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Federalizing Benefits: the Introduction of Supplemental Security Income and the Size of the Safety Net

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ABSTRACT

In 1974, Supplemental Security Income (SSI) federalized cash welfare programs for the aged, blind, and disabled, imposing a national minimum benefit. Because of pre-existing variation in generosity, SSI differentially raised payment levels in states below its benefit floor, but had no effect in states that paid above it. We show that SSI increased disability participation in states with the lowest pre-SSI benefits, 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.

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Economic analyses of income redistribution and reforms to the American safety net throughout the 20th century have centered on the question of local versus federal control. In models of fiscal federalism (Brown and Oates 1987, Brueckner 2000, Oates 1999), local welfare programs pay inefficiently low benefits relative to a national program.[1] In reality, the American safety net is a changing patchwork of programs controlled and financed by all levels of government at the same time.[2] Current proposals to provide basic income or reform public insurance programs, for example, would drastically shift the level of government at which control and funding take place. We have little evidence, though, on how federal, state, or local control of such policies determines the overall size and effectiveness of these many interconnected programs.

This paper examines how federalizing part of the cash safety net affects total income redistribution, focusing on the introduction of Supplemental Security Income (SSI) in 1974. Described as "the most fundamental new departure in U.S. public welfare policy since the 1930s" (Bickel and Wilcox 1974, p. vii), SSI replaced a set of highly variable state welfare programs for the elderly, blind, and disabled 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).

Yet by federalizing just part of the welfare system, SSI created incentives at both the state and individual level for "shifting" of cases away from programs partly or wholly financed by the

[1] These predictions stem from local policymakers concerned with recipient migration but not redistribution preferences outside their jurisdiction.

[2] The biggest welfare reforms of the 20th century—the 1935 Social Security Act and the 1996 Personal Responsibility and Work Opportunity Reconciliation Act—each fundamentally changed the role of federal versus state and local governments in antipoverty policy. In an historical review of American public finance, Wallis (2000) argues that "the Great Depression and the New Deal ushered in the third financial system…[including] a federal system of domestic economic programs (including infrastructure investment funded by national grants and administered by state and local governments)."

states (Schmidt and Sevak 2004). Moving an adult from Aid to Families with Dependent Children (AFDC) to SSI, for example, would raise their annual family income by $2,400 on average and save their state $1,800.[3] Therefore, by inheriting an existing pool of recipients and potentially drawing heavily from another, the rapidly growing SSI program may not have increased the size of the overall safety net to the extent previously thought.[4]

To address this question, we first 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 previously state-controlled welfare programs for the blind and disabled replaced by SSI, as well as the other 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 research design exploits pre-existing variation in benefit generosity 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 use a difference-in-differences design that compares changes in program participation, payments per recipient, and per capita spending 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 before SSI experienced large increases in generosity because of SSI's income floor (binding states). States with high benefits before SSI

[3] We discuss the individual- and state-level incentives for shifting in more detail in section III.
[4] Within SSI's first year, monthly transfer spending for the aged, blind, and disabled grew by a third, from $1.3 billion to $1.8 billion, and monthly participation grew by a quarter, from 3.2 to 4 million recipients.

had no change in generosity because of a maintenance of effort provision that largely required them to hold payments constant (non-binding states). This distinct feature of SSI strengthens our 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. The cross-state patterns track household-level incentives more closely than those of states, suggesting much of the shifting was likely to have been initiated by recipients. We also apply our design to the distribution of welfare income and total income in the 1970 and 1980 censuses and find that, despite caseload shifting, SSI raised incomes among poor adults with disabilities.[5]

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 across states. This is crucial to consider when conducting cost-benefit analyses. SSI raised average annual payments per recipient in binding states by about $1,700, but our estimates suggest that because of caseload shifting only about half of that represented *new* income. Caseload shifting also implies that SSI's reduced form effects on well-being are likely much smaller than the program's size suggests, and

[5] We find no relationship between benefit increases and the share of adults who self-reported a work-limiting disability, as we discuss below.

that SSI's costs net of savings on other programs ("fiscal externalities", Mayshar 1990) are much lower. Failing to account for program interactions thus inflates costs and may understate benefits. Finally, examining SSI's introduction also provides new insights into economic models of fiscal federalism that consider a single transfer program (Brown and Oates 1987, Brueckner 2000, Oates 1999). 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.

I. 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.[6] 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 Aid to the Blind (AB), AFDC, General Assistance (GA), Aid to the Permanently and Totally Disabled (APTD), and Medical Vendor Payments (MVPs).[7] In 1974, AB and APTD data are recorded in the corresponding eligibility categories in SSI. Except for information on AFDC participation after 1959, these data are all new.

[6] 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).

[7] 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.

Our focus on disability transfers motivates several sample restrictions. First, we include the years 1950 to 1980 because SSI's immediate predecessor for adults with disabilities, APTD, began in 1950, and 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. We do not examine Old Age Assistance, since the scope for shifting from other programs was limited.

We create measures of participation and spending in cash programs for adults only.[8] APTD and AB did not typically cover children, so we use the reported number of recipients. GA did sometimes cover children, so we use the reported number of cases. 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). SSI participation and spending include recipients and outlays from federal SSI as well as state supplementation. We collapse our data by year to avoid differences in seasonality across states. We study three outcomes for disability programs (APTD plus AB) and non-disability programs (AFDC plus GA): the average monthly adult participation rate (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).[9] Table 1 presents summary statistics for the participation and spending in panel A, and these outcome measures in panel B.

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

[8] SSI covered relatively few children immediately after the creation of the program, but the child SSI caseload grew quickly after Sullivan v. Zebley (1990) liberalized child eligibility rules (Garrett and Glied 2000).
[9] 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.

1967, 1973, 1975, and 1977 (DHEW 2011). For each state and year we calculate the share of adults in an AFDC households who received disability benefits, exactly the behavior we would expect for caseload shifting between AFDC and SSI.

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.

II. 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). 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 (OAA), the blind (AB), and single-parent families (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).

The APTD program was not part of the original Social Security Act, but was created in 1950.[10] Disability policy in the United States then remained largely unchanged until the early 1970s, when SSI was introduced in reaction to more comprehensive proposals for universal basic income programs.[11] 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.[12,13] The importance of SSI was largely missed at the time by both politicians and journalists.[14] It passed at the end of 1972, but was not implemented until January 1, 1974, to allow the Social Security Administration time to plan.

[10] 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 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).

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

[12] 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).

[13] Problems plagued the implementation process for SSI, so the first benefits were not paid until January 1974.

[14] 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.

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).[15] This was close to "the median level of payment standards established in state assistance programs" (Bickel and Wilcox 1974, pg. 16). Recipients in states with APTD benefits (G_s^{APTD}) below SSI's level experienced automatic benefit increases. We refer to these as "binding states," indicated by $B_s \equiv 1\{G_s^{APTD} < G^{SSI}\}$. States with APTD benefits above SSI's level—"non-binding states"—had to supplement federal SSI payments up to their APTD levels (at least for recipients transferred from APTD).

The 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 Wilcox 1974, pg. 15). Figure 1 maps the (real) difference between SSI's monthly benefit floor and each state's 1971 APTD maximum benefit, denoted $d_s \equiv G_s^{APTD} - G^{SSI}$.[16] Alabama, Mississippi, Louisiana, and West Virginia had benefits that were more than $300 below SSI's level, while Oregon's benefit was just $89 below it. Wide differences existed between non-binding states as well (shown in white). Michigan's APTD benefit was $414 over SSI's minimum, while Wisconsin's was just $89 above. State supplementation, however, meant that these pre-existing benefit differences did not translate to post-SSI benefit changes.

The following equation approximates the change in statutory benefit levels before and after SSI as a function of its APTD payment in state s:[17]

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

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

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

[17] 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.

This defines three 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. Prediction 3: Effects occurred immediately in 1974, when SSI began.

This approximation matches actual benefit changes quite well. Panel A of Figure 2 plots the monthly time-series of disability payments per recipient in binding and non-binding states. First, benefits spike immediately in January 1974.[18] While they fall relatively quickly thereafter due to rapid inflation (benefits were not indexed until December 1975), SSI changed the value of disability transfers as soon as it took effect. 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 3 plots changes in disability payments per recipient between 1973 and 1975 against the 1971 APTD benefit maximum. Benefits in the least generous states grew by as much as $2,400 a year, while the average growth in non-binding states is close to zero. The nonparametric fit picks out a trend break at SSI's minimum benefit, and a linear fit shows benefit growth of $354 for each $100 difference in the maximum APTD benefit in the binding states (SE = 107) but no relationship in non-binding states. (The change is not one-for-one because recipients with other income got less than the maximum.)

[18] Although SSI had been passed two years before, Congress added provisions intended to prevent states from making anticipatory policy changes.

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.[19] 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 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. These effects were quite similar across states, and did not vary by APTD generosity. Figure 4 uses direct reports about these phenomena from the Survey of Low Income Aged and Disabled (SLIAD; Social Security Administration 1992) to show that, at least from recipients' point of view,

[19] 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).

programmatic features or stigma were uncorrelated with the level of APTD benefits. Using 3,434 adults who responded to and received disability assistance in both waves of the SLIAD, we calculate state-level means of the share who said that SSI was "better than public assistance" or the difference across waves in the share who felt either "bothered by having to accept aid" or would be "embarrassed to admit" receiving aid. Panel A shows that about 80 percent of SSI recipients felt it was "better" than APTD/AB and, importantly, there is no correlation between this opinion and level of APTD benefits. Panel B shows that the likelihood that recipients' perceived stigma on SSI fell by about 20 percentage points relative to APTD/AB, but, again, did not fall differentially in lower-APTD-benefit states.

Appendix Figure A1 shows that levels of reported disabilities differed by APTD generosity. About 16 percent of adults in the least generous APTD states reported a disability in 1970, compared with around 12 percent in non-binding states. However, consistent with no systematic relationship between SSI's benefit changes and its role in changing the medical eligibility criteria, we also show that *changes* in self-reported disability rates between 1970 and 1980 are not correlated with APTD generosity. Between 1970 and 1980, when SSI could have induced some adults to report or medically verify a health condition, disability rates fell by almost two percentage points across all APTD benefit levels.[20] Differential changes in disability welfare participation in lower-APTD-benefit states cannot be due to differential changes in disability incidence itself.

III. 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 the break-even level of income

[20] 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).

that defines financial eligibility (mechanical effect), and because they lead to reductions in income in proportion to the compensated labor supply elasticity (behavioral effect).[21] Our raw outcome data highlight that participation in disability programs rose most where benefits rose most. Panel B of Figure 2 shows that while disability participation took 20 years after the introduction of APTD in 1950 to reach 1 percent, it grew by half this amount in just the two years following SSI's introduction.[22] Moreover, the difference in participation rates between binding and non-binding states doubled soon after SSI was introduced.[23] Panel B of Figure 3 shows the same kinked relationship between disability participation growth from 1973 to 1975 and APTD benefits that we observed 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. Second, because AFDC or GA recipients receive some welfare by definition, have already incurred any 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 benefit.)

[21] 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).

[22] Participation appears not to increase exactly in January. Berkowitz and DeWitt (2013) suggest that part of this came from problems with SSI's new computerized benefit system in the first few months.

[23] Even prior to SSI, APTD participation rates were *higher* in low-benefit states, because individuals in those states were poorer and had higher disability rates.

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.

