The Expansion of Social Security and the Decline of Elderly Public Assistance*

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Abstract

The growth of social insurance and transfer programs was among the most consequential changes in the 20th century United States, and a central element of this growth was the change in the level of government that administered and funded transfers. We investigate the expansion of the nationally-administered Old Age and Survivors Insurance (OASI) program – commonly known as Social Security – and its role in the decline of the state-administered, means-tested Old Age Assistance (OAA) program from 1940 through 1955. In the absence of changes in state OAA policies, means-tested OAA programs would shrink as Social Security increased the resources of the elderly, meaning that the net cost of Social Security transfers and the increase in the resources of the elderly would both be smaller than the dollar value of Social Security transfers would suggest. The analysis exploits variation across states in the size of Social Security expansions due to exclusions of certain industries from coverage in the early program. Overall, OAA programs shrank in response to the growth of Social Security, but states also responded to these "savings" by liberalizing eligibility and payment policies. However, there was stark regional variation in states' responses. Most notably, most of the decline in OAA attributable to the expansion of Social Security was driven by Southern states.

JEL: H5, H7, I38, N3

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1 Introduction

Among the most consequential changes in the American economy over the 20th century was the growth of the government's role in providing social insurance and transfers, especially to the elderly. A central, yet understudied, element of this growth was a change in the *level* of government that administered and funded transfers. The first key period of transformation was the New Deal, during which states and the national government significantly expanded relative to local governments (Wallis, 1984; Fishback and Wallis, 2012). This was the case both in general, and in terms of transfers to the elderly, as local programs and relatively small state programs were replaced by large Old Age Assistance (OAA) programs run by state governments (Fetter, 2017). Yet for transfers to the elderly, there was a second key period of transformation. Old Age and Survivors Insurance (OASI), the nationally-administered and nationally-funded program commonly known as Social Security, began making regular payments in 1940 and grew dramatically over the second half of the 20th century, especially after legislative expansions in 1950 and later years. OAA was significantly larger than Social Security in terms of both payments and recipients until well into the 1940s but by 1950, as is evident in panel (a) of Figure 1, OAA began a steady decline that coincided precisely with the accelerated growth of Social Security.

In this paper we investigate how OAA programs responded to the early expansion of Social Security. OAA programs were state-run, means-tested, and funded through a mix of state and federal funds (and, to a lesser degree, local funds). If state policies did not change in response to Social Security, OAA programs would become smaller than they otherwise would have been as the income of older people who were eligible for Social Security grew; a smaller share of the elderly would qualify for OAA under the means tests, or they would have qualified for lower benefits. To the extent that Social Security crowded out OAA payments, it would reduce the budgetary cost of Social Security payments to the federal government, and states – for many of which OAA was a significant share of the budget in 1940, as shown in panel (b) of Figure 1 – would see savings from reduced OAA expenditures. At the same time, the income of elderly recipients would change less than the dollar value of the increase in Social Security benefits would imply. Yet the degree to which this was true depends on whether states spent some of these savings on liberalizing OAA eligibility or payments. Hence, a critical question in understanding the implications of the expansion of Social Security is how state OAA programs responded to it.

The empirical approach exploits variation across states in the impact of the introduction and early expansion of Social Security, based on limitations in the original Social Security Act on coverage of different types of employment. An individual's eligibility to receive payments through Social Security (for oneself or one's dependents) depended on having a sufficient length of employment covered by Social Security. But coverage of employment was far from universal in the original Social Security Act; most notably, farming, self-employment, agricultural wage work, and domestic paid work were initially excluded from coverage. Differences in industrial composition across states thus

generated significant variation across states in the size of the expansion in Social Security. Focusing on the period up until the mid-1950s, when extension of coverage to self-employed farmers and farm managers complicates the relationship between initial employment structure and the subsequent expansion of Social Security, we investigate whether states that saw greater increases in the amount of Social Security payments also saw relative declines in payments under their OAA programs. We further investigate the degree to which this reflected changes in federal spending or changes in state spending on OAA payments, as well as changes in OAA policies governing eligibility and payments.

The results indicate that overall, OAA programs did become smaller than they otherwise would have been in response to Social Security. Our estimates imply that over the period from 1940 to 1955, total OAA payments fell by 40 to 50 cents for each dollar of OASI payments. This was associated with significant savings to the federal government as well as to states: for each dollar of OASI payments, federal expenditure on OAA payments fell by 30 to 35 cents, and state expenditure fell by 7 to 10 cents. Despite the overall decline in OAA payments in response to Social Security, analysis of state OAA policies suggests that as a whole, states spent some of the gross savings from the expansion of Social Security on liberalizing OAA eligibility criteria and benefit levels. We also find suggestive evidence that Social Security led to lower rates for taxes typically earmarked for public assistance expenditure. However, there was stark regional variation in the response of states to Social Security. Most notably, much of the decline in OAA attributable to the expansion of Social Security and virtually all of the decline in state (as opposed to federal) OAA expenditure was driven by states in South. In contrast, states in the Northeast were more likely to respond by paying higher OAA benefits to a smaller number of recipients.

Our findings fit into the broad literature on fiscal federalism and the social safety net. Theoretical work, such as Brown and Oates (1987), investigates the efficiency properties of providing assistance at differing levels of government, and suggests a larger role for the federal government in social insurance due to externalities across sub-national governments in setting benefits. A significant body of empirical work has studied fiscal federalism in the New Deal, especially as it relates to public assistance programs (e.g. Wallis, 1984, 1991; Wallis and Oates, 1998; Fetter, 2017). Other work, such as Baicker (2005), has studied how states responded to changes in federal matching policies over the middle decades of the 20th century.

This paper also adds to a growing literature documenting how the introduction or alteration of social insurance programs often induces caseload shifting between various social insurance programs, attenuating the overall change in the size of the safety net. For example, this has been shown to occur between Aid to Families with Dependent Children (AFDC) and Supplemental Security (SSI) (Schmidt and Sevak, 2004; Goodman-Bacon and Schmidt, 2020) and between Social Security and Social Security Disability Insurance (SSDI) (Duggan and Song, 2007).

Finally, the paper adds to a considerable literature on the growth of government transfer payments to the elderly over the mid-20th century. Much of the literature on OAA has focused on

its effects on outcomes such as elderly mortality (Balan-Cohen, 2008; Stoian and Fishback, 2010), male labor supply (Friedberg, 1999; Fetter and Lockwood, 2018), and elderly co-residence (Costa, 1999). We complement this literature by examining the determinants of state OAA eligibility and benefit levels in the period after the Social Security program, which ultimately became much larger than OAA, began.

2 Background on Social Security and Old Age Assistance

Arising out of the hardships of the Depression, the Social Security Act (SSA) of 1935 created two programs tasked with providing income support for the elderly. Title 1 contained Old Age Assistance (OAA), a means tested entitlement program for the poor elderly that constituted a much broader, federalized version of existing state and local programs (Fetter, 2017). Title II laid out Old Age and Survivors Insurance (OASI), commonly known as Social Security, a mandatory insurance policy for workers in "covered employment" that pays annuities to them and their dependents upon eligible (insured) retirement.

Today, coverage of workers under Social Security is near universal, with 175.6 million workers covered in 2018, more than the total number of people working at any given point in that year (Social Security Administration, 2020; U.S. Bureau of Labor Statistics, 2019).

The degree to which the elderly rely on Social Security benefits for income support late in life reflects the scope of coverage; roughly 90% of individuals 65 and older receive benefits. Social Security was originally not intended to provide uniform elderly support, however, instead working in conjunction with OAA to address elderly need (Myers, 1953; Quadagno, 1988*a* p. 328). Although universal coverage was considered "a desirable goal from the beginning" (Nelson, 1985), initially only workers in "commerce or industry" were covered, constituting roughly 55 percent of the labor force (Martin and Weaver, 2005; Kollmann, 2000). Trends in expenditure reflect the dual contributions of both programs towards overall elderly support, with both programs paying out hundreds of dollars annually per person 65 and older throughout the 1940's (Figure 1).

2.1 Social Security Benefits, Coverage, and Financing

Social Security benefits are payable to aged retirees who have worked (and paid taxes) in covered employment and acquired insured status. Eligibility and benefits are functions solely of work history, and the mapping from tax contribution to benefit receipt is thus common for all covered workers among the states.[1] Workers achieved quarters of coverage by earning $50 or more in covered

[1]Specifically, under the 1939 Amendments, it was 40% of the first $50 of AMW, plus 10% of the next $200, and then increased by 1% for each year with all quarters covered. The minimum individual benefit was $10 per month, the maximum was $45.20, and retirees could receive benefits provided they satisfied the "retirement earnings test" of less than $15 a month. For other recipients, the Primary Insurance Amount (PIA) was adjusted down by a percentage; widows received 75% of the PIA, whereas benefits for wives, children, and parents were reduced by 50%. Lump sum

employment. Full insurance status (eligibility for full benefits) necessitated having coverage in half of the quarters since 1936 or since age 21 if later, with a minimum of 6 quarters required for any insurance and 40 quarters indicating permanently insured. Monthly benefits were first payable in January, 1940.

The main groups originally excluded from coverage were farm laborers, domestic workers, and the self-employed, formally because of administrative difficulty in ascertaining earnings (DeWitt, 2010); federal employees, the majority of whom were covered under the federal Civil Service retirement program; and state and local government employees, due to "constitutional limitations on the federal taxing power" (Nelson, 1985).[2] These workers continued to be excluded until broad amendments in the 1950s extended coverage to these groups. The first major expansion occurred in 1950, which extended coverage to roughly ten million regularly employed farm and domestic workers, as well as most self employed individuals. Because the original rules stipulated that half of the quarters be in covered employment since 1936, the 1950 Amendments also allowed for a "new start" formula that based coverage and earnings from 1950 onward, requiring 6 quarters of coverage for benefits. The second major expansion in 1954 also extended coverage to an additional ten million workers, including all farmers not regularly employed as earlier defined, members of state and local government retirement systems (on a voluntary basis), additional domestic workers, and self employed members of specified professions. Finally, smaller amendments in 1956 extended coverage to some additional, smaller groups.[3] The cumulative effect of the 1950s expansions on the universality of the program is striking; coverage increased from 58.4% of the civilian workforce in 1949 to 86.2% in 1960 (Martin and Weaver, 2005).

The financing structure of Social Security has largely been constant over the history of the program, with the program funded through equivalent payroll taxes assessed on both employees and employers on earnings up to a maximum earnings base. First contributions were made beginning in 1937, and from 1937 through 1949 the marginal tax rate remained at 1% each on an earnings base up to $3,000 (nominal). The marginal rates were then periodically increased throughout the 1950s, with an additional, higher rate imposed on self-employed workers.

death payments were 6 times the PIA.

[2] Agricultural and domestic workers were originally included, but Treasury officials, backed by southern Democrats in Congress, objected publicly on the basis of difficulty in tracking their work records. Quadagno (1988*a*) argues that the underlying reason for Southern objection was that local control over OAA allowed Southern states to institute more stringent eligibility criteria and less generosity, ensuring continued labor control by landlords over the sharecropper and tenant class (Quadagno, 1988*a* p. 240; see also Alston and Ferrie (1999) and Costa (1998)). Differences across regions in attitudes towards the OAA program, especially between the South and non-South, motivates our investigation of regional heterogeneity in Section 6.

[3] These include some special categories that were smaller than these three in the aggregate – extensions of coverage on an elective basis to employees of non-profits and state and local governments, self-employed physicians, railroad workers, who were covered under the Railroad Retirement Act (Pesner, 2021), as well as federal employees.

