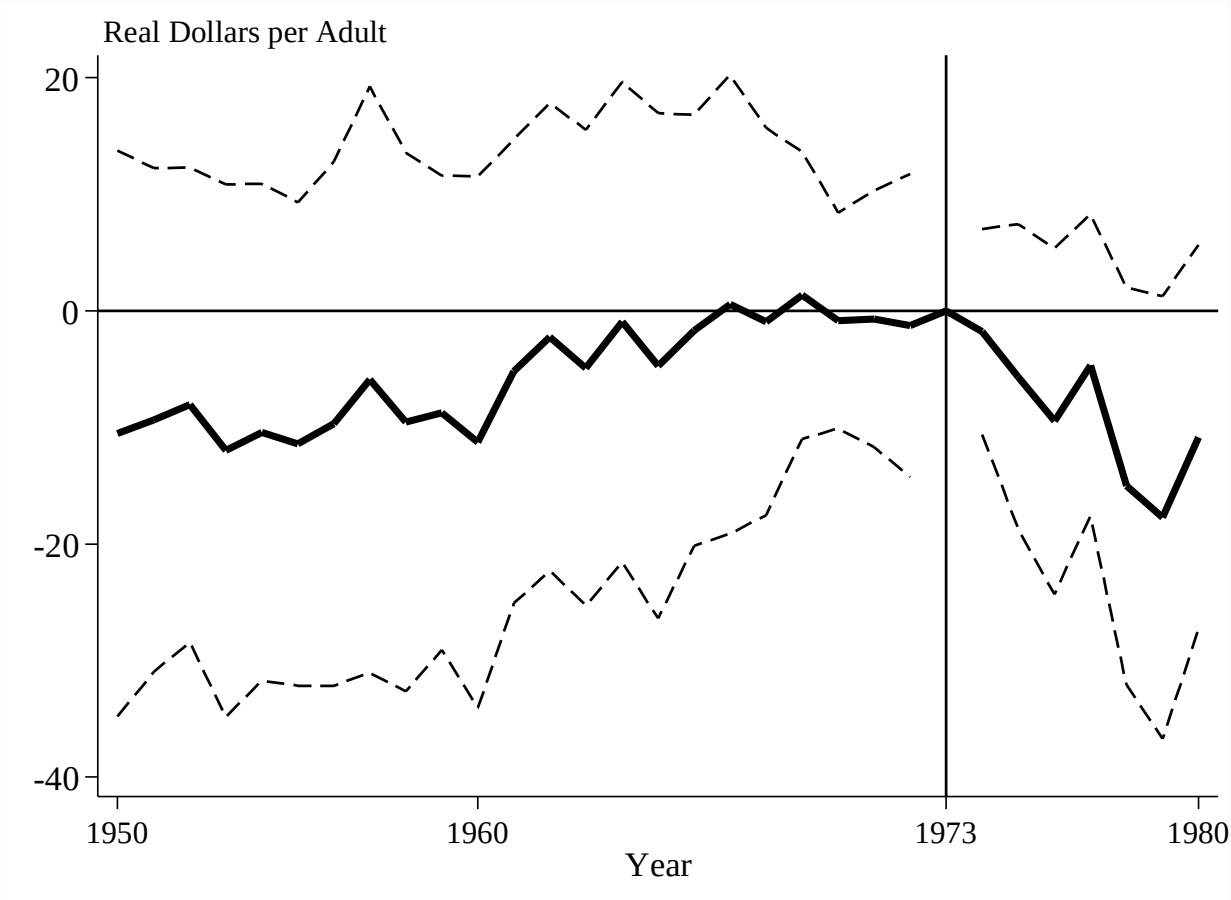

Notes: This figure plots coefficient estimates from difference-in-differences specifications like equation (1) but with only two time periods: the 1970 and 1980 censuses. Each point comes from a regression whose outcome is the share of adults, with disabilities (solid black line) or without disabilities (solid gray line), in state $s$ in year $t$ who report income greater than $x$, indicated on the horizontal axis. The red line with open triangles uses the difference in the shares between adults with and without disabilities as the outcome and equals the vertical distance between the black and gray lines. Both adults with and without disabilities in binding states experienced differential earnings growth between about $10,000 and $40,000, but only adults with disabilities show a spike in the lowest incomes around the SSI level. Source: Ruggles et al. (2010) and DHEW (1972).

**Figure A10. Average Welfare Outlays per Adult Across States: Total and Categorical Spending**




Notes: The figure plots average welfare spending per adult across states. These are the total outlays jointly financed by the federal and state governments and so do not represent states' portion of welfare costs. The dashed gray line uses total public welfare spending, which includes General Assistance and Medicaid as well as non-cash expenditures such as social services, training programs, and administrative costs. The solid black line shows expenditures on categorical programs (OAA, AB, APTD, and AFDC) and not the associated Medicaid expenditures for these populations. This outcome mostly reflects cash payments. Source: U.S. Census Bureau (Various Years)

**Figure A11. The Effect of SSI's Benefit Floor on State Welfare Costs in Binding States**




Notes: The figure plots estimates of $\lambda_t^U$ and $\gamma_t^U$ (with 95-percent confidence intervals based on standard errors clustered by state) from equation (2). In addition to fixed effects for states and years (and their interaction with an above-SSI dummy), the model also controls for the share of each year that states operated APTD or AFDC-UP programs, and separate year fixed effects for each Medicaid timing group. The outcome variable is the state's share of all public assistance costs, including cash and medical benefits. Source: U.S. Census Bureau (Various Years)

**Table A1. SSI Increased the Probability That Adults in AFDC Households Received Disability Benefits**

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| *A. Binding States:* APTD Benefit × Post-SSI | 2.41 | 2.29 | 1.74 | 1.45 | 1.28 |
| | [0.68] | [0.84] | [1.02] | [0.93] | [0.75] |
| 95% C.I. | *(1.07,3.74)* | *(0.65,3.92)* | *(-0.25,3.74)* | *(-0.37,3.27)* | *(-0.19, 2.75)* |
| *B. Non-Binding States:* APTD Benefit × Post-SSI | -0.51 | -0.27 | -0.50 | -0.27 | -0.29 |
| | [0.28] | [0.43] | [0.30] | [0.40] | [0.57] |
| 95% C.I. | *(-1.06,0.05)* | *(-1.10,0.57)* | *(-1.08,0.08)* | *(-1.06,0.52)* | *(-1.41,0.84)* |
| Specification | No Covariates | Preferred | Preferred WLS | Region-by-Year FE | 1970 Disability-by-Year FE |

Notes: The table presents reduced form coefficients that measure changes before and after SSI in the relationship between APTD generosity and the probability that AFDC households contained an adult receiving disability benefits. The first three rows show the results for binding states and the last three rows show the results for non-binding states. These results strongly suggest that many new SSI recipients induced to participate because of benefit increases did indeed come from AFDC since they still had children receiving AFDC benefits. Source: DHEW (2011).