Figure 5 illustrates (in circles) the potential increase in family income if a non-working adult were to switch from AFDC to SSI, plotting this gain against the 1971 APTD benefit. In this case, the children of an SSI recipient can remain on AFDC, and the adult trades her portion of the AFDC benefit for her SSI entitlement. Individuals gained the most from caseload shifting in the lowest-APTD-benefit states—about $4,800 a year—and the least in states with high APTD benefits. The incentive for individuals to shift programs tracks SSI's benefit effects closely.[24]

The second two panels in Figures 2 and 3 provide preliminary evidence of caseload shifting. Panel D of Figure 2 shows that especially in binding states, participation in non-disability transfer programs started to fall after 1974. Panel C shows that there are no corresponding changes in benefits per recipient that can explain this change. Panel D of Figure 3 shows that the relationship between changes in non-disability participation and APTD generosity is the opposite of what we observe for disability take-up in panel B. The least generous states have relative reductions in non-disability welfare participation, but there is essentially no relationship in the non-binding states, and no indication (in panel C) that changes in non-disability benefits can explain the pattern.

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. In fiscal year 1973, binding states spent about $215 per adult on "public welfare" compared to $460 in non-binding

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

states. These are 5 to 10 percent of total state-raised revenues per adult ($3,100 and $3,900), and only about one-quarter of total public welfare expenditures were for cash assistance (they included Medicaid, for example).[25] The potential income effects were therefore fairly limited. More important, as Appendix Figure A2 shows, these costs were unrelated to APTD benefits.[26] Consistent with this, we also find no differential change in AFDC or GA benefits. Therefore, 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 open triangles in Figure 5 plot an estimate of the 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

[25] 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.

[26] Appendix Figure A2 plots 1973 state welfare costs (total costs net of the federal portion) per adult and as a share of state revenue against the 1971 APTD benefit level. Both measures of state spending are higher in non-binding states, but there is no relationship between either measure and APTD benefits within binding and non-binding states.

($1,968 per recipient on average).[27] It was clear that some of these states had recognized the benefits of caseload shifting even before SSI was implemented.[28]

C. Evidence on Caseload Shifting

Substantial evidence of caseload shifting from other programs to SSI has been documented 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, 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. Most closely related 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.

IV. EMPIRICAL STRATEGY: DIFFERENCE-IN-DIFFERENCES USING PRE-SSI BENEFITS

Our research design builds on SSI's effects on benefits described in equation (1). We estimate the following event-study specification for outcome y_{st} for state s in year t:

[27] 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.

[28] 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).

$$y_{st} = \alpha_s + \boldsymbol{\beta}'\boldsymbol{X_{st}} + \left[\alpha_t + \sum_{t=1950}^{1973} \lambda_t^U \alpha_t |d_s| + \sum_{t=1974}^{1980} \gamma_t^U \alpha_t |d_s|\right] B_s$$

$$+ \left[\alpha_t + \sum_{t=1950}^{1973} \lambda_t^O \alpha_t |d_s| + \sum_{t=1974}^{1980} \gamma_t^O \alpha_t |d_s|\right] (1 - B_s) + \epsilon_{st}. \qquad (2)$$

α_s are state fixed effects, and $\boldsymbol{X_{st}}$ 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. α_t are year fixed effects and we allow them to differ for states that were above or below SSI's minimum benefit.[29]

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. (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 λ_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 3). The γ_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 γ_t^O coefficients 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 (prediction 2).

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

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 one-sided *p*-values from 500 random permutations of d_s (and therefore B_s).

Finally, we summarize these magnitudes using an instrumental variables (IV) model that uses the post-SSI trend in binding states as an instrument for the disability variables (participation rates or per capita transfers). The results equal the ratio of the non-disability to disability trend-breaks. The participation results then 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 APTD generosity in the specific way that SSI did.[30] 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

[30] 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).

states. Second, if the determinants of APTD generosity were 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. 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 a range of demographic and economic characteristics from the 1960 census, and use the coefficients to predict participation rates in 1970 and 1980.[31] Figure 6 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. Figure 6 shows that changing economic and demographic characteristics were not the cause of the differential changes in program participation documented in Figure 3.[32]

V. RESULTS: SSI'S DIFFERENTIAL EFFECT ACROSS STATES

Figure 7 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

[31] 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.
[32] Recall that disability rates themselves are correlated with APTD benefits. Lower-benefit binding states have higher disability rates. The striking balance in disability *changes* shows that estimates of equation (2) will not confound trends in health-related eligibility with SSI's effect on benefits. The imbalance in disability levels may affect the interpretation of our estimates (see de Chaisemartin and D'HaultfŒuille 2018), but not necessarily internal validity.

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 levels during APTD's first 24 years. Immediately after SSI took effect, however, participation jumped in states with benefits lower than SSI's floor (predictions 1 and 3), 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.

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.[33] Non-binding states did not have systematically different changes in other welfare participation according to their APTD generosity.

The first panel of Table 2 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 0.05 additional percentage points of disability participation (column 1; SE = 0.014, permutation *p*-value = 0.000), but lost 0.038 percentage points in other welfare participation (column 2; SE = 0.02, permutation *p*-value = 0.054). We find no significant change in overall welfare participation, which is the difference in the other two estimates.

[33] 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 0.05 percentage points per year in disability participation at the expense of 0.038 percentage points in other welfare participation, then 0.76 (0.038/0.05) recipients left non-disability programs for each person that got SSI. The just-identified IV estimate exactly equals this ratio (SE = 0.28, permutation *p*-value = 0.41). 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 3 presents reduced-form and IV estimates for annual per capita transfer income (see appendix Figure A3 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 = 0.74), but $2 fewer 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 $0.49 less from non-disability programs (SE = 0.35), raising per capita transfer income by just $0.51 (SE = 0.35). The confidence interval for total per capita transfers, however, includes both *reductions* and values as high as $1.20 (95% C.I.: -0.33, 1.21).

A. How do we know this is caseload shifting?

Figure 8 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. The results are smaller when we control for separate year fixed effects by region or by quartiles of the 1970 work-limiting-disability rate. In fact, these two sets of controls are similar. SSI-induced benefit increases were largest in the South (Figure 1), which had 12 out of the 13 states in the highest disability quartile. 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 Wilcox (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 safety net correlated with pre-existing disability prevalence, or measurement error in the APTD benefit policy data.[34]

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 4 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 (for example, if the AFDC children lived in a foster home or parents received other programs). If

[34] Appendix Figure A4 plots event-study estimates for the ratio of non-farm employment to the adult population. Using this rough measure, we find no evidence of post-1974 changes in employment that are correlated with APTD benefits. This 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.

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.[35]

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 9 scatters the 1967–1977 change in this outcome for each state against APTD benefit levels. As in 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. Table 5 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.[36]

[35] Appendix Figure A5 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.

[36] 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?

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? Figures 10 and 11 address this question using the 1970 and 1980 censuses. We estimate equation (3) on a series of variables that measure the share of adults with 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 income distribution in binding states (Chernozhukov, Fernández-Val, and Melly 2013).

Figure 10 plots these estimates for welfare income 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 A6 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 1 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 10 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.[37] We also find no change in the probability of having any welfare income (the left-most point

[37] 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.

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.[38] 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 plotted in Figure 5. This also corresponds closely to SSI's effect on disability benefits per recipient (Appendix Figure A5), which shows an increase of $600 per year (per $100 in the benefit gap). That the census estimate implies just $300 of additional welfare income per SSI recipient matches our finding in Table 3 that half the cross-state growth in SSI income came at the expense of other welfare income.[39]

The increases in welfare income show up clearly in total income. Figure 11 plots comparable results for total personal income (in binding states). The black and gray lines show the results for adults with and without disabilities. The positive coefficients at low levels of income show that both groups 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 $40,000 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 10 closely. The red line with open triangles shows results for the difference in the income distribution between disabled

[38] 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).

[39] 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 3.

and non-disabled adults and highlights that the only range where the two distributions differ is the most common amount of SSI income. 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 economically vulnerable adults with disabilities. This income gain is in addition to the value recipients gained from reduced stigma and better administration.

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.[40] 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, the share of adults on welfare who got disability payments grew from 25 to 36 percent. Without caseload shifting it would have only reached 31.5 percent. About 300,000 disabled SSI recipients "shifted" from other programs.

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"

[40] 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.

off of AFDC switched to SSI, very similar to our finding that 76 percent of those "pulled" onto SSI came from AFDC or GA.

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.[41]

Despite the variability, 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 75 percent with respect to SSI's benefit increases is thus a key input into any program evaluations.

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

[41] Many "crowd out" studies in education focus on spending (presumably a policy choice) rather than changing participation. Turner (2017) finds that Pell grants reduce institutional aid by about 20 percent, a smaller estimate than earlier studies. Gordon (2004) finds federal funding for local school districts is completely offset by reductions in state/local revenue after 3 years.

limited—whether groups who receive competing benefits can make themselves eligible—can influence its cost and effects. Similarly, proposals to limit federal Medicaid financing and grant states wide latitude in setting benefits and eligibility could drastically shrink the program (Goodman-Bacon and Nikpay 2017). 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. State Medicaid cuts could, therefore, shift cases onto SSI.

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.

Three important caveats apply to our results. First, we cannot identify whether caseload shifting came from recipient or state decisions. Since individual incentives correlate more closely to our cross-state identifying variation in APTD benefits than state incentives do, we find it more