2.2 Old Age Assistance Eligibility, Benefits, and Financing

The Old Age Assistance provision of the Social Security Act provided federal matching funds for state-administered programs providing means-tested old-age support for the low-income elderly.[4] State governments had been active in passing legislation creating old age assistance programs since the 1910s, but compared to the later scale of OAA, these programs universally remained quite small. The introduction of federal matching funds under the Social Security Act, and the related shift of funding and administration of old-age assistance programs from local to state governments in many states, increased the size of these programs considerably (Fetter, 2017). By 1940, all states had an OAA program, and about 22 percent of people aged 65 and older received OAA payments (Fetter and Lockwood, 2018). Although the Social Security program grew steadily as cohorts aged in to eligibility, OAA remained larger than Social Security in terms of both recipients and payments until 1950.

The Social Security Act granted states considerable leeway in the design and administration of their of their programs, but there were several key commonalities in the structure of the programs. In general, OAA programs were set up as either an income floor or a consumption floor, the key feature of which is that recipients' income would be taxed at a 100 percent rate: benefits would be phased out dollar-for-dollar with income. In practice, state or local OAA administrators evaluated a applicant's "needs" and "resources," and any excess of needs over resources determined the size of the payment, up to a maximum level. Cases were re-evaluated regularly, usually every six months, and a non-trivial share of cases were closed due to the recipient becoming self-supporting or his or her relatives becoming able to provide adequate support (Lansdale et al., 1939; U.S. Social Security Board, 1941).

States varied in their criteria for eligibility and payments, but tended to follow some broad common parameters. A universal criterion was a minimum age, which by 1940 was 65 in all states (although Colorado allowed payments to long-term residents starting at age 60). Many states required either US citizenship or long-term residency in the United States, and all required residency in the state for some period of time, although the length of the requirement varied. At the end of the 1930s and beginning of the 1940s, most state laws specified maximum payments for a given case. Statutory maximum payments varied from \$15 to \$45, with eight states having no statutory maximum. The modal maximum was \$30 (\$470 in 2010 dollars), which, as described below, was the federal matching cap.

In addition to these features of OAA programs, states maintained a variety of other tests or requirements. Asset tests, disqualifying applicants owning property above a certain value, were common. Many states also included provisions that made assistance conditional on giving either state or local governments a claim on the recipient's property upon the recipient's death. It was also common for states to require that applicants have no close relatives who were able to support them.

[4] Much of this discussion derives from Fetter (2017) and Fetter and Lockwood (2018).

For interpreting these laws and eligibility for assistance more broadly, however, it is important that, as Fetter and Lockwood (2018) note, eligibility in assistance programs of this period was not categorically determined based on easily observable criteria, and instead involved significant discretion on the part of state or local welfare officials. In part because of this discretion, some eligibility criteria that may appear restrictive, such as assets tests, may in fact have been intended to liberalize eligibility by formalizing eligibility rules, preventing people from being deemed ineligible if they had less than the specified amount of property (U.S. Social Security Board, 1940, p. 157). Similarly, as Lansdale et al. (1939) note, claims on property may have broadened eligibility; whereas some relief agencies may have otherwise restricted relief to those without property, these claims may have allowed elderly owning property that was not easily liquidated, such as a home, to borrow against its value. The ambiguity in interpreting these features of eligibility inform our choice of OAA policy measures to examine in Section 5, where we study the effect of expanding Social Security on those OAA policy measures that are most easily interpretable.

For interpretation of some of our results below, it is useful to describe the structure of the federal matching contribution. From the passage of the Social Security Act up until 1946, the federal government paid half of the cost of the OAA payment for each case, up to a maximum specified in the Social Security Act: in the original Act, this maximum was $30, raised to $40 in 1940. The 1946 Amendments introduced progressive cost sharing in which two-thirds of the first $15 to a case would be funded by the federal government, and half of the next $30. This general rule was followed, with several liberalizations, until OAA became part of Supplemental Security Income (SSI). Because of the federal matching cap, and later because of progressive cost sharing, states making higher payments to individual cases would tend to pay a greater share of the total amount of OAA payments, and the federal share would be correspondingly lower.

2.3 Expanding OASI Insured Status and Expected Impacts on OAA Expenditure and State Budgets

As populations aged into insured status over the 1940s, states varied in the degree to which OASI payments expanded, due to variation in the share of employment that was covered under the original Act. Because the means tests for OAA payments included Social Security income, expanding OASI required less OAA to meet the *existing* standards of need and, if greater than the standard, eliminated OAA eligibility for those individuals. Thus, if states did nothing to alter their OAA policies, higher covered states should crowd out some OASI funds through lower OAA expenditure. At the same time, Social Security benefits were on average smaller than OAA in 1940, and no legislated changes to benefits until 1950 led to declines in the real value of payments which, in 1949, were the lowest in the history of the program.[5] Thus, even had all workers receiving OAA

[5]OASI benefits were not pegged to inflation until 1972, so that for the first 32 years of the program Congress needed to legislate to maintain real benefit levels.

been eligible for OASI, we would not expect full crowd out. Of course, many of these individuals had worked in non-covered industries, so expanding OASI should not be *fully* crowded out.[6] Given the federalized structure of OAA funding, to the extent that relative OAA expenditure did decline, shares will be captured by local, state, and federal governments.[7]

States could respond to OASI growth by legislating more lenient eligibility criteria or more generous benefits. To the extent they did not, these funds were either used to increase spending in other areas, to reduce taxes, or some combination. While there is no *a-priori* reason to expect systematic ways in which states would spend or cut taxes in response to these windfalls, many states financed OAA through specific taxes earmarked for welfare. We therefore focus on those when examining state budgetary policy responses.

As Figure 1 panel (b) shows, OAA constituted a significant share of state own-source expenditure in the 1940s and an even-greater share of total state outlays.[8] In 1949, public assistance constituted one of the largest categories of state own-source expenditure, with benefits averaging over 9% of total expenditure, or slightly over $9 billion summed across the states (in $2018). Further, the OAA program was by far the costliest assistance program, with just over 50% of state expenditure on welfare spent on it. Members of the Social Security Advisory Council in 1948 noted that "because employers and employees paid for retirement benefits and old age assistance benefits were financed partially by state and local revenues, the poorer agricultural states were facing a disproportionate financing burden under the existing arrangement." (Schieber and Shoven, 1999 p. 83)

Issues surrounding insufficient coverage, deterioration of real benefits, and the adverse impact on state finances from reliance on OAA led to the formation of the second Social Security Advisory Council in 1947 (Schieber and Shoven, 1999 p.89). The recommendations laid out in the report led directly to changes instituted under the Amendments of 1950, and upon signing them into law on August 28th, 1950, President Truman stated that the act will "ultimately reduce dependence on public charity" (Truman, 1950).

[6] Note that the present context differs from most examples of crowd out in that, if state OAA policy is left unchanged, OAA costs mechanically decrease relative to a counterfactual without Social Security payments. In other examples of intergovernmental crowd out, state or local governments need to respond with policy to crowd out federal funds. For example, (Gordon, 2004) finds that local governments crowd out federal Title I education funding. These governments presumably had to revise their budgets to lower taxes earmarked for education expenditure, or formally decide what else to do with the revenue. Economic theory generally suggests these setups are equivalent, since most models do not incorporate any transaction costs of changing the share of the budget going to various public goods (Bradford and Oates, 1971; Knight, 2002).

[7] Later expansions to OASI in the 1950s were described as the leading cause of OAA caseload declines by many state welfare agencies. In Pennsylvania, for example, 4,484 OAA cases had been closed as a result of OASI expansions by the end of 1950, of which 3,924 were due to higher benefits from previously concurrent recipients and 560 were from individuals who gained insured status under the liberalization of the required number of quarters of coverage under the 1950 Amendments. Another 9,665 recipients had their benefits reduced, of which 6,987 and 2,678 were existing and new OASI recipients, respectively (Pennsylvania Department of Public Assistance, December, 1950 p. 6). This resulted in savings in excess of 300,000 per month. In North Carolina, Approximately 1,800 cases were discontinued as a result of OASI expansions (North Carolina State Board of Public Welfare, July 1, 1950 to June 30, 1952 p. 37).

[8] Own-source OAA expenditure is defined as total state expenditure net of federal intergovernmental revenue.

3 Data and empirical strategy

3.1 Social Security and OAA Expenditure by State and Year

One limiting factor preventing studies on Social Security and OAA over the twentieth century has been the lack of data on program participation and spending by state and year. In particular, data on caseloads and expenditure have not been available. We use data from the *Social Security Yearbook* and *Social Security Bulletin Annual Statistical Supplement* on OAA and Social Security caseloads and payments for years 1936-1972.[9] We normalize expenditure variables by the population 65 and older in each state and year using population data from (Haines, 2010) and linearly interpolating in between Census years.

We also require information on OAA expenditure broken down by the local, state, and federal portions. The Census Bureau entered data on over 650 state budgetary revenue and expenditure items for available years 1942-1974. These primarily come from *the Revised Summary of State Government Finances* (1942-1950) and *Compendium of State Finances* (1951-1965).[10] We use these data for information on total and own-source state expenditure, however these data are only biannual before 1950, and only contain information on intergovernmental grants broken down by welfare program post 1950. We therefore supplement these data with information on local, state, and federal shares of total OAA expenditure by state/year for our sample. These come from the *Social Security Bulletin* (1938-1939), the *Social Security Yearbook* (1940-1949), and the successor publication *Social Security Bulletin Annual Statistical Abstract* (1950-1955). We then multiply these estimates by total OAA payments by state and year. While our use of OAA payments omits administrative expenses, we show in Figure A.1 that, for the years in which we have expenditure measured in both data sources (1951-1964), they line up well at each level of government.

State OAA Policies by Year

State spending on OAA provides some indication as to how state OAA policies were changing in response to the growth of Social Security, but to investigate policy responses directly, we supplement these data with newly entered information on state OAA policies governing benefits and eligibility. We focus on three measures of OAA policies: United States citizenship and long-term residency requirements, state residency requirements, and maximum payments. We focus on these because, as noted in Section 2, many other features of state OAA laws do not have an easily interpretable relationship with eligibility.

Information on both citizenship and long-term residency requirements come from various issues of *Characteristics of State Public Assistance*, which were published frequently but irregularly from

[9] The data come from a combination of our own entry and data generously shared by Andrew Goodman-Bacon.

[10] These data are available here:
`https://www.census.gov/programs-surveys/gov-finances/data/historical-data.html`

1937 through 1971. For our analysis, we study the years from 1937 through 1956, which affords us observation of eight years: 1937, 1939, 1940, 1946, 1947, 1950, 1953, and 1956. For citizenship requirements, we create an indicator for whether a state requires citizenship or long-term US residency. For state residency requirements, the modal requirement in 1937, and also the most limiting, was that applicants had to have lived in that state for 5 of the previous 9 years. We create an indicator for whether a state required 5-year residency in a given year.

States varied in both the existence of a legal or administrative maximum payment and, if one existed, its amount. Because of the difficulties of interpreting changes in amounts of maximum payments when their existence may respond to Social Security payments, we focus on measuring whether a state had a maximum payment in a given year. The underlying information come from *Characteristics of State Public Assistance* for 1937 through 1940 and from *Assistance Payments under State-Federal Programs* from 1944 onwards. The latter was published more frequently than the *Characteristics of State Public Assistance*, and lines up well for years that overlap.

State Tax Policies in 1939 and 1950

Finally, for preliminary investigation of whether state tax rates changed in response to Social Security, we enter tax rates on alcohol – which, as explained below, was the tax most commonly earmarked for OAA – in 1939 and 1950, from Tax Foundation (1951). Tax rates on beer, wine, and spirits are in dollars per gallon, which we convert to 2010 dollars.