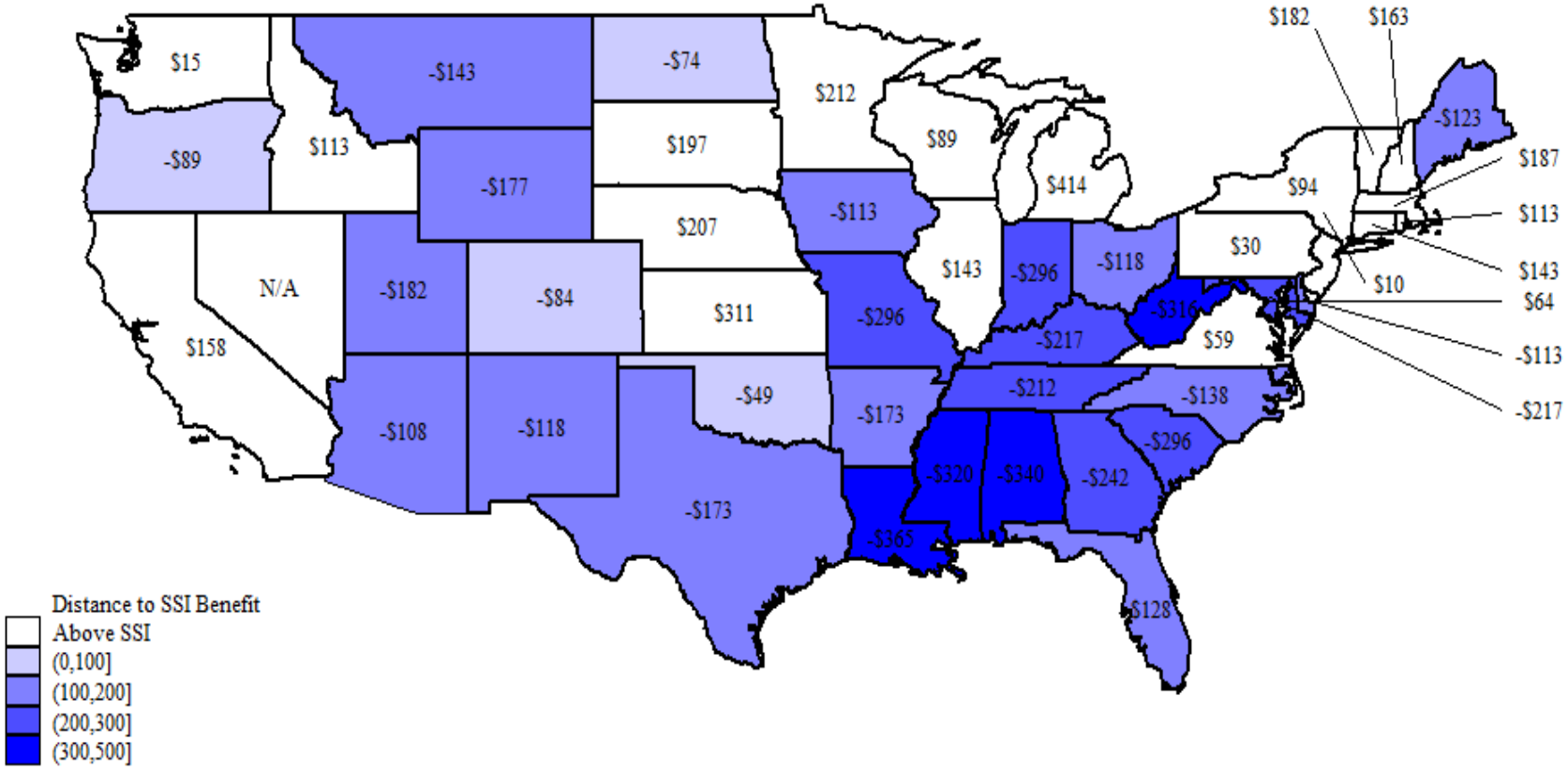
likely that our effects derive from individual behavior. But states stood to gain, too, if they shifted many recipients, and we cannot rule this out as an explanation.[42] Second, we cannot identify effects of SSI that did not differ across states, including a potentially important role for widespread 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. Third and last, while the confidence intervals for some key estimates, such as the caseload shifting "rate" in Table 2, 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.

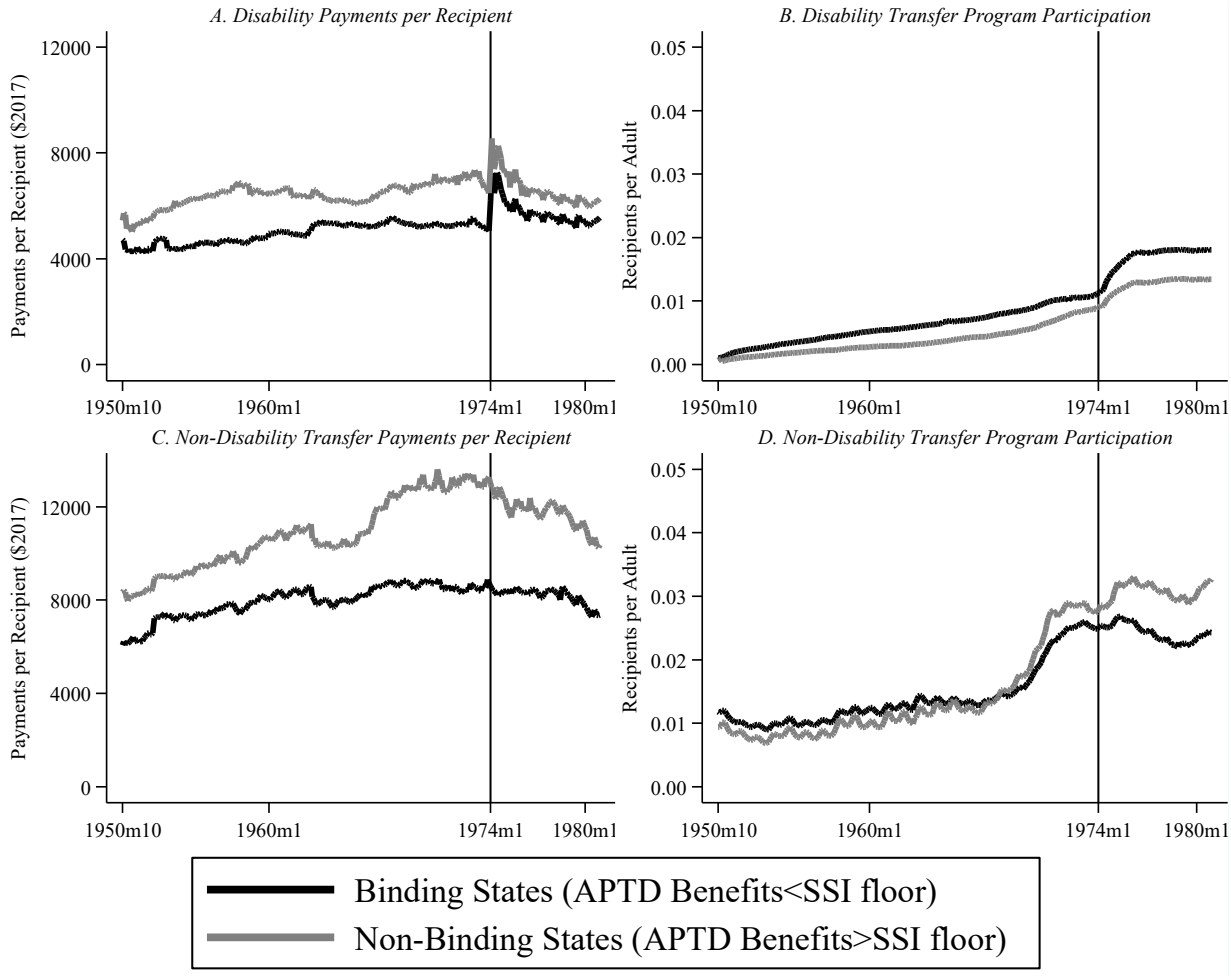
[42] Some states surely recognized the potential savings. New York sought to pack the APTD rolls ahead of SSI's implementation to ensure recipients would be automatically moved to SSI, for example.

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



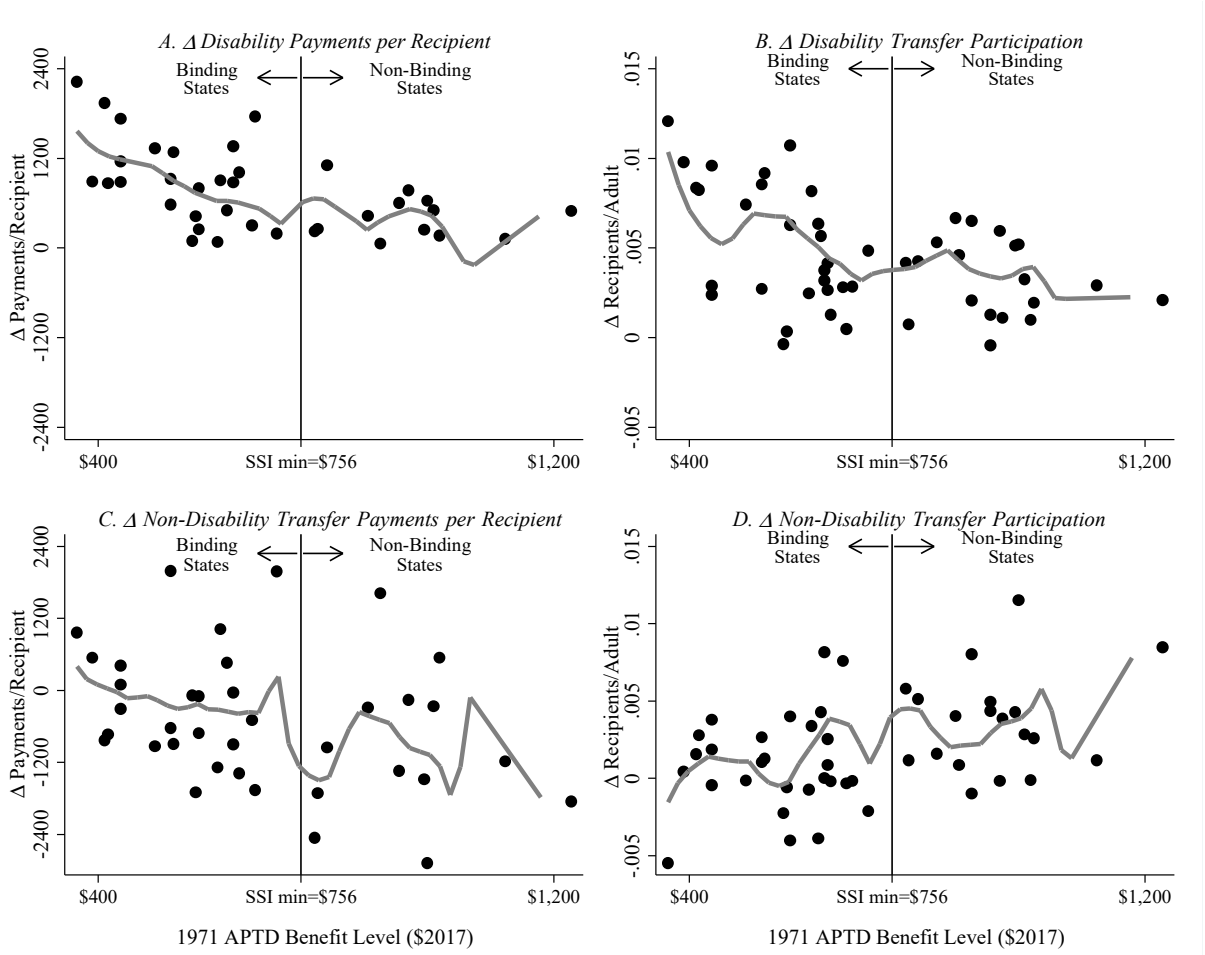
Notes: The figure maps the difference between the benefit for a single adult on APTD in 1971 and SSI's initial minimum benefit. Positive numbers indicate non-binding states where APTD benefits exceeded SSI benefits (shown in white), and negative numbers indicate binding states where SSI raised benefits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

Figure 2. Benefits and Participation Rates in Adult Transfer Programs by Pre-SSI Benefit Level, 1950–1980