3.2 Coding Cross-State differences in OASI

The spirit of our empirical analysis is to compare states whose OAA programs were affected differently by the expansion of Social Security due to a greater or lesser share of their population being eligible for Social Security. To measure the degree to which states were affected by the introduction and expansion of Social Security, we use variation that derived from restrictions on the types of employment covered by the original Social Security Act. To do so, we apply the mapping of Fetter, Lockwood and Mohnen (2021) of Census employment information into Social Security coverage years. In the Census, each worker reports an occupation, industry, and self-employment status; each combination is mapped to a year when that type of employment would be covered by Social Security.[11]

We apply this mapping in the 1940 complete count Census data to estimate the share of employment in each state, as of 1940, that would be covered under each of the major expansions of Social Security coverage. To illustrate the differences across states, we calculate each state's "coverage shares" in 1940 based on the employment status of men born by 1895 and alive in 1940. We calculate employment shares for men born in 1895 and earlier, rather than including later cohorts,

[11] There are, unsurprisingly, some ambiguous cases given the coarseness of Census employment information. Any case that cannot be classified with reasonable confidence is classified as having unclear Social Security coverage status.

to focus on the population that would be age-eligible for OASI and OAA, or close to age-eligible, in the years that we include in our analysis; the resulting coverage shares are highly correlated with those from reasonable alternative definitions of the population. In calculating the coverage shares, we do not restrict attention to those who are employed: those who were not working from 1937 onwards, when workers could begin accumulating quarters towards eligibility for Social Security, were never eligible for Social Security, and that should be accounted for in the impact of Social Security on OAA.

Differences in existing employment by industry and state led to highly heterogeneous employment shares originally covered. In Figure 2, we plot the shares covered as of 1940; these shares are plotted separately by Census region in Appendix Figure A.2. We focus on four major coverage groups: those covered in 1935; in 1950; in either 1954 or 1956 (who, for the most part, were covered in 1954); and the remainder, which comprises a handful of groups treated separately (employees of government or railroads, firefighters and police, and several smaller groups) as well as those who were not working in 1940. Two key features stand out: First, the variability in share of state employment is substantial, with the minimum and maximum coverage shares corresponding to 15.2% (North Dakota) and 51.2% (Connecticut). Second, the primary driver of differences across states in coverage status is the relative size of the agricultural sector. The 1954 and 1956 expansions were largely to self-employed farmers and farm managers, and there is a clear negative relationship between the share of employment covered in 1935 (which largely excluded agriculture) and the share covered in 1954 or 1956, with a correlation of -0.922. In contrast, the size of the 1950 expansion across states is much less variable, and mostly unrelated to the size of the initial coverage share: the correlation between the share covered in 1935 and in 1950 is 0.015.

The strong, negative relationship between the share of employment covered in 1935 and the size of the 1954/56 expansions motivates our choice of time frame of the analysis that follows. Because the relationship between the share of employment covered in 1935 and subsequent expansions in Social Security should change with the 1954 expansion of coverage, we limit our analysis to the years up to 1955, the last full year in which workers first covered in 1954 would be ineligible for Social Security.[12] The expansion of coverage in 1950, on the other hand, was largely uncorrelated with the share of workers covered in 1935.

3.3 Reduced Form Empirical Specifications

We take two approaches to estimating the effect of expanding Social Security on state OAA programs. The first of these is a standard event study, which has the advantage that it allows us to shed light on the validity of the parallel trends assumption, by examining whether trends in OAA expenditure were correlated with Social Security coverage before 1940. We estimate the following

[12] In our analysis of state OAA policy responses, we include laws as of 1956, because we lack information on laws from 1954 or 1955.

event study specification:

$$y_{st} = \alpha_s + \beta_t + \sum_{t \neq 1939} \gamma_t \times (\text{Share of employment covered in 1939})_s + \varepsilon_{st} \tag{1}$$

Note that since cohorts must age into eligibility for Social Security, differences between states in the total amount of Social Security payments and the share of 1935-covered employment in 1940 will tend to grow over time. Hence, in our event study specifications, crowd-out of OAA by Social Security would be expected to appear as a growing difference over time, after 1940, in the size of OAA programs in states with greater versus lesser shares of employment covered in 1935. As described below, we aggregate event study coefficients to consider the full effect of the expansion of Social Security in these specifications.

Our second approach is to predict the share of the elderly in a given state and year who would be expected to be eligible for Social Security in a more parametric way. The key idea is that the share of the elderly in a given state and year who are eligible for Social Security is predictable based on the eligibility requirements for Social Security under the Social Security Act in each year, pre-existing patterns of labor force participation by age, and employment characteristics for each state and birth cohort. First, based on the Social Security Act and subsequent amendments, we calculate the number of quarters that a worker of a given birth cohort would need to work in order to be "fully insured" (and hence eligible to receive benefits in retirement) in a given year. Second, under the assumptions that workers exit the labor force but do not re-enter it, and that workers do not change between employment in different Social Security coverage categories, we calculate the earliest age at which a worker of a given birth cohort and employment type could exit the labor force (or could have exited the labor force) and be fully insured under the Social Security policy prevailing in a given year. Third, we use the cross-sectional relationship between age and labor force participation status in 1930 – the last Census year before OAA significantly changed the age pattern of retirement (Fetter and Lockwood, 2018) – to estimate the share of workers who would work until they reached the age necessary to be eligible for Social Security benefits. The result is a dataset at the birth cohort by employment coverage date by year level with a predicted share of individuals who would be fully insured; birth cohorts who are 65 or older in a given year are both fully insured and eligible to receive benefits. Combining these predicted shares with the observed shares of workers in each employment category by cohort by state cell in 1940, we can predict the share of people 65 and older who would be eligible to receive Social Security payments, by state and year..

This simulated eligibility for Social Security payments does not lend itself to pre-trend tests quite as naturally as the constant shares, but has the advantages that it is higher-powered, and also naturally builds in aging-in effects for Social Security. Referring to the share of the elderly population that should be eligible to receive Social Security benefits in a state and year as the

"Share predicted fully insured," we estimate:

$$y_{st} = \alpha_s + \beta_t + \gamma \times (\text{Share Predicted Fully Insured})_{st} + \varepsilon_{st} \tag{2}$$

The use of industrial and occupational differences across the states nests our research design within the broader class of Bartik "shift-share" instruments (Bartik (1991)). Our setting, containing many periods and distinct policy changes, admits normal tests of parallel trends of outcomes in the pre-period to test the strict exogeneity identifying assumption required for identification in this setting (Goldsmith-Pinkham and Swift, 2020). Under this and the normal relevance condition that the predicted shares are correlated with Social Security, two stage least squares identifies the relevant crowd out parameter.

4 Results

4.1 Impact of Higher Social Security Coverage on Social Security Expenditure

We first show that the share of 1935-covered employment observed in the 1940 Census in each state, as described above, is strongly predictive of subsequent growth in Social Security payments. Figure 3 shows coefficients from estimating equation (1) where the outcome variable is total OASI payments normalized by the population 65 and older. As would be expected as cohorts aged into eligibility, states with a greater share of 1935-covered employment saw a differential increase in OASI payments beginning in 1940, and this differential grew over time. Note that the substantial increase in 1935-covered states in 1950, relative to other states, is expected. The large payment increases in the 1950 Amendments would differentially affect those states with a larger number of recipients; the 1950 Amendments also relaxed the number of quarters of covered employment required for benefit eligibility, which would be expected to have larger effects in states with more employment that had already been covered prior to 1950.

4.2 Impact of Higher Social Security Coverage on OAA Expenditure

If states did not respond by liberalizing OAA programs, higher OASI receipt should lead to lower OAA expenditure and savings at each level of government. We estimate (1) on overall, federal, and state OAA expenditure, with coefficients estimated relative to 1939. OAA programs began paying benefits as early as 1936, so a useful feature of this analysis is that it embeds falsification tests for differences in OAA expenditure for up to four years before Social Security benefits became payable. We present estimates for overall as well as separately by state and federal expenditure because we are interested in how OASI expansions impacted finances at each level of government.[13]

[13] For overall expenditure we have data back to 1936, but we only have expenditure shares by level of government beginning in 1938.

Figure 4 plots the results for overall expenditure in panel (a), federal expenditure in panel (b), and state expenditure in panel (c). Higher OASI coverage in 1940 leads to large and statistically significant declines at each level of government, with state expenditure somewhat smaller and less precise than federal.[14] These results show that the expansion of OASI translates into savings at each level of government; by 1955, each 1 percentage point higher 1940 coverage had led to a relative OAA annual expenditure decline per elderly person of roughly \$18.47 (s.e.=5.88), of which federal savings were \$14.41 (s.e.=3.74) and state savings were \$3.94 (s.e.=2.53).

4.3 OASI Crowd Out of OAA Expenditure

Combining the OASI point estimate in 1955 from Figure 3 of 63.94 (s.e.=2.31) with the estimate in for this year of overall OAA expenditure in 4 implies crowd out of 18.47/63.94 or 29 cents for each dollar of OASI expenditure in that year. As the patterns in Figure 3 show, however, this captures expanded benefits under the 1950 Amendments, and the figure is likely higher for earlier years. We turn next to developing two methods for formalizing crowd out estimates over the full post-period 1940-1955.

Aggregating Event Study Coefficients

One way to view the total effect of OASI on OAA expenditure is to aggregate the event study coefficients in Figures 3 and 4. For OASI expenditure and for total, state, and federal OAA expenditure we calculate $\sum_{t=1940}^{1955}\left(\frac{\widehat{\gamma}_t}{100}\right)$. This procedure captures the gradual growth of Social Security and decline in OAA in a transparent way; the implied *annual* savings is higher at the end of the sample than in the middle.

The results from this exercise indicate that, for each 1 percentage point higher 1935 share of covered employment, OASI expenditure per elderly person increased between 1940-1955 by a total of \$384.98, with the F-statistic for the sum of coefficients over 980. The corresponding figures for total, federal, and state OAA savings are -\$157.04, -\$114.61, and -\$38.32.[15] These results therefore indicate crowd out aggregated over this period of 157.04/384.98=40.8 cents for every additional dollar of OASI expenditure, of which 29.8 cents were recouped by the federal government and 10.0 cents were savings to states. As expected from the preceding discussion, this figure is higher than

[14] As we show in Section 5, some states responded by legislating higher OAA maximums. This led to a lower federal share of OAA expenditure, because matching funds were only available for states up to \$30 (nominal) until 1940, then \$40 until 1946, and \$45 thereafter. The combined effect of higher maximums and lower federal reimbursement mitigates the impact on state expenditure to some extent. On the other hand, we show in Section 6 that, for Southern states, the decline is state expenditure is more precise notwithstanding a much smaller sample size, which is in line with no evidence of legislated increases to maximums as a policy response in the South.

[15] For this exercise we interpolate the federal and state estimates for 1941 and 1950, the years for which we do not have expenditure shares by level of government. We calculate F-statistics for the sum across coefficients; for overall, federal, and state expenditure these are 8.49 (p-value $< .01$), 13.37 (p-value $< .01$), and 2.62 (p-value $= .11$), respectively.

estimates only in 1955 because it includes the period prior to 1950 expansions. To make this point clear, if we compare aggregates through 1950, this figure is 53.5 cents.

How do these magnitudes compare with overall state expenditure? The average share covered in 1940 was 32.9%, implying total savings in 1955 of $\$18.47 \times 32.9 = \$607.66$. Average state outlays in 1955 were \$12,808.45, so that our results indicate total state outlays in 1955 would have been roughly 4.7% higher in the absence of OASI expenditure. Because state OAA expenditure declined by much less than overall, the corresponding share of state own-source expenditure on all items is roughly 1.2%, which is smaller but certainly not insignificant, particularly when considering that this period was characterized with significant growth in state expenditure. If we instead perform this exercise over the full period 1940-1955, the gradual decline in OAA expenditure is offset to some degree by growth in state budgets, implying that total state outlays would have on average been roughly 3.4% higher over the full post-period, with the corresponding figure for own-source outlays roughly 1%.[16]

Predicted Share Fully Insured

We summarize these event studies with our secondary approach that builds in aging and uses the predicted fully insured in specification (2). We present the results from this specification in Table 1, with OASI expenditure in column (1) and OAA expenditure by type of government in columns (2)-(4). Reassuringly, these results mirror our crowd-out estimates resulting from event studies. Specifically, the predicted share fully insured is a strong predictor of expenditure, it also predicts significant declines in OAA expenditure, and effects are larger in magnitude and more precise for federal OAA expenditure relative to states, with the latter still representing an economically meaningful reduction. Between 1940-1955, each 1 percentage point higher predicted share insured is associated with \$74.89 higher OASI expenditure per elderly person.

In Panel B, we estimate a variant of this specification, using OLS to estimate the relationship between observed OASI expenditure and OAA expenditure, conditional on year and state dummies. These results indicate crowd out of \$.37 (s.e.=.11) for each additional dollar spent on OASI, of which \$.29 (s.e.=.07) was recouped by the federal government and \$.07 (s.e=.04) by the states. These figures are slightly smaller than those from the previous analysis, however in Panel C we show the instrumental variable estimates of crowd out using the predicted share fully insured as the instrument for OASI expenditure are slightly larger than those estimated previously by aggregating the event study coefficients.

Overall, the various estimates indicate that each dollar of OASI was crowded out by between 40 and 50 cents of OAA expenditure declines between 1940 and 1955, of which 30-35 cents went back to the federal government and 7-10 cents went to state governments.

[16]The state finance data are biannual in the 1940s, so for this exercise we interpolate the odd years.

5 Policy Response

5.1 OAA Policies

The previous results suggest that roughly 40-50 cents of every dollar of OASI expenditure was crowded out by declines in OAA expenditure. A notable feature of this decline is that the federal government recouped a greater portion of the savings than states. As discussed, the burden of higher OAA payments for a given recipient falls disproportionately on states, so a natural question is then whether states responded by liberalizing OAA policies governing eligibility and generosity.

We investigate state responses in three eligibility or payment policies that, as we explain in Section 2, have reasonably unambiguous interpretations in terms of liberalizing or restricting eligibility: requirements for US citizenship or long-term US residency, requirement of 5-year state residency, and the existence of a maximum payment. We show the share of states with each of theses policies over time in Appendix Figure A.3; the general trend was toward liberalization of all these policies.

Figure 5 presents event study coefficients from estimating equation (1) in the years for which we have information on policies. Although the coefficients are imprecise, they suggest a general liberalization of both eligibility and payments. Maximum payments in particular show a more discrete rather than gradual response: a state having a 10 percentage point greater share of employment covered in 1935 was associated with roughly a 9 percentage point lower likelihood of having a maximum payment in 1944, and between 10 and 15 percentage point lower likelihood of having a maximum payment throughout the remainder of our period. Hence, to some extent, states responded to the fiscal savings from the expansion of OASI by liberalizing their OAA policies.

5.2 Tax Rates

To the extent that state spending on OAA fell, a natural next step is to ask whether states increased spending on other items or decreased taxes. For preliminary evidence on this question, we test whether greater 1935 employment shares were associated with relative changes in state tax rates between 1939 and 1950. It was common for states to earmark specific taxes for welfare spending; in principle these may not have been the taxes that states would adjust in response to savings on OAA, but as a first step, we examine changes in rates for alcohol taxes, which were the most common source of explicit funding source for OAA programs. Of the 19 states that had any earmarked items for OAA in 1939, 10 of them included alcohol taxes (Clague and Gordon, 1940). Note that this does not mean that states beyond those ten did not use alcohol taxes collected in general revenues to finance OAA.

With only two periods, 1939 and 1950, we estimate simple differenced regressions of the form

$$\Delta_{1950-1939}(\text{Tax of type X})_s = \alpha + \beta(\text{Share of 1940 employment covered in 1935})_s + \varepsilon_s \qquad (3)$$

where s indexes states and the dependent variable is the tax rate on Beer, Wine, or Spirits, measured in dollars per gallon (in real 2010 dollars).

In Figure 7 we show estimates of β and corresponding 95% confidence intervals. All coefficient estimates are negative, indicating lower taxes in states more affected by the expansion of Social Security over the 1940s, but the estimates are fairly imprecise, and we cannot rule out zero or positive responses.

6 Regional Heterogeneity

The results thus far show that the expansion of OASI crowded out OAA funds, provide suggestive evidence that states also responded by liberalizing OAA policies so that crowd out would have been bigger in the absence, and suggest that states may have been more likely to legislate relatively lower tax rates earmarked for welfare expenditure.

Yet it is likely that states did not all respond in the same way to the expansion of Social Security. A significant body of work has documented regional variation in policy towards public assistance programs and OASI over this period, particularly focused on the South (e.g., Quadagno, 1988*a*,*b*; Costa, 1998; Alston and Ferrie, 1999; Alesina and Glaeser, 2004). For example, Quadagno (1988*a*) argues that Southern Democrats fought for local control over elderly assistance for the purpose of maintaining the system of labor control over the tenant and share cropper class. Hence, it would be reasonable to expect that Southern states would not opt to respond to higher OASI subsidies by increasing payments through liberalized policies.

To investigate the degree to which our overall analysis masks heterogeneity across regions, we estimate specification (1) using variation within region (see Figure A.2) and plot these results for state and federal expenditure by region in Figure 6 (see Figure A.5 for overall expenditure).[17] The results show that OAA expenditure reductions were far from equal across Census regions and, in accordance with the previous discussion, are strongest in the South. We summarize these with specification (2) in Table A.1. The point estimates show clearly that the previous results for all states in Table 1 are in large part driven by the South. We show the analogous crowd-out estimates in Table 2. OAA expenditure per person 65 and older fell by 62 cents for each dollar of OASI expenditure in the South, whereas there is no statistically significant decline in any other region in response to OASI payments.

Separating payments into Federal, State, and Local shares uncovers further interesting heterogeneity. In particular, Table 2 shows that both federal and state expenditure fell in Southern states. In contrast, federal OAA spending fell significantly in Northeastern states, but not state spending. Based on the discussion of the matching structure for OAA payments in Section 2, a natural explanation is that Northeastern states tended to respond to OASI by making larger payments for a

[17] Appendix Figure A.4 shows that the 1940 state share of employment covered in 1935 is a strong predictor of subsequent OASI expansions in each region individually.

smaller set of individuals, thereby reducing the federal share of OAA payments.[18] Consistent with this explanation, event studies of the presence of a maximum payment, shown in Figure 8, indicate that states in the Northeast that were more affected by Social Security were differentially more likely to eliminate maximum payments after 1940, while other regions do not exhibit this pattern.

Given that the South is the only region in which there is evidence that state spending on OAA declined in response to OASI, we further ask whether the South shows stronger evidence of reductions in tax rates in response to OASI. in Figure 9, we show estimates of equation (3) separately by region. We see little evidence of a reduction in tax rates outside of the South in states that would be more affected by the expansion of OASI (and, if anything, differential increases in tax rates on wine in more-affected states in the Northeast and West). However, there is evidence that tax rates on distilled spirits fell differentially in more-affected states in the South, possibly reflecting Southern states cutting taxes earmarked for OAA as they reduced their spending in response to OASI.

7 Conclusion

The 20th century saw not only a significantly expanding role for government in support for the elderly, but also significant changes in the level of government providing support, from localities to states, and then to the national government. This paper examines how state OAA programs responded to expanding federal transfers through Social Security between the beginning of regular payments in 1940 and when most remaining uncovered groups gained coverage in 1956. We test the degree to which OASI funds led to declines in OAA expenditure, whether states responded by liberalizing eligibility or benefit criteria, and how state choices over tax rates responded. Our research design leverages variation in covered employment across states and growth of the program as cohorts aged into insured status. Key elements facilitating the analysis are the availability of full count Decennial Census data and newly entered information on OASI and OAA program expenditure (with the latter broken down by level of government), OAA policies, and tax rates, each by state and year.

Our results suggest that a significant portion of OASI expenditure was crowded out by lower OAA expenditure, but that the federal government received a larger portion of these "savings" as states responded, to some extent, by liberalizing OAA policies. Motivated by past literature on differences across regions in policy towards public assistance, we show that crowd out of OASI by OAA was largely driven by the South, and completely so when considering only state expenditure. In contrast, states in the Northeast tended to increase payments among a relatively smaller group

[18] Similarly, the liberalization of federal OAA matching rates and introduction of a progressive formula in 1946 was a reason for particular declines in state OAA expenditures in the South, where many states also responded by converting joint payments to couples into two individual payments (Quadagno, 1988*a* pp. 251-252; see also Costa (1999)). Note, however, that state expenditures in the South were already declining before 1946.

of recipients. These results pose intriguing questions about the sources of regional heterogeneity in states' responses to Social Security, which merit further investigation.

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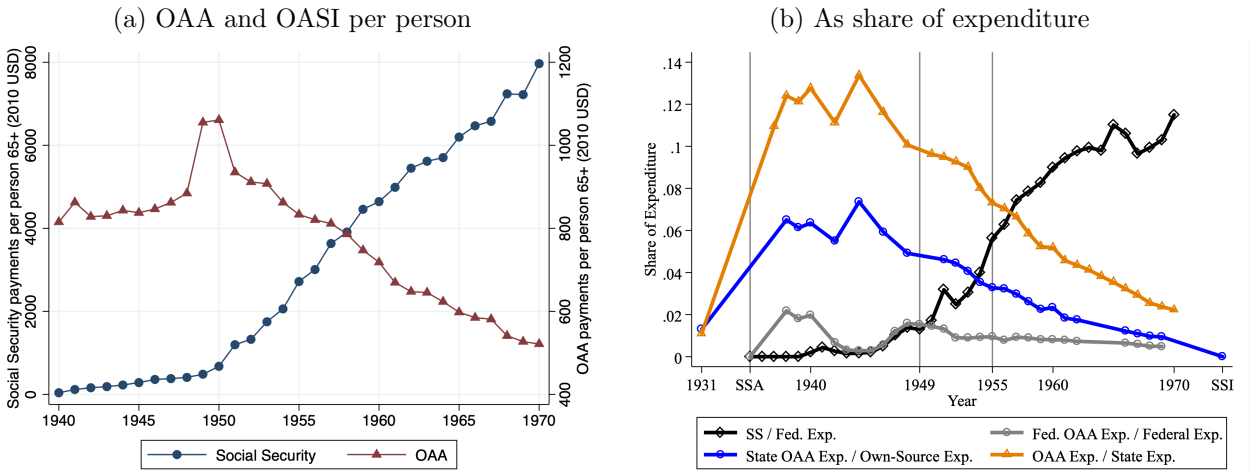
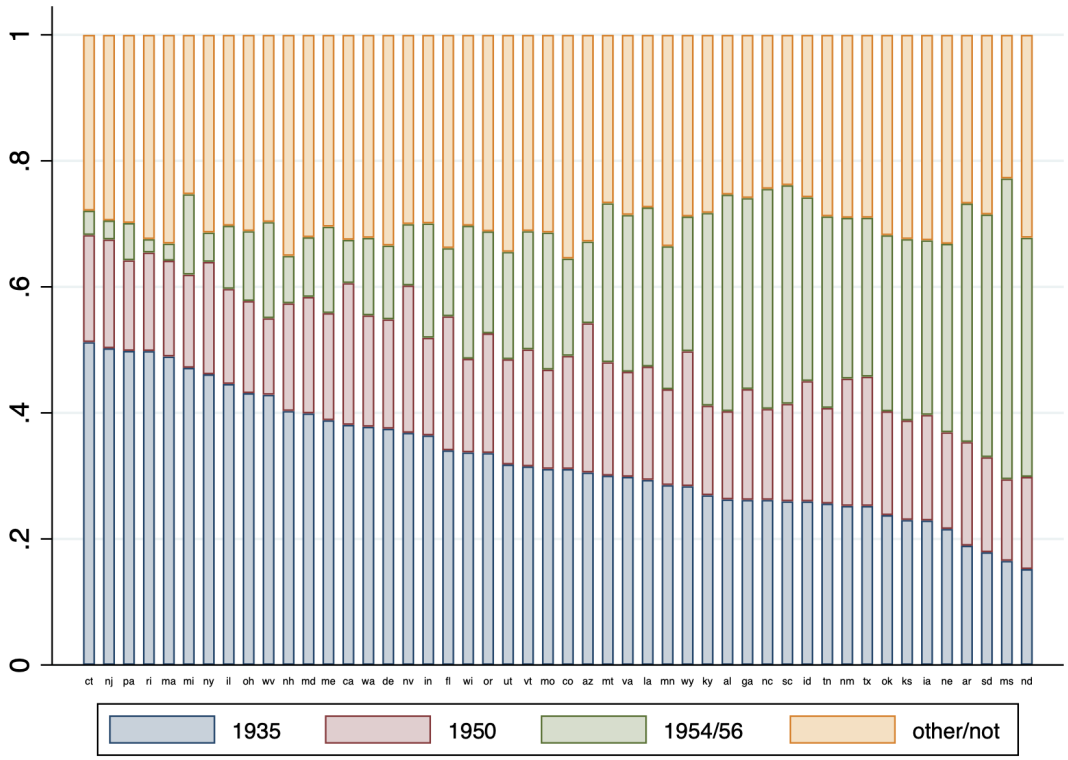
Figures and Tables