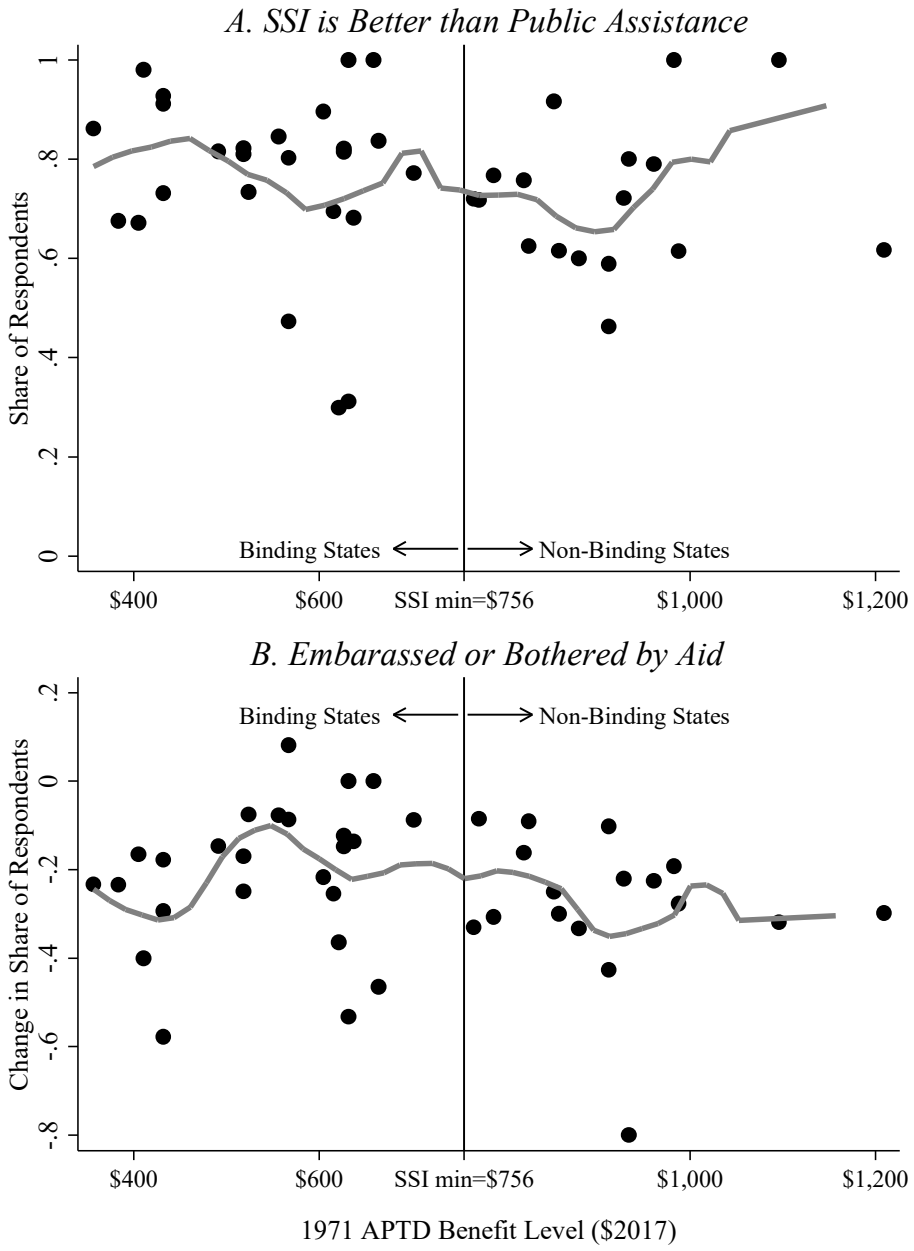
Notes: The figure plots real annual payments per recipient (panel A) and participation rates (panel B) in disability welfare programs (APTD and AB), and the same outcomes for non-disability categorical welfare programs (AFDC and GA in panels C and D. We present the time series separately for states with 1971 APTD maximum benefits that were below (binding states; black line) SSI's benefit floor and above it (non-binding states; gray line). 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 Kinked Relationship Between Changes in Disability Payments per Recipient and Disability Recipients per Adult and pre-SSI APTD Benefit Levels



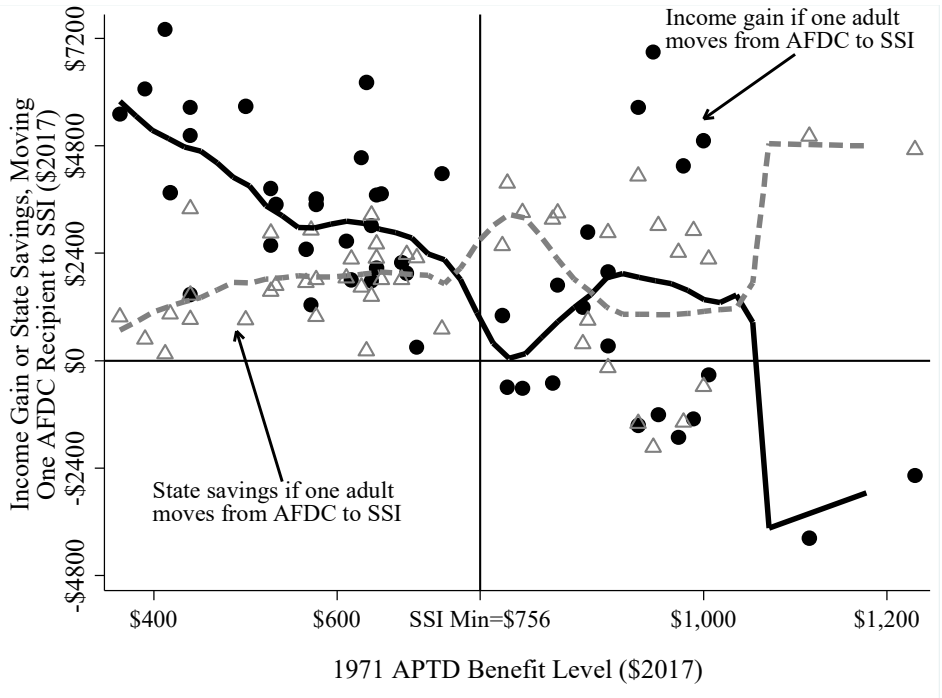
Notes: The figure plots the change between 1973 (pre-SSI) and 1975 (post-SSI) in annual payments per recipient (panel A) and participation rates (Panel B) in disability welfare programs (ATPD and AB) against the maximum monthly APTD benefit in 1971 expressed in 2017 dollars. Panels C and D present the same outcomes for non-disability welfare programs (AFDC and GA). The figure also includes smoothed estimates using an Epanechnikov kernel with bandwidth of 30. Panel A shows convergence in benefits per recipient after SSI for states previously below its minimum, but not for those above. The linear fit is -$354 per $100 difference in monthly benefit maxima (SE = 107) in the binding states with a trend break of $315 per $100 (SE = 134) in the non-binding states. 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. The linear fit is -0.0013 per $100 (SE = 0.0006) in the binding states with a trend break of 0.0008 per $100 (SE = 0.0007) in the non-binding states. The linear relationship between non-disability benefit changes and APTD benefits is -121 (SE = 241) in binding states with no change in slope in non-binding states (trend break = 6, SE = 29.8). The linear relationship between non-disability benefit changes and APTD benefits is 0.001 per $100 (SE = 0.001) in binding states with no change in slope in non-binding states (trend break = -0.0002, SE = 0.001). 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. No Relationship Between APTD Benefit Levels and Changes in Recipient's Assessment of Program Quality or Stigma



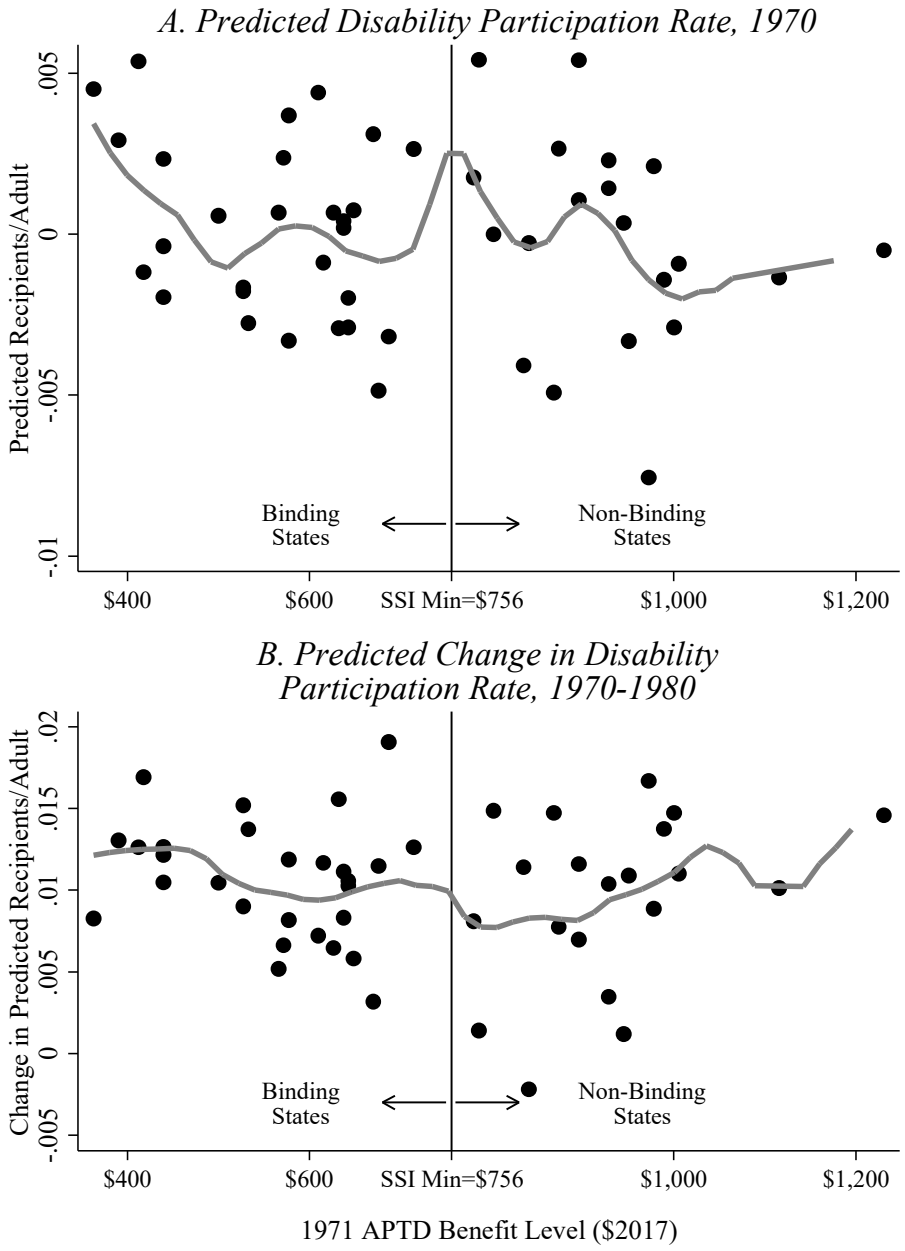
Notes: The figure plots recipients' assessment of SSI relative to APTD/AB in panel A and the change from 1973 to 1974 in disability recipients' likelihood of feeling "bothered" or "embarrassed" about receiving benefits. The figure also includes nonparametric regression estimates using an Epanechnikov kernel with bandwidth of 30. The linear fit in panel A is an insignificant -0.0003 (SE = 0.0003) in the binding states, with an insignificant trend break of 0.0004 (SE = 0.0005) in the non-binding states. The linear fit in panel B is an insignificant 0.0003 (SE = 0.0003) in the binding states with an insignificant trend break of -0.0006 (SE = 0.0004) in the non-binding states. Source: "Survey of Low Income Aged and Disabled" (Social Security Administration 1992) and DHEW (1972).