Figure 1: The expansion of Social Security and the decline of OAA



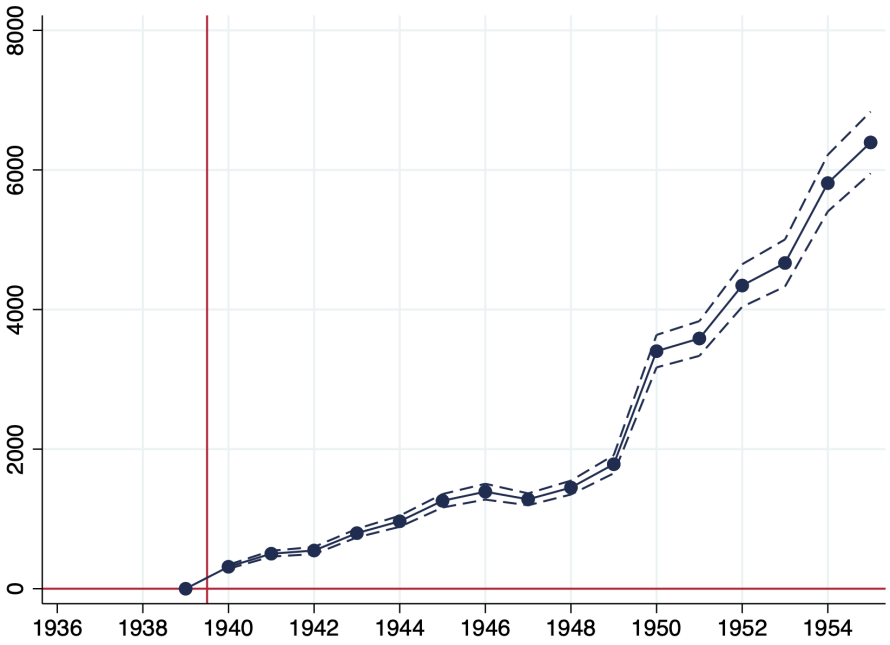
Notes: Panel (a) shows Social Security payments and Old Age Assistance payments normalized by the national population 65 and older, in 2010 dollars. Expenditure data come from Carter et al. (2006) and population data come from (Haines, 2010). Panel (b) plots the Social Security share of total federal expenditure (black line), federal expenditure on Old Age Assistance as a share of total federal expenditure (gray line), state expenditure on OAA as a share of total state expenditure out of own-source revenue (blue line), and total OAA expenditure as a share of total state expenditure (gray line). SSA and SSI stand for Social Security Act and Supplemental Security Income, the latter being the federal program that subsumed OAA. Data on federal expenditure come from. See Section 3 for additional data sources.

Figure 2: Shares of employment in 1940 by coverage year and state



Notes: Figure shows shares of men in 1940 Census for men born 1895 and earlier in the following Social Security coverage categories: covered in 1935, covered in 1950, covered in 1954 or 1956, and covered in another year (or not covered). Not covered includes individuals who were not employed at the time of the 1940 Census. See Section 3 for our construction of the employment shares.

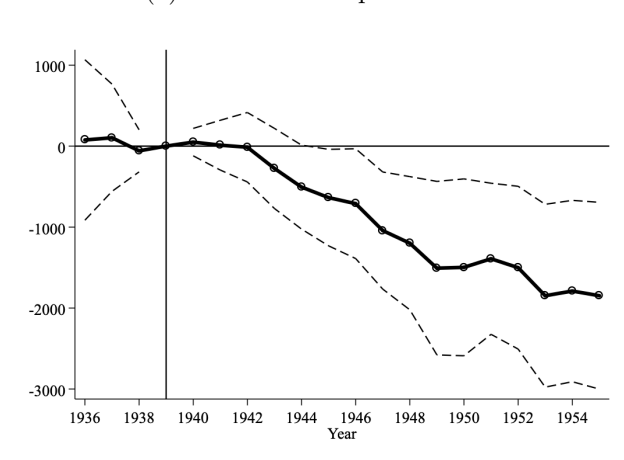
Figure 3: 1935 coverage share is predictive of increased OASI payments per person



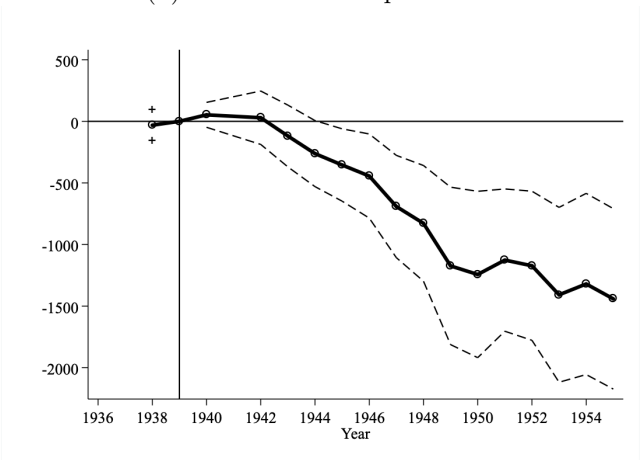
Notes: Plots estimated coefficients and 95% confidence intervals from estimating the event study specification 1. Dollar amounts are in 2010 USD. Standard errors clustered at the state level. See Section 3 for data sources.

Figure 4: OAA expenditure declined in states with greater OASI-Covered shares

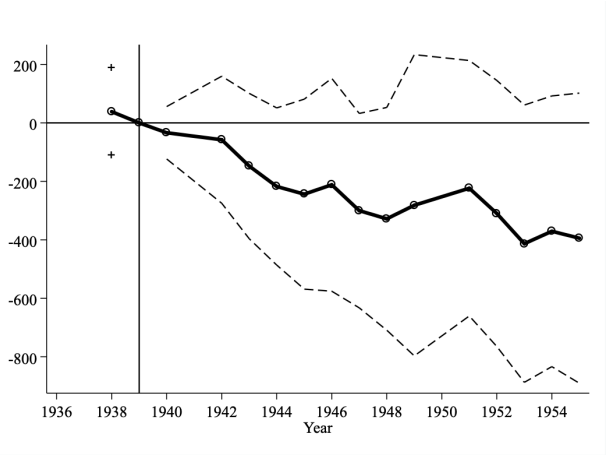
(a) Total OAA Expenditure



(b) Federal OAA Expenditure



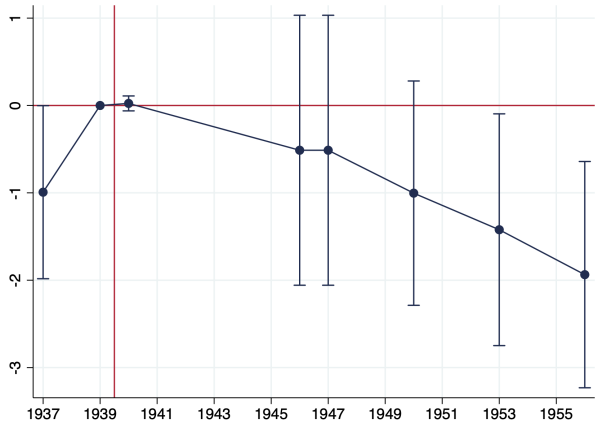
(c) State OAA Expenditure



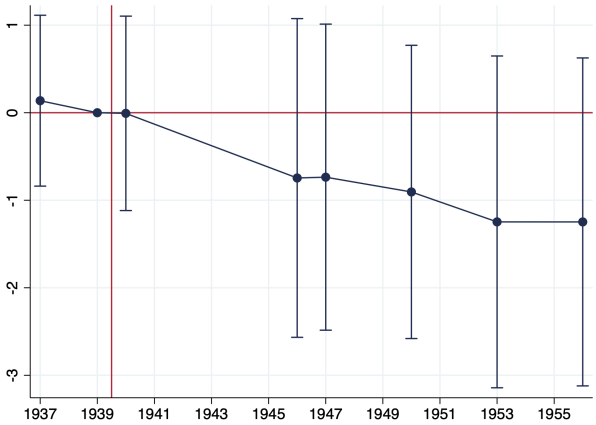
Notes: Plots the results of specification (1) where the outcome is total OAA expenditure in Panel (a), federal OAA expenditure in panel (b), or state OAA expenditure in panel (c), each per person 65 and older. See Section 3 for data sources.

Figure 5: OAA eligibility and payment policies liberalized

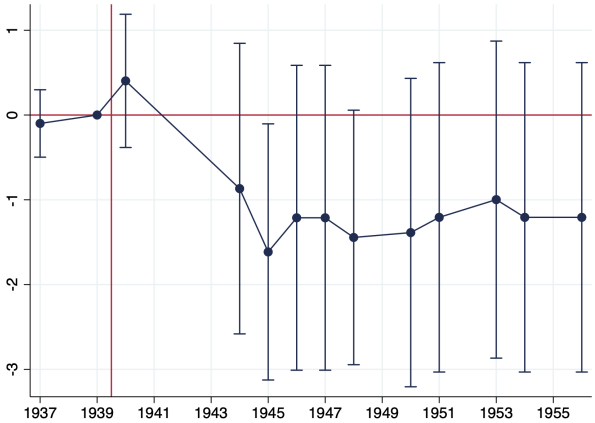
(a) Require US citizenship / long-term residency



(b) Require 5-year state residency

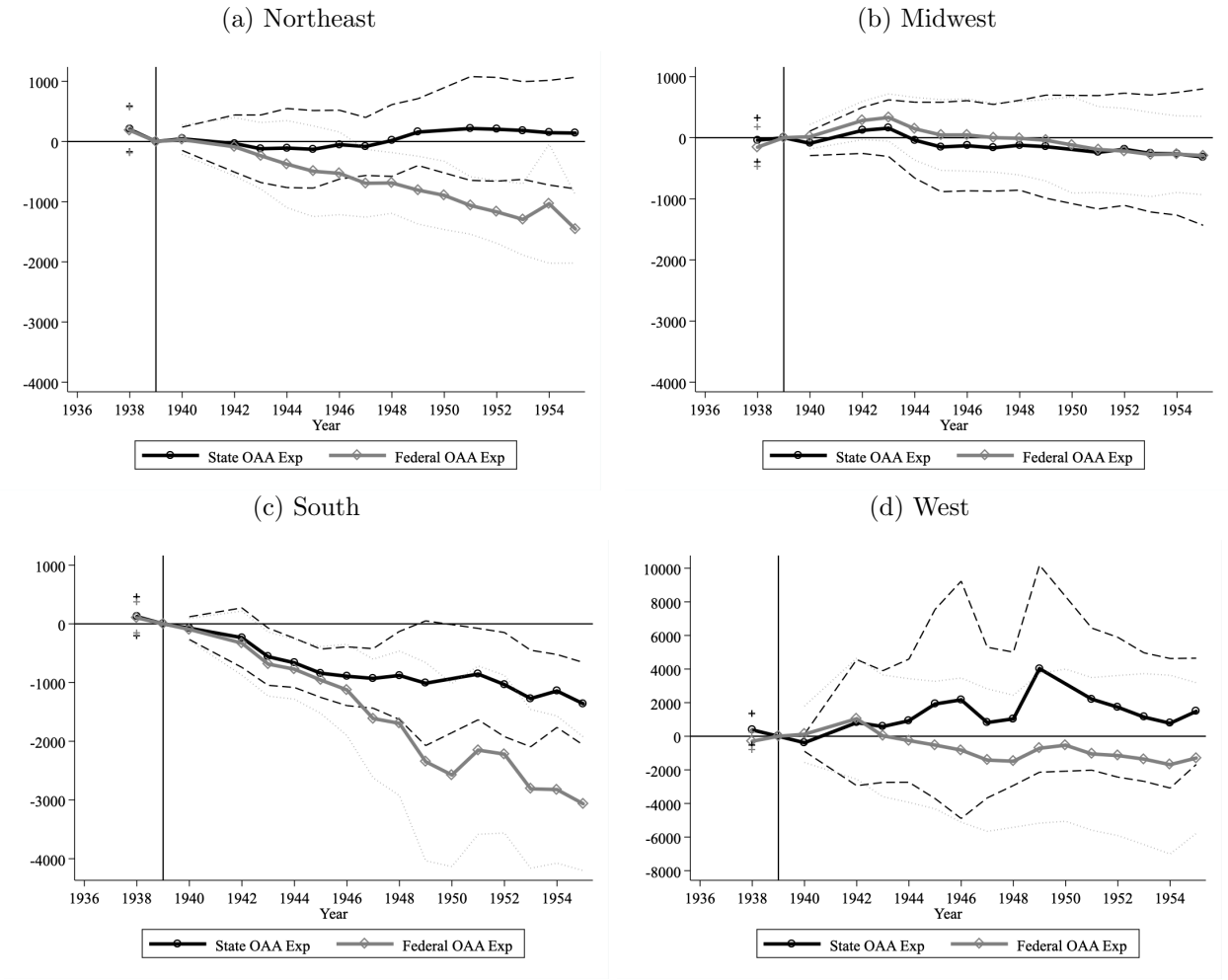


(c) Any maximum payment



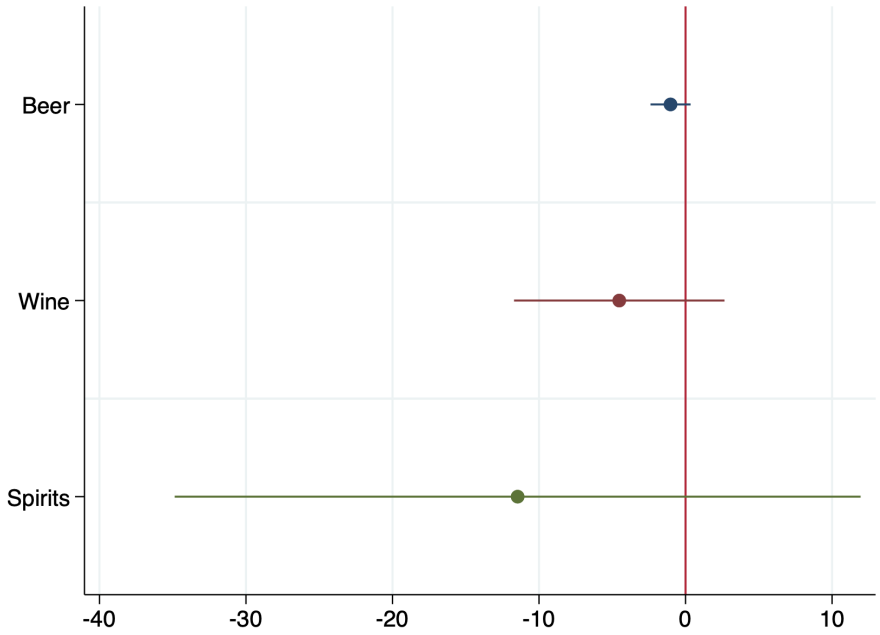
Notes: Plots the results of specification of specification (1) . Outcomes are presence of an OAA eligibility requirement of US citizenship or long-term residency (panel (a)), requirement of state residency for 5 of the last 9 years (panel (b)), and presence of any statutory or administrative maximum payment (panel (c)). See Section 3 for data sources.

Figure 6: State and federal OAA expenditure by Census Region



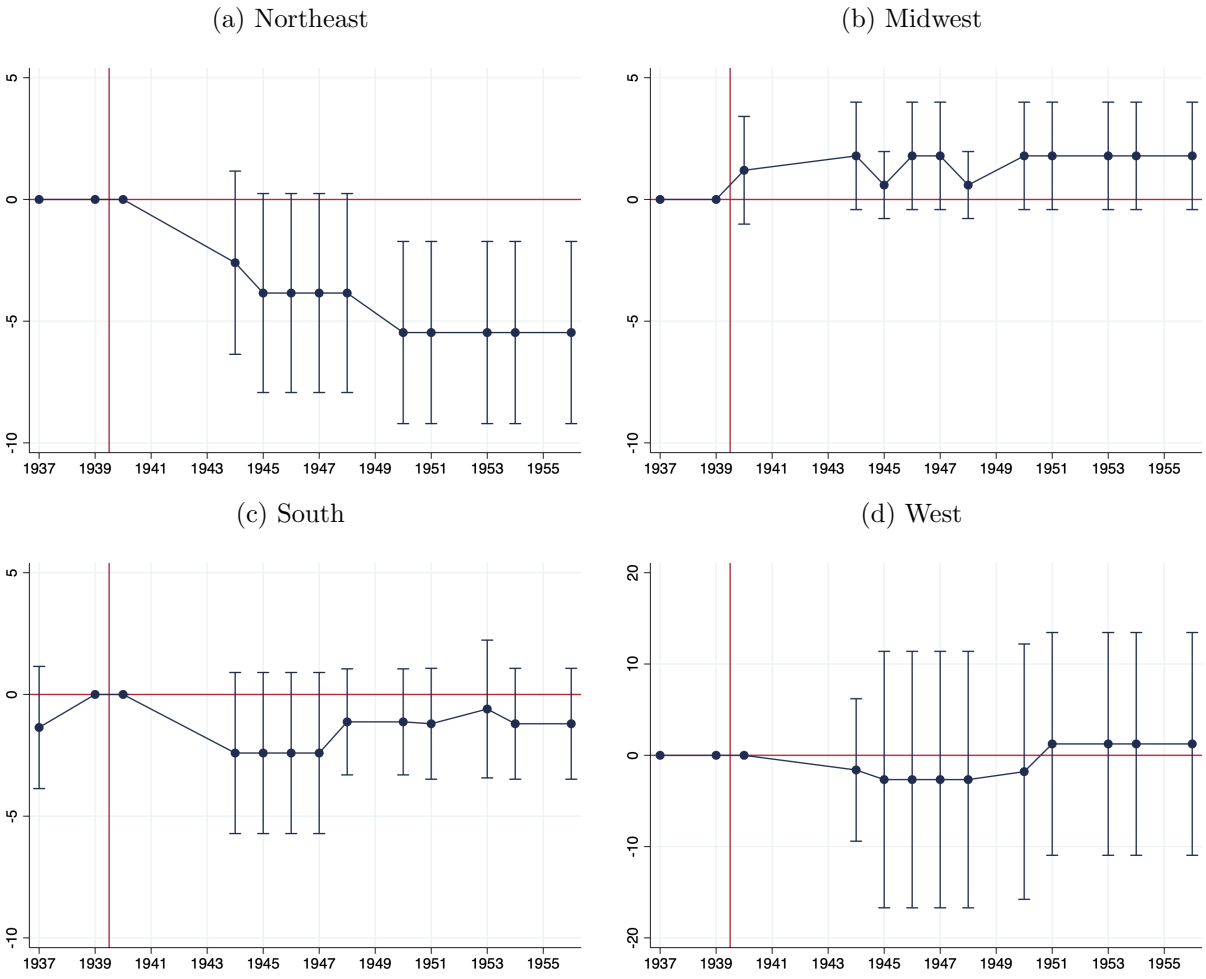
Notes: Plots the results of specification (1) where the outcomes are state OAA expenditure (black lines, circles) and federal OAA expenditure (gray lines, diamonds) each per person 65 plus, estimated separately by Census region: the Northeast is in Panel (a), Midwest in panel (b), South in panel (c), and West in panel (d). See Section 3 for data sources.

Figure 7: Estimates of differential changes in alcohol taxes in states with greater 1935 coverage share



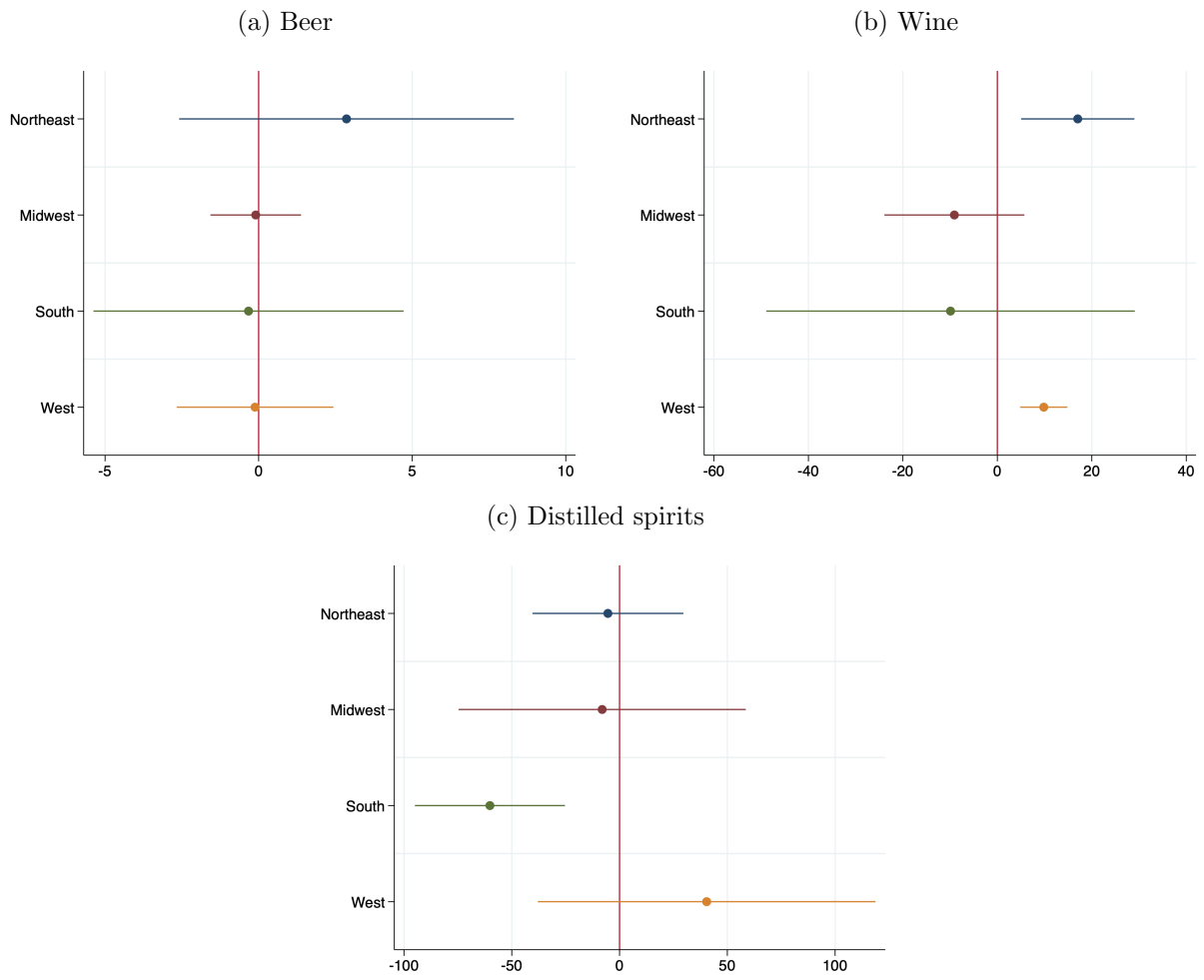
Notes: Plots estimated coefficients and heteroskedasticity-robust 95% confidence intervals from estimating equation 3. Dependent variable the change in the real value of the specified tax rate between 1939 and 1950, in 2010 USD. Mean changes are -0.017 per gallon (beer), -0.370 per gallon (wine), and -1.66 per gallon (distilled spirits)