Figure 5. The Relationship Between State Savings and Individual Income Gains to Switching from AFDC to SSI



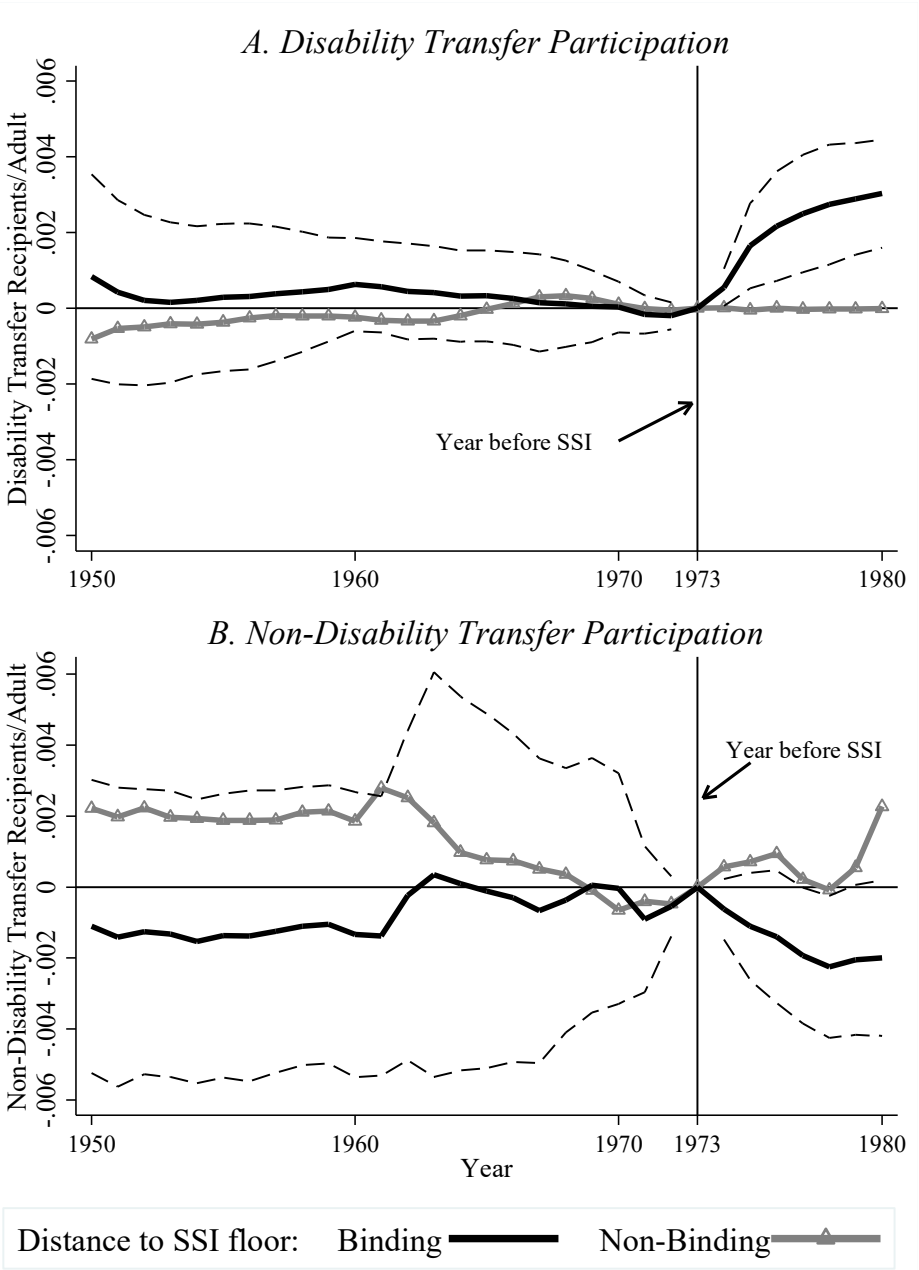
Notes: The figure plots the potential savings to states and the potential gain to families from moving one adult from AFDC to SSI. Annual state savings equal twelve times the state's share of the adult portion of the maximum AFDC benefit level in 1973 minus its supplementation amount for basic needs 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. 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. The potential annual income gain to an individual from switching equals twelve times the total SSI benefit (federal minimum plus state supplementation) minus the adult portion of the AFDC max. The *x*-axis equals the nominal monthly maximum APTD benefit level in 1971. The figure also includes nonparametric regression estimates using an Epanechnikov kernel with bandwidth of 30. Source: DHEW (1972), Rigby and Morrison (1975), United States Social and Rehabilitation Service Assistance Payments Administration (1972).

Figure 6. Predicted Participation in 1970 and Predicted Change in Participation from 1970 to 1980 Based on 1960 Characteristics Are Not Related to APTD Benefit Levels



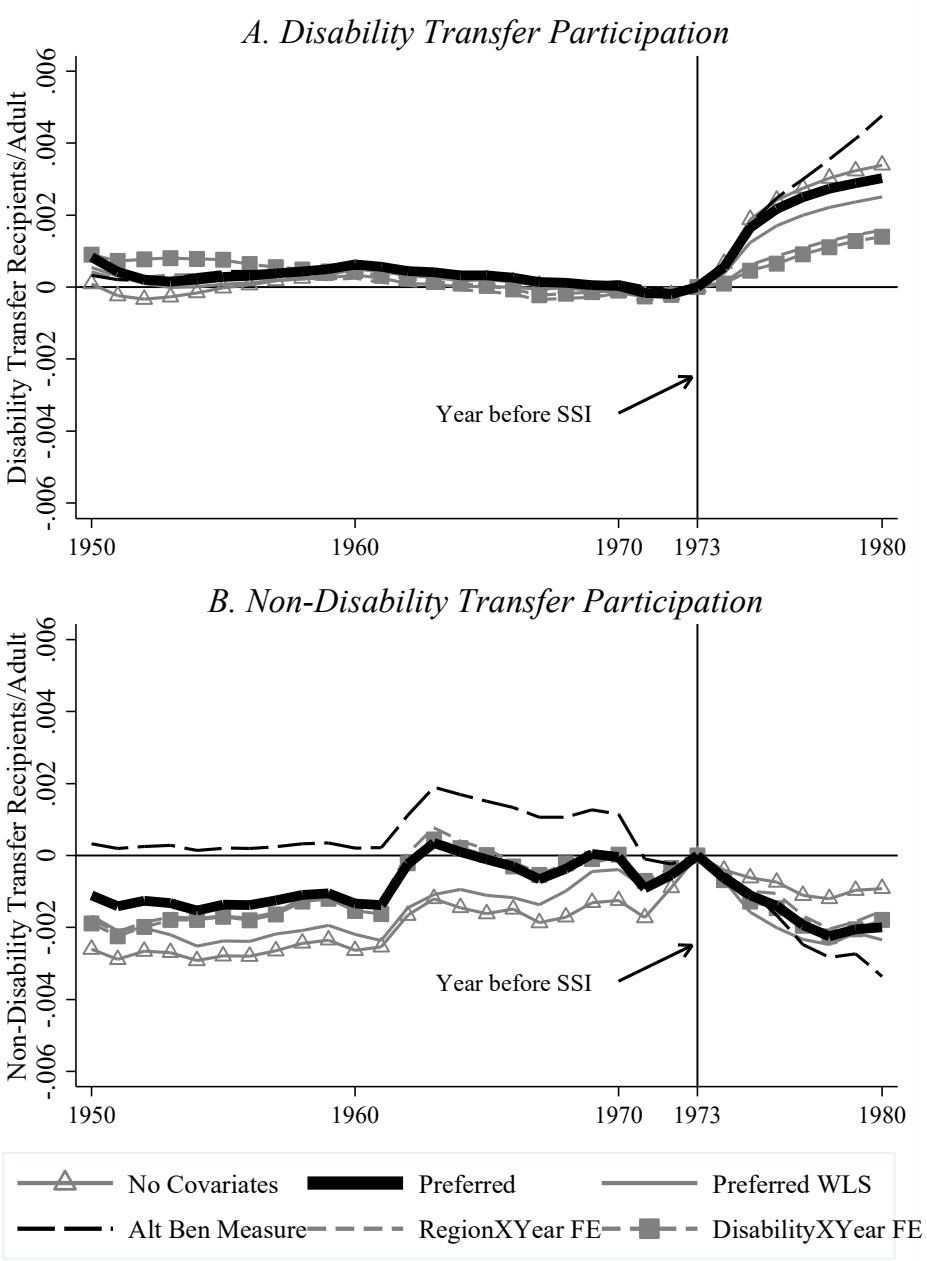
Notes: The figure plots predicted disability transfer participation in 1970 and the change in predicted participation from 1970 to 1980 against the 1971 APTD benefit level. Predictions come from a cross-sectional regression of 1960 state APTD participation rates on the share of adults who are institutionalized, 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. Gray lines are nonparametric regression estimates using an Epanechnikov kernel with bandwidth of 30. Source: Ruggles et al. (2010) and DHEW (1972).

Figure 7. The Effect of SSI's Benefit Floor on Participation in Disability and Non-Disability Transfer Programs



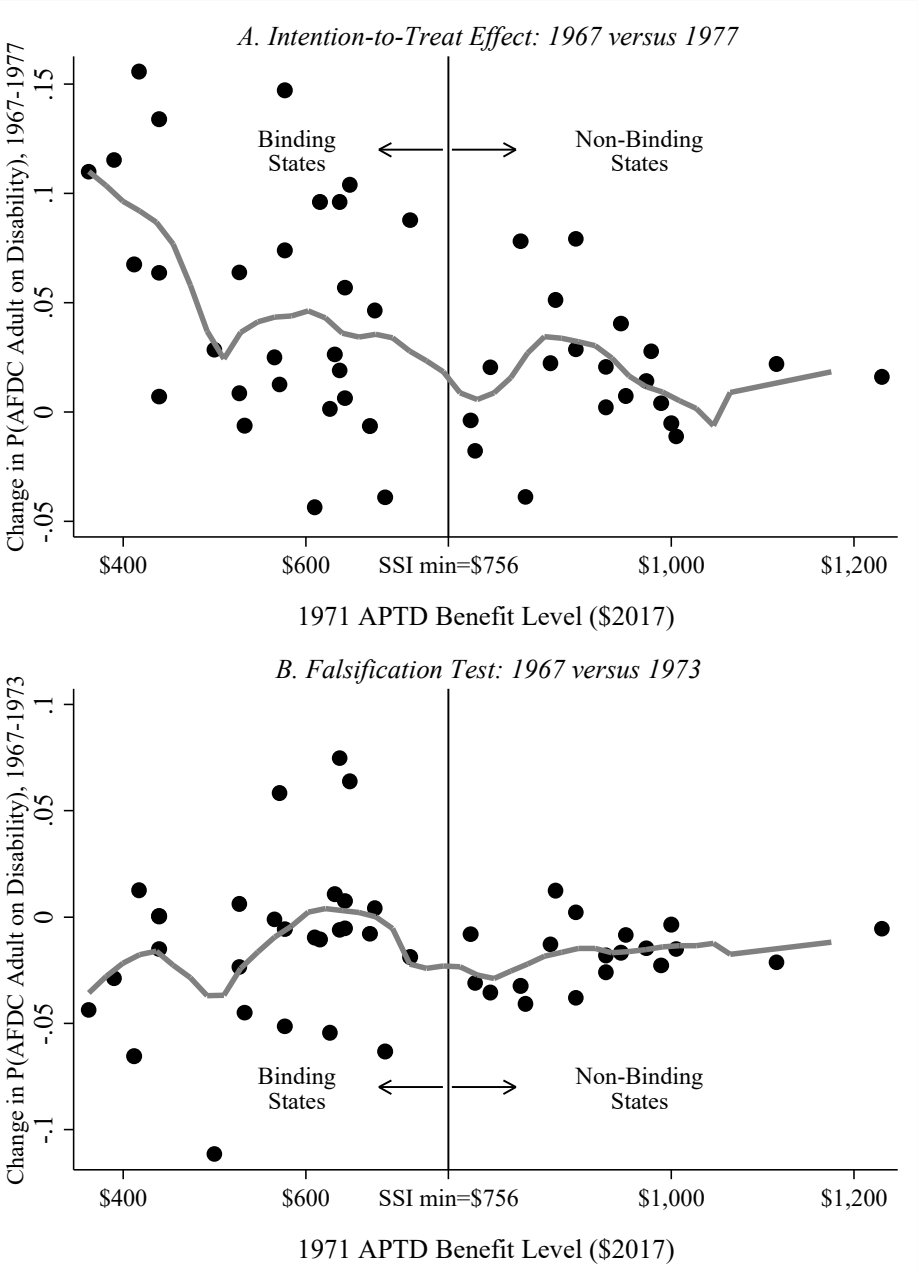
Notes: The figure plots estimates of λ_t^U and γ_t^U (in black with 95-percent confidence intervals based on standard errors clustered by state in dashed lines) and λ_t^O and γ_t^O (in gray) from equation (2). In addition to fixed effects for states and years (and their interaction with an above-SSI 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 8. Robustness of the Estimates Across Specifications for Binding States