Figure 8: Heterogeneity in existence of a maximum payment by region



Notes: Figure plots event study coefficients and 95% confidence intervals from estimation of equation 1, separately by Census region, with dependent variable an indicator for the existence of a statutory maximum payment. Standard errors clustered on state. See Section 3 for data sources.

Figure 9: Heterogeneity in alcohol tax responses by region



Notes: Plots estimated coefficients and heteroskedasticity-robust 95% confidence intervals from estimating equation 3, separately by region, with dependent variable the change in the real value of the specified tax rate between 1939 and 1950, in 2010 USD. Mean changes are -0.017 (beer), -0.370 (wine), and -1.66 (distilled spirits).

Table 1: OASI, OAA, and crowd out by government

	(1) OASI	(2) OAA	(3) Fed. OAA	(4) State OAA
Panel A. First Stage / Reduced Form				
Predicted Fully Insured	7640.11***	-3487.75***	-2712.05***	-642.68*
	(332.52)	(800.41)	(529.36)	(347.68)
N	672	672	672	672
R^2	0.98	0.86	0.81	0.89
Panel B. OLS Results				
OASI		-0.37***	-0.29***	-0.07
		(0.11)	(0.07)	(0.04)
N		672	672	672
R^2		0.86	0.81	0.89
Panel C. IV Results				
OASI		-0.46***	-0.35***	-0.08*
		(0.11)	(0.08)	(0.05)
N		672	672	672
R^2		0.10	0.15	0.02
State Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes

Notes: Panel A. shows the results from specification 2 where the outcomes are OASI expenditure in column (1), OAA expenditure in column (2), OAA expenditure from the federal government in column (3), and OAA expenditure from state government in column (4), all normalized by the population aged 65+ and in $2010s. Panel B presents the results from the same specification, where the dependent variable is OASI expenditure. Panel C presents IV regressions, where we instrument for OASI expenditure with the predicted share fully insured. See Section 3 for data sources.

Table 2: IV estimates of OAA crowd, by government and Census region

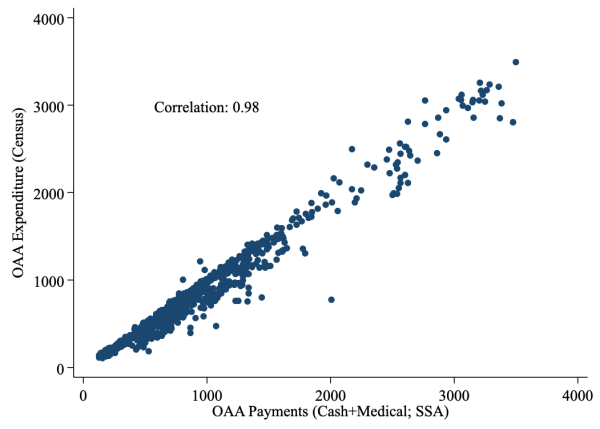
	(1) OAA	(2) Fed. OAA	(3) State OAA
Panel A. Northeast			
OASI	-0.28	-0.35***	0.08
	(0.20)	(0.08)	(0.14)
N	126	126	126
R^2	0.00	0.11	0.04
Panel B. Midwest			
OASI	-0.19	-0.11*	-0.07
	(0.13)	(0.06)	(0.08)
N	168	168	168
R^2	0.07	0.08	0.02
Panel C. South			
OASI	-0.62***	-0.45***	-0.17**
	(0.18)	(0.11)	(0.08)
N	224	224	224
R^2	0.14	0.18	0.07
Panel D. West			
OASI	-0.08	-0.20	0.23
	(0.49)	(0.30)	(0.22)
N	154	154	154
R^2	0.01	0.08	-0.06
State Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes

Notes: Shows IV results from specification 2 where we instrument for OASI expenditure with the predicted share fully insured. Outcomes are OAA expenditure in column (1), OAA expenditure from the federal government in column (2), and OAA expenditure from state government in column (3), all normalized by the population aged 65+ and in $2010s. Panel A. restricts the sample to states in the Northeastern Census region, Panel B restricts to the Midwest, Panel C restricts to the South, and Panel D restricts to the West. See Section 3 for data sources.

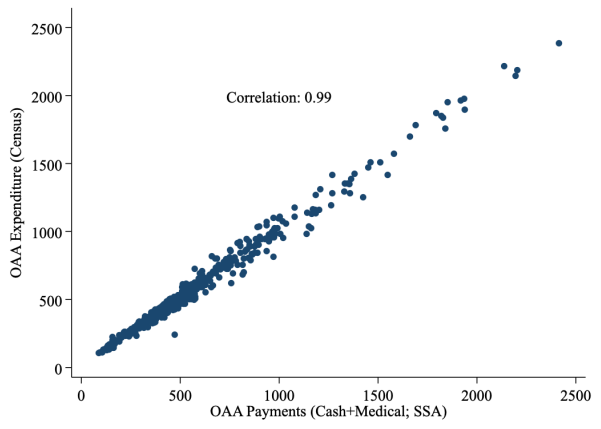
Appendix Figures and Tables

Figure A.1: OAA expenditure matches well between sources

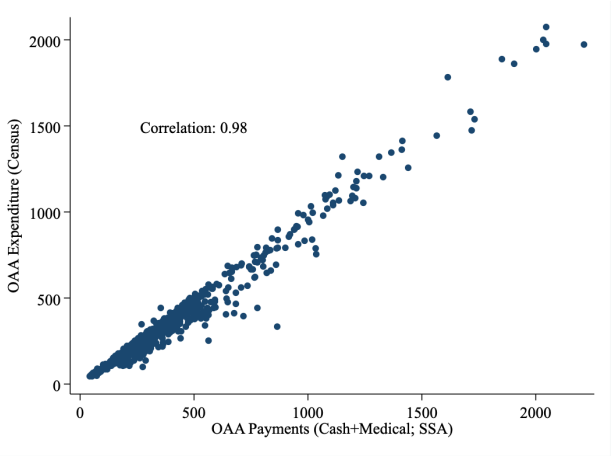
(a) Total Expenditure



(b) Federal Expenditure

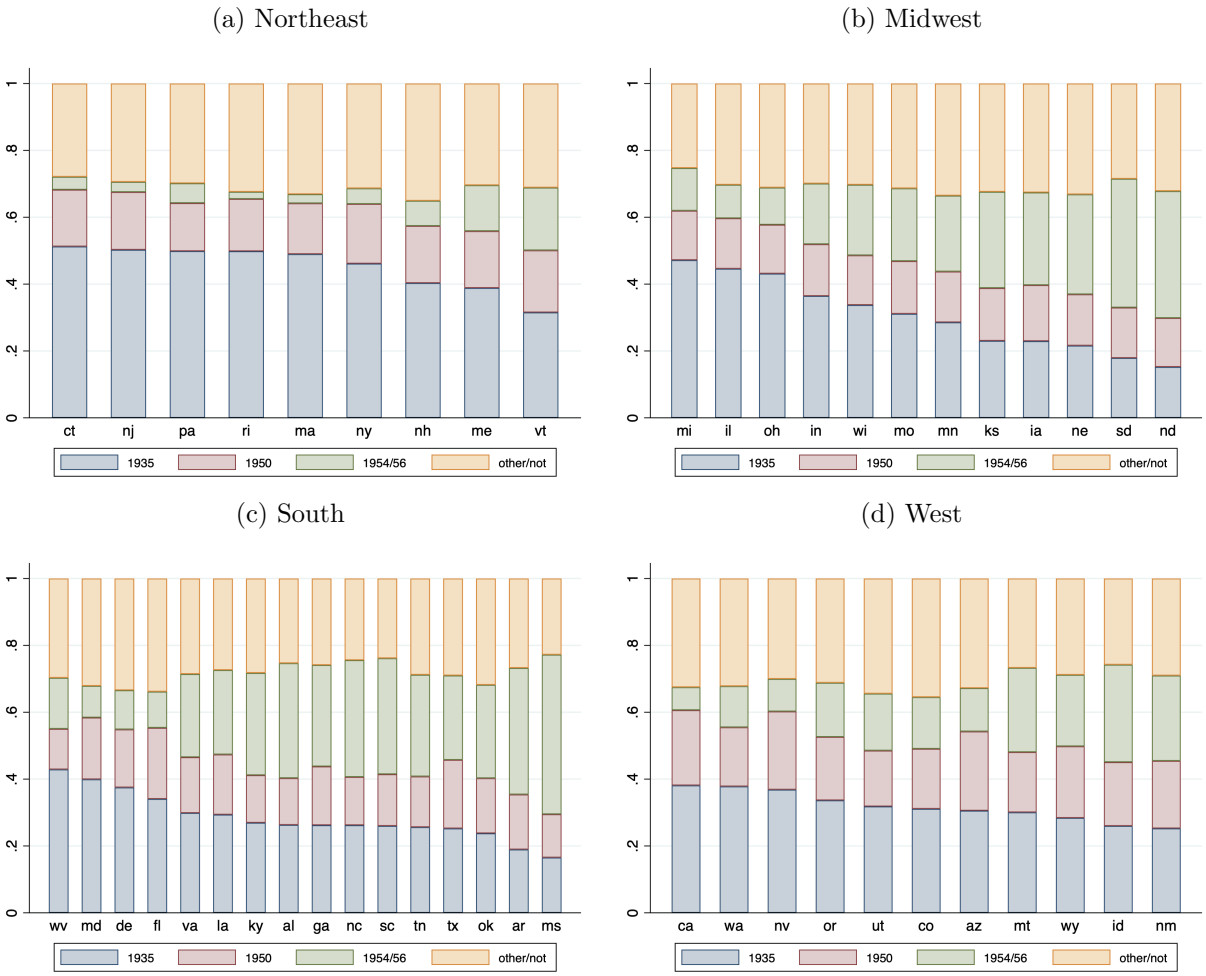


(c) State+Local Expenditure



Notes: The y-axis is OAA expenditure as measured in the Census Bureau entered information on state finances. the x-axis are OAA payments and shares of expenditure by level of government from the Social Security Administration (see Section 3 for more details). Data are for each state between 1951-1964, the years we have information from both sources available. The Census Shares are calculated by using federal intergovernmental revenue for OAA, which is available between 1951-1964, in conjunction with total "cash" categorical OAA welfare expenditure.