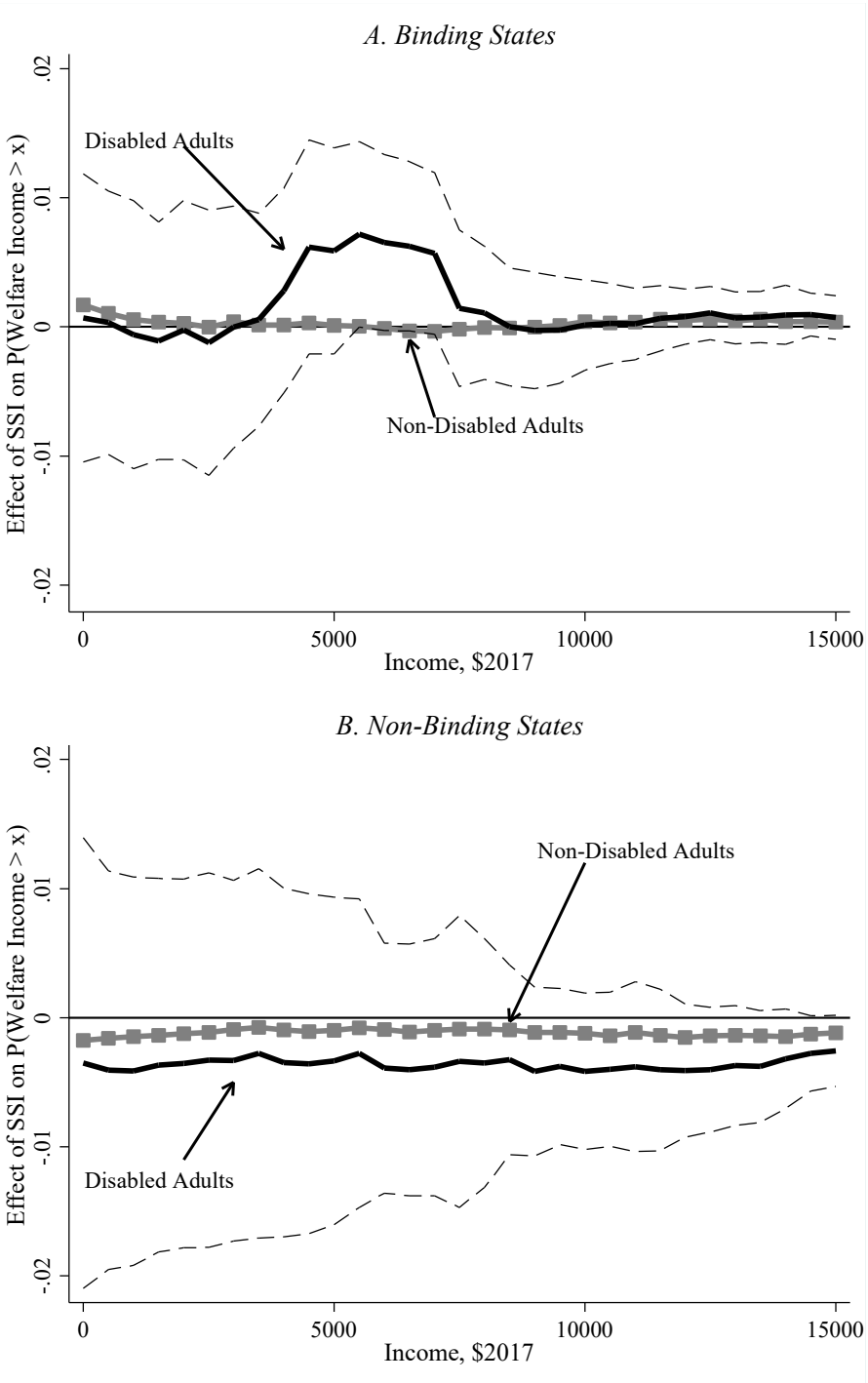
Notes: The figure plots estimates of λ_t^U and γ_t^U from alternative specifications of equation (2). "No covariates" refers to equation (2) without $\boldsymbol{X_{st}}$. WLS results are weighted by the 1950 adult population. The "Disability X Year" controls are interactions of year fixed effects with quartiles of states disability rates in 1970. The alternative benefit measure uses reported APTD maximum benefits from Bickel and Wilcox (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 9. Direct Evidence of Shifting: The Relationship Between APTD Benefits and Changes in the Probability That AFDC Adults Received Disability Transfer Income



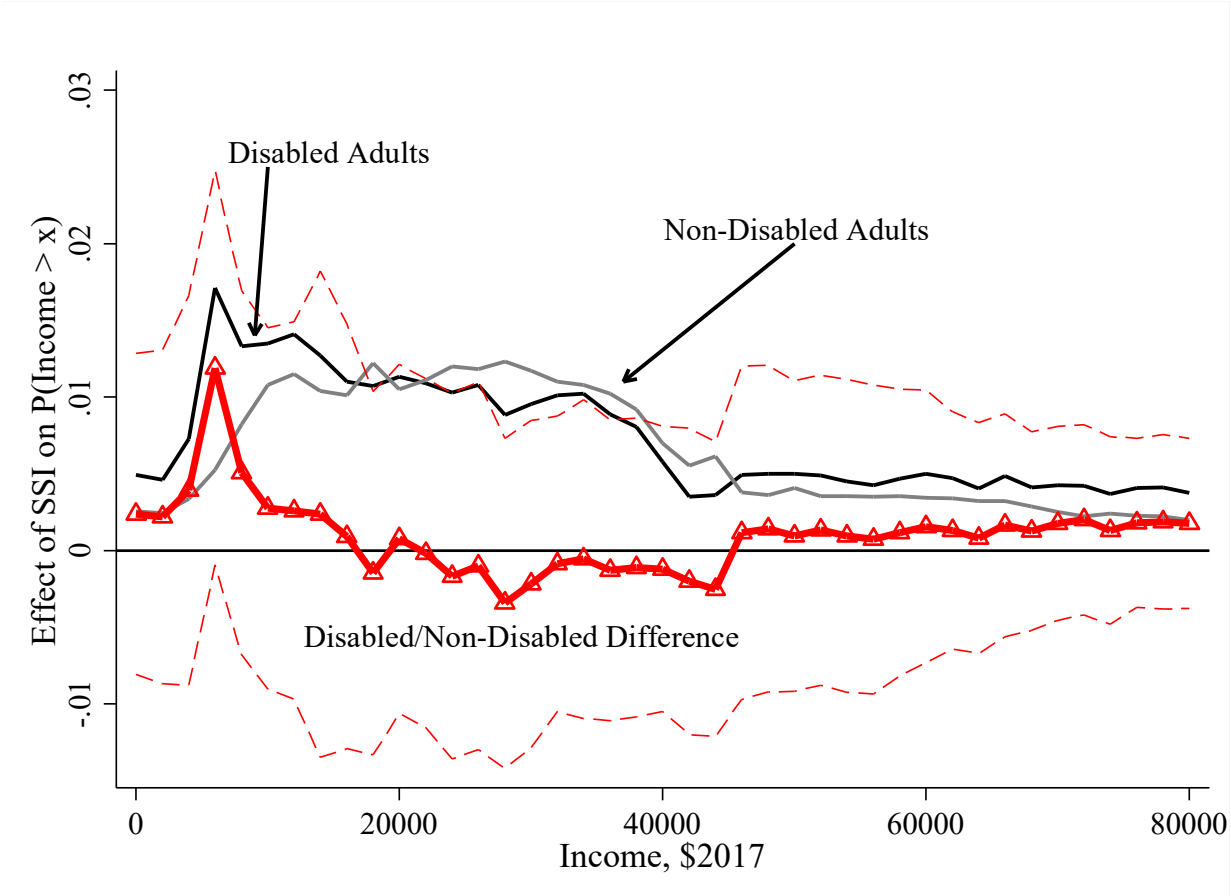
Notes: The figure plots change in the share of AFDC households where an adult (either the AFDC mother or father) received disability income (APTD or AB in 1967 and 1973, SSI in 1975 and 1977). Panel A is a scatter plot and smoothed fit for the change before and after SSI in 1967 and 1977. Panel B is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

Figure 10. 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).

Figure 11. 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).

Table 1. 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	167,304	427,401	931,002	2,323,132
AFDC	562,221	644,885	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	$14.20
AFDC	$5.00	$7.52	$27.87	$35.15
GA	$1.97	$2.51	$3.64	$4.07
	B. Outcome Measures			
Participation Rate				
APTD/SSI	0.0019	0.0046	0.0087	0.0180
AFDC	0.0064	0.0069	0.0203	0.0253
GA	0.0044	0.0042	0.0046	0.0058
Annual Benefits per Recipient				
APTD/SSI	$5,344	$6,235	$6,516	$6,127
AFDC	$9,560	$12,235	$12,435	$10,024
GA	$4,458	$5,649	$5,937	$4,673
Annual Per Capita Benefits				
APTD/SSI	$9.64	$25.85	$58.32	$113.77
AFDC	$56.96	$80.17	$260.11	$271.69
GA	$22.45	$26.72	$34.02	$31.45

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 2. 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
Panel A			
Post-SSI Trend x Benefit Gap, Binding States	0.00050	-0.00038	0.00012
	[0.00014]	[0.00020]	[0.00021]
Permutation, one-sided p-value	*0.000*	*0.054*	*0.324*
Panel B			
IV: Disability Transfer Recipients		-0.76	0.24
		[0.28]	[0.28]
Permutation, one-sided p-value		*0.409*	*0.591*
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 Γ^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 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 3. 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
Panel A			
Post-SSI Trend x Benefit Gap, Binding States	4.10	-2.03	2.08
	[0.74]	[1.81]	[1.86]
Permutation, one-sided p-value	*0.000*	*0.213*	*0.195*
Panel B			
IV: Per Capita Disability Income		-0.49	0.51
		[0.35]	[0.35]
Permutation, one-sided p-value		*0.463*	*0.537*
Mean Dependent Variable	$52	$196	$244

Notes: This table presents estimates effects of SSI on annual per capita transfer income. Panel A contains estimates of Γ^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 4. 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 2. 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).

Table 5. SSI Increased the Probability That Adults in AFDC Households Received Disability Benefits

	(1)	(2)	(3)	(4)	(5)
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)*
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).

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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.

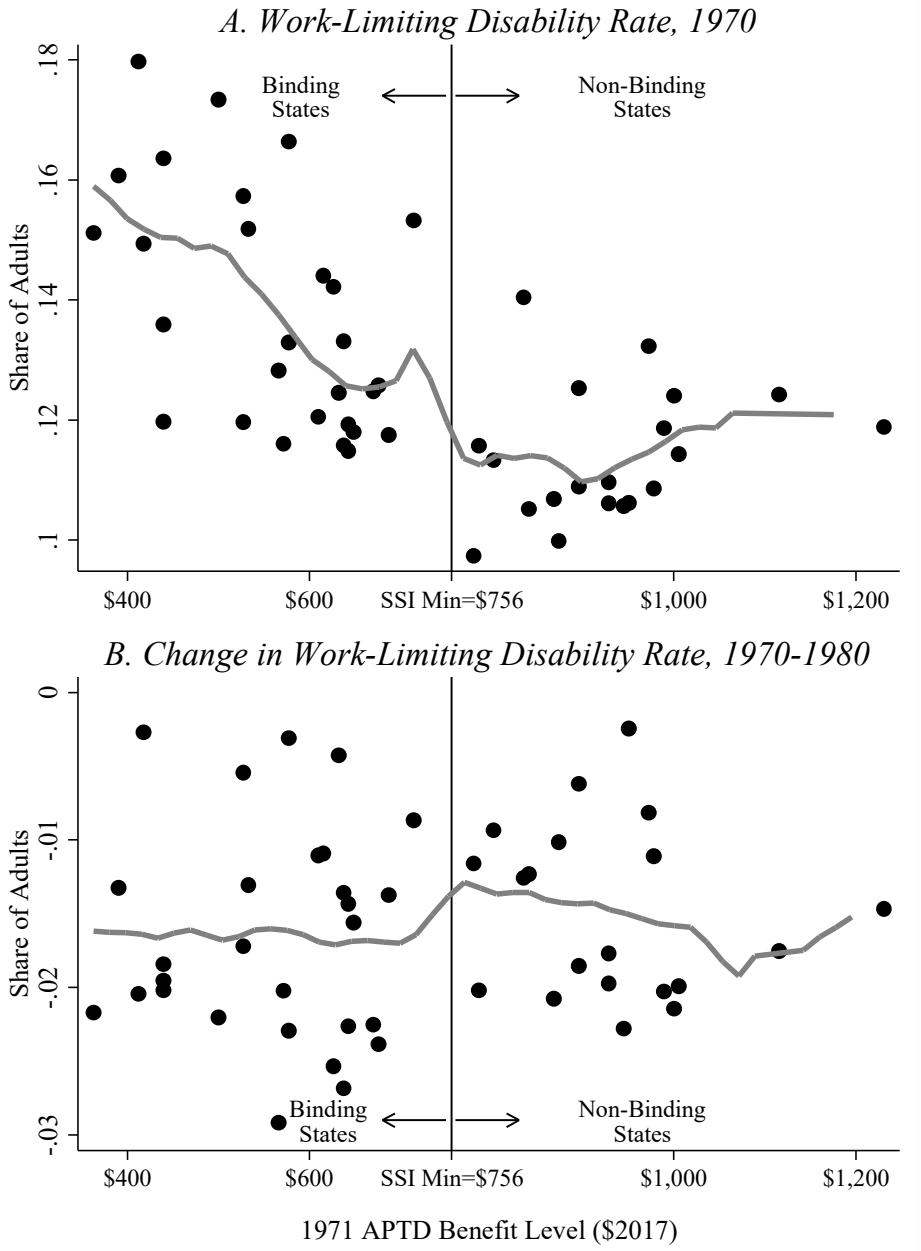
C. Adjusting for Medical Vendor Payments

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.

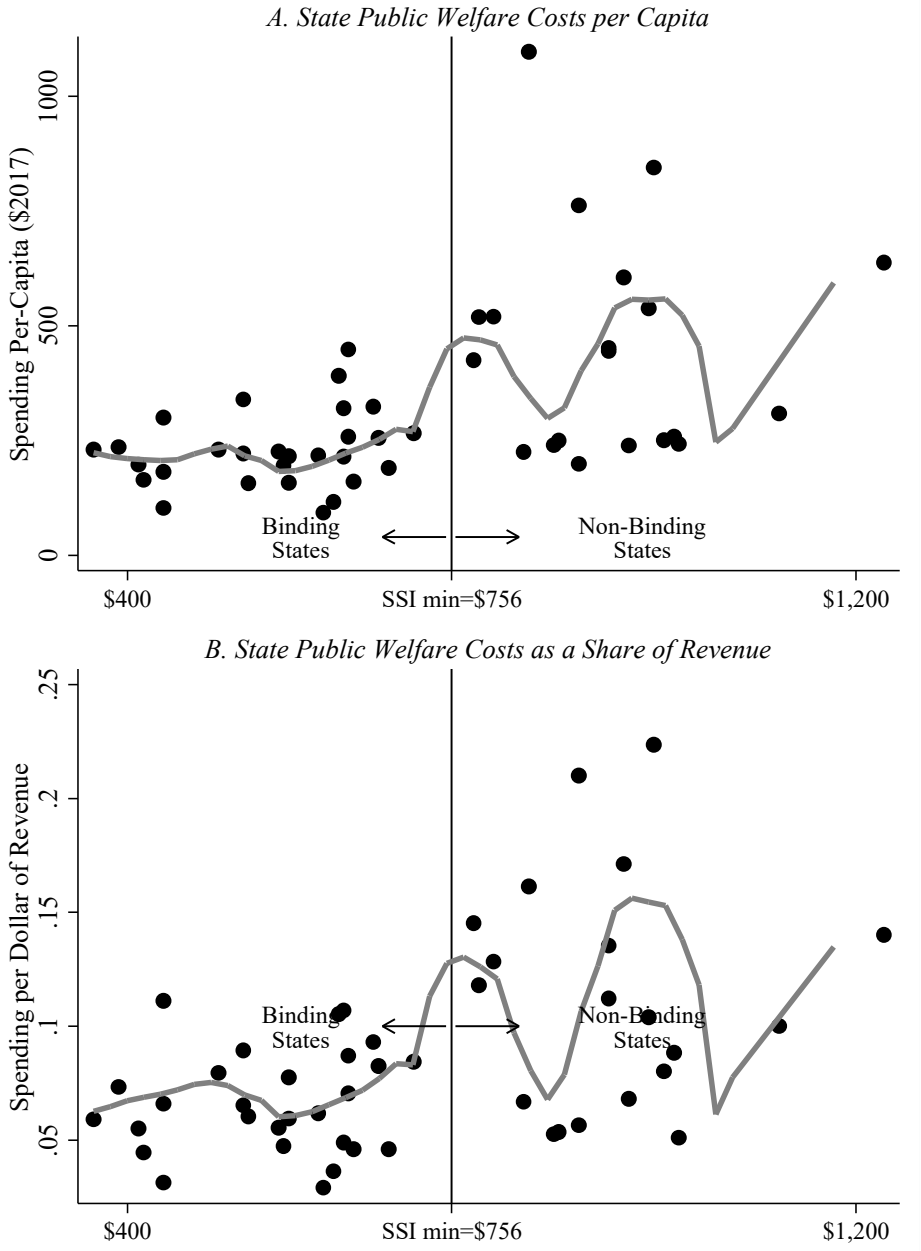
X. RESULTS APPENDIX

Figure A1. Work-Limiting Disability Rates in 1970 and Changes from 1970–1980



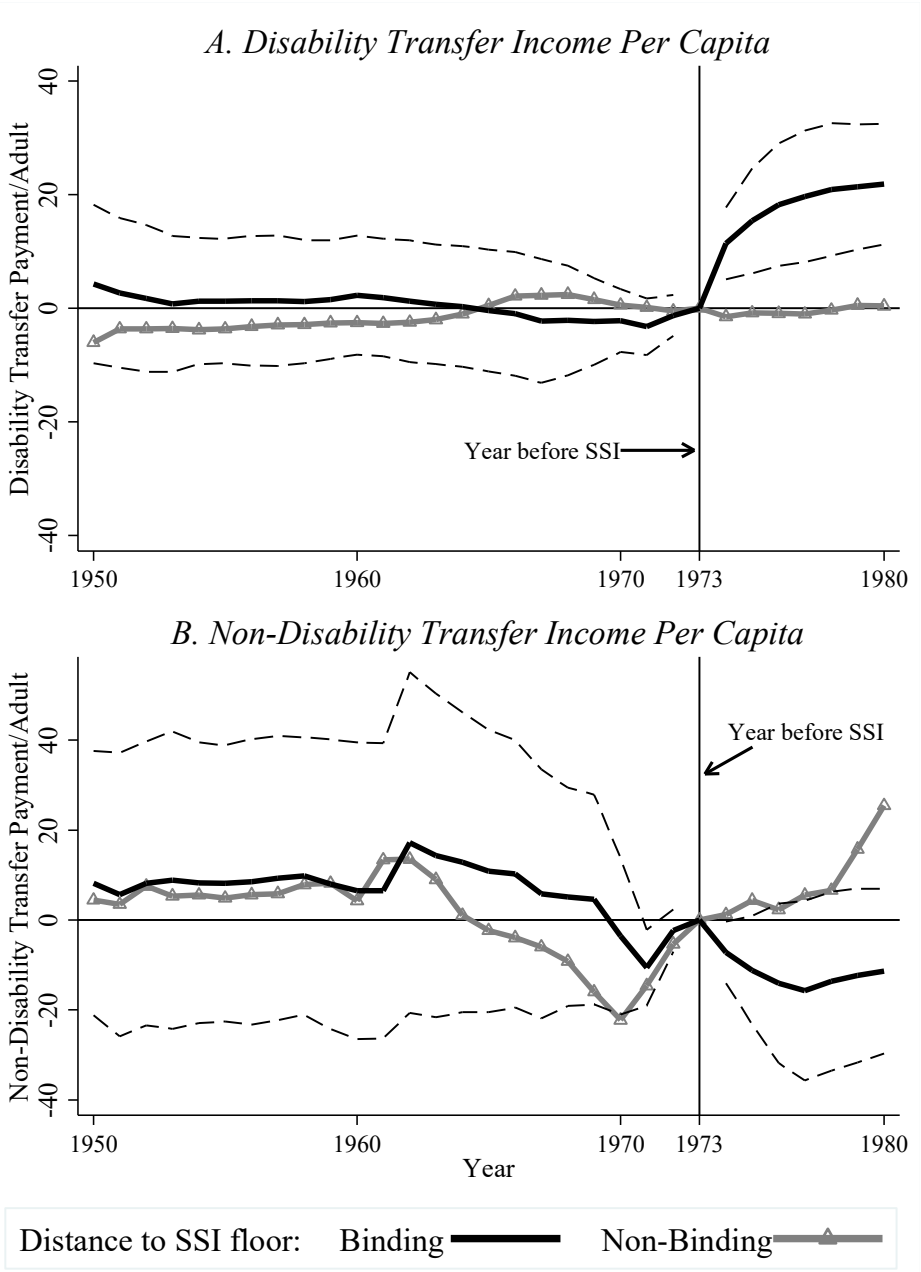
Notes: The figure plots self-reported work-limiting-disability rates from the 1970 census and the change in disability rates from 1970 to 1980 against the 1971 APTD benefit level. In 1970 respondents were asked, "Does this person have a health or physical condition which limits the kind or amount of 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?" Gray lines are nonparametric regression estimates using an Epanechnikov kernel with bandwidth of 30.

Figure A2. Per Capita Public Welfare Costs and APTD Benefits, FY 1973



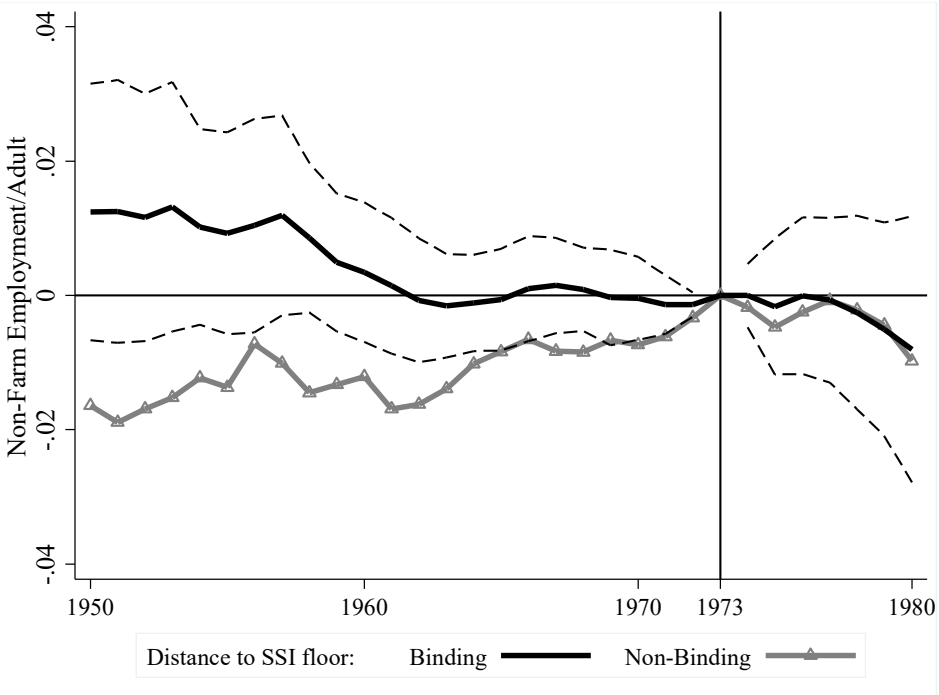
Notes: This figure uses data on state budgets to plot per capita public welfare costs in FY 1973 against 1971 APTD benefits. The public welfare category includes cash assistance, Medicaid, and other state-level programs not separately enumerated. We subtract from total outlays the federal intergovernmental revenue for the same category. What is left is the state's cost. The denominator in panel B is state revenues minus intergovernmental revenue.

Figure A3. The Effect of SSI's Benefit Floor on Payments per Capita in Disability and Non-Disability Transfer Programs



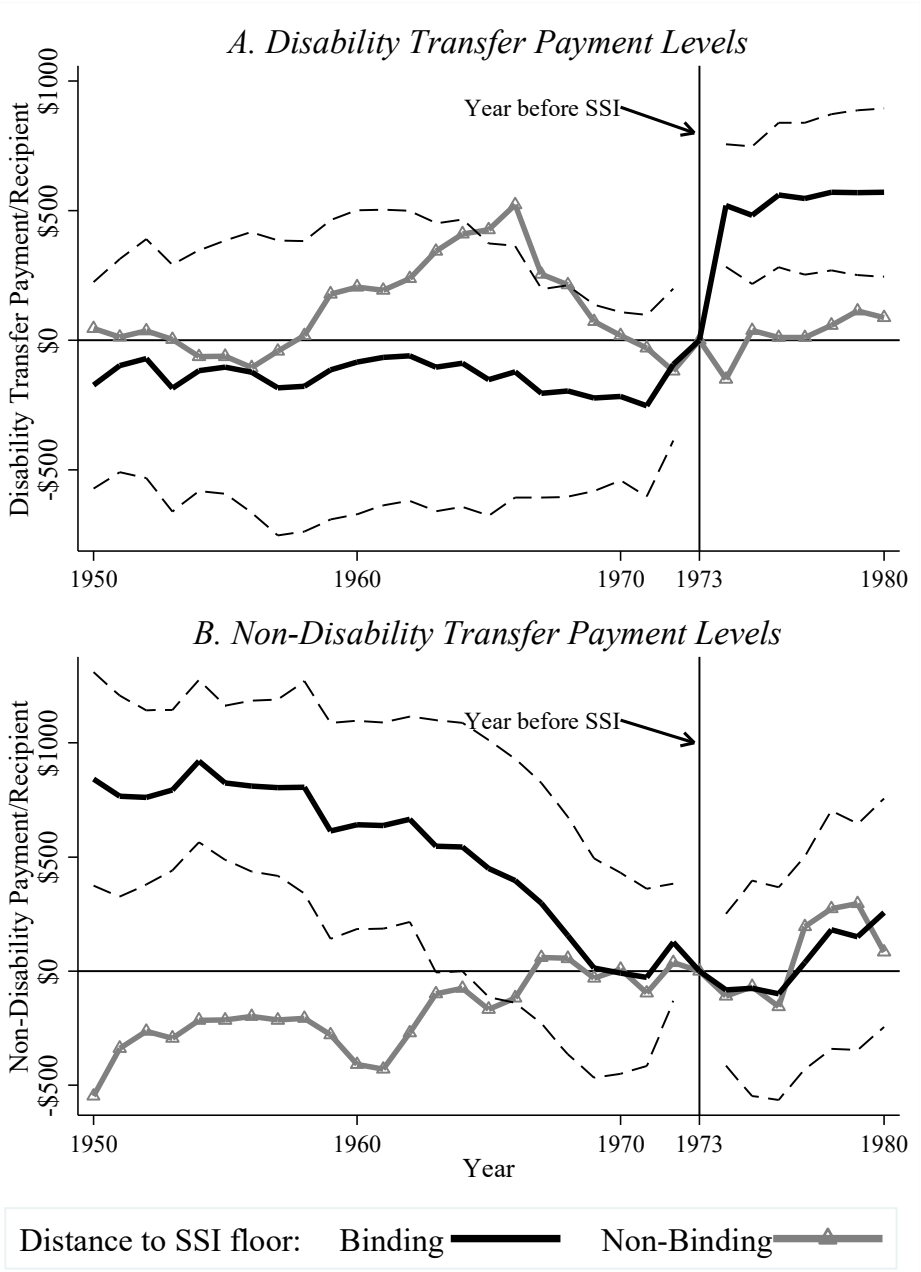
Notes: See notes to Figure 7. The outcome is the per capita payment in disability and non-disability programs.**Figure**

A4. The Relationship of SSI's Benefit Floor to Non-Farm Employment Per Adult



Notes: See notes to Figure 7. The outcome is the non-farm employment per adult.

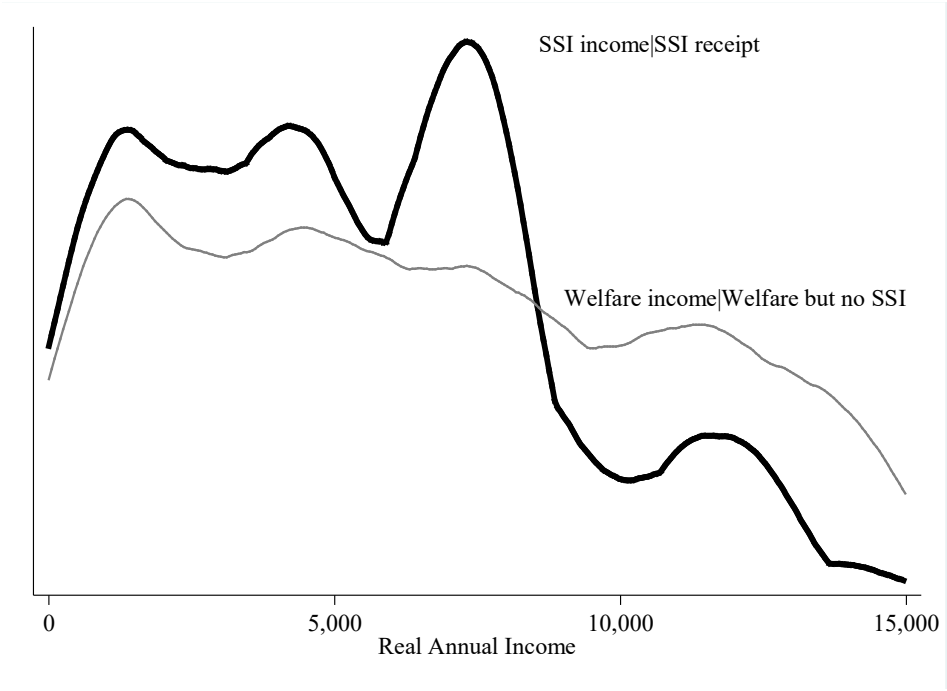
Figure A5. The Effect of SSI's Benefit Floor on Payments per Recipient in Disability and Non-Disability Transfer Programs



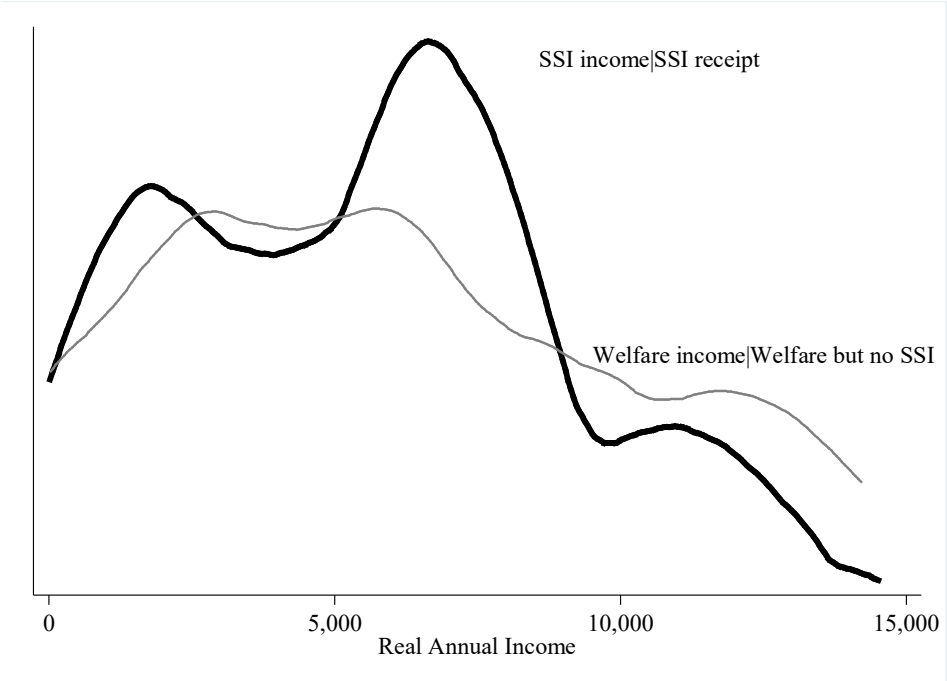
Notes: See notes to Figure 7. The outcome is the average payment per recipient in disability and non-disability programs.

Figure A6. 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).