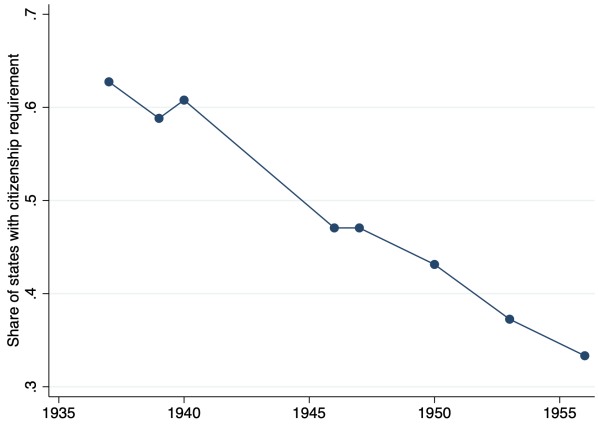
Figure A.2: Shares of employment in 1940 by coverage year and state



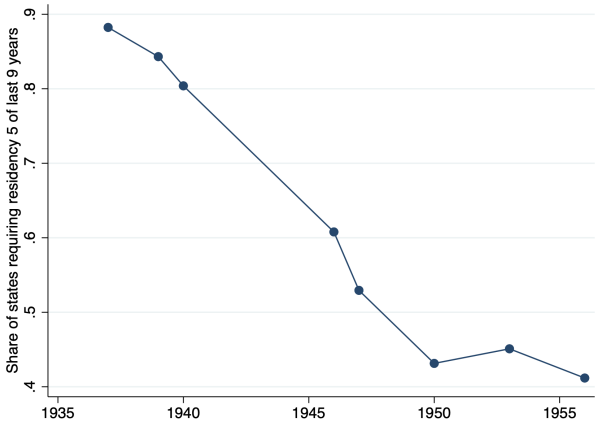
Notes: Figure shows same employment shares as Figure 2, separately by Census region.

Figure A.3: Summary statistics on OAA eligibility and payment policies

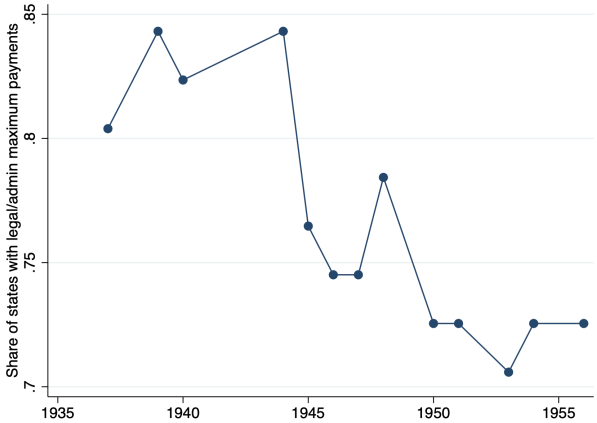
(a) Require US citizenship / long-term residency



(b) Require 5-year state residency

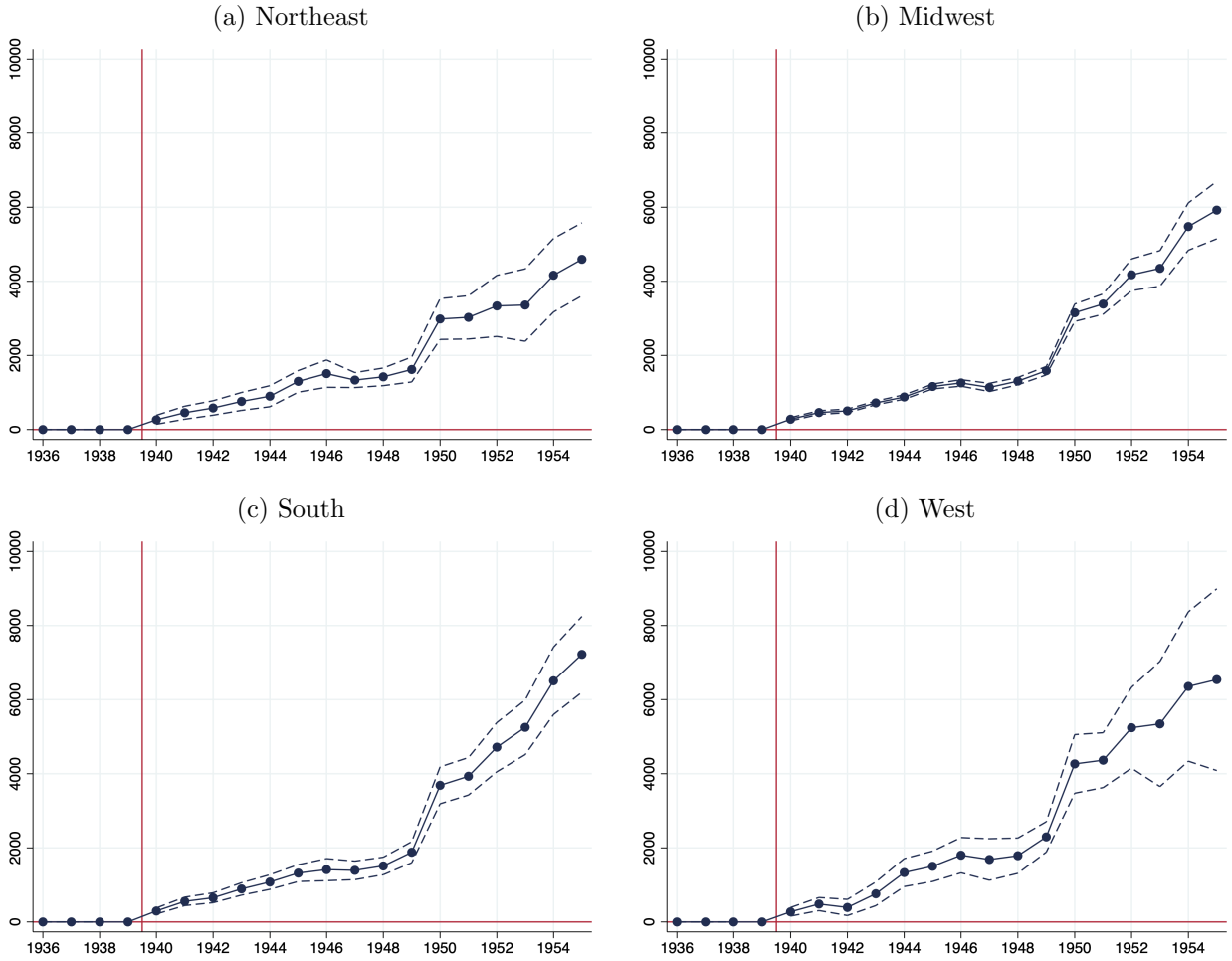


(c) Any maximum payment



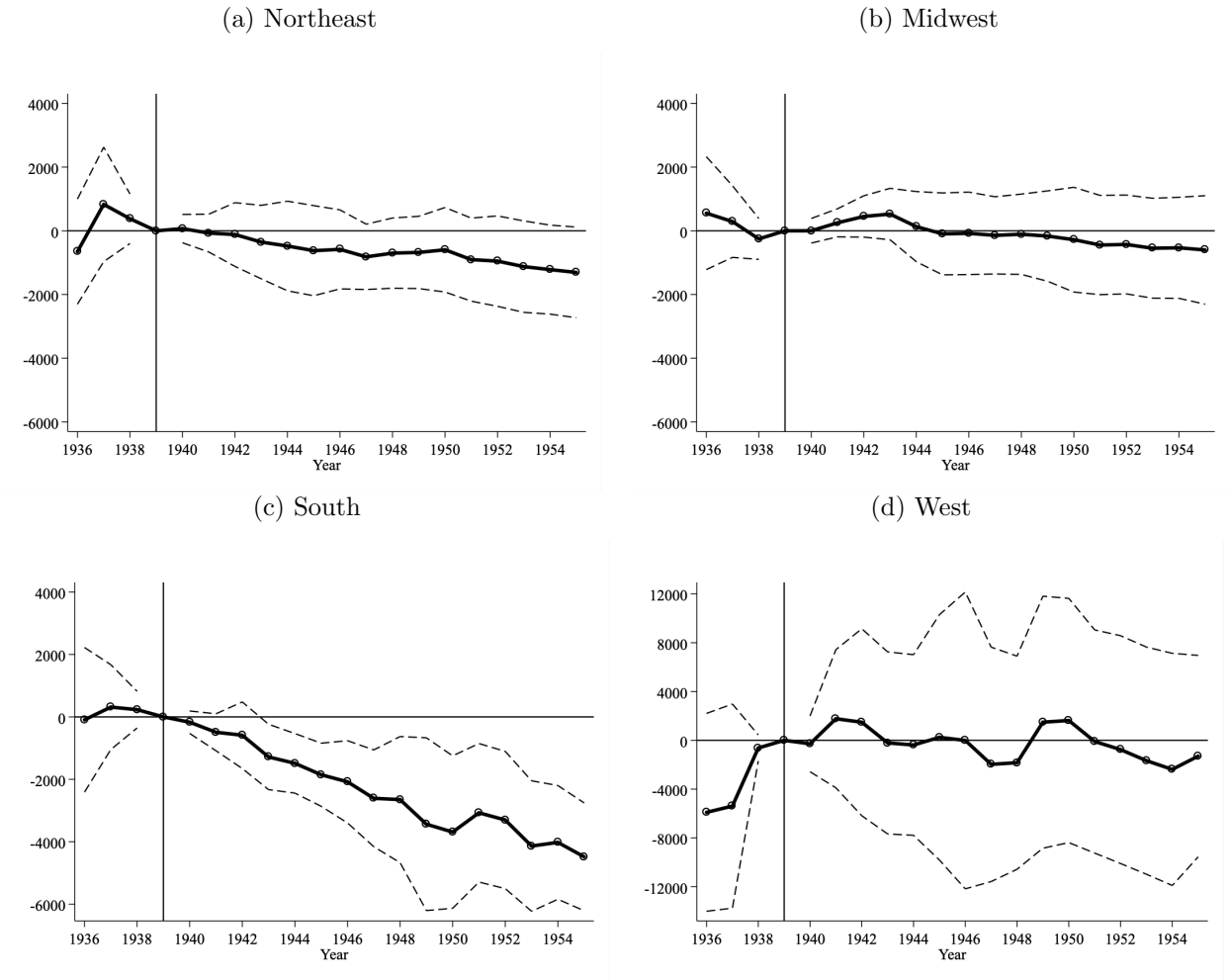
Notes: Plots OAA eligibility and payment policies over time. Panel (a) shows share of states with an OAA eligibility requirement of US citizenship or long-term residency, panel (b) shows share requiring state residency for 5 of the last 9 years, and panel (c) shows share with any statutory or administrative maximum payment. See Section 3 for data sources.

Figure A.4: OASI per person 65+, by region



Notes: Plots estimated coefficients and 95% confidence intervals from estimating the event study specification 1, separately by Census region. Dollar amounts are in 2010 USD. Standard errors clustered at the state level. See Section 3 for data sources.

Figure A.5: Overall OAA expenditure by Census region



Notes: Plots the results of specification (1) where the outcome is total OAA expenditure per person 65 plus, estimated separately by Census region: the Northeast is in Panel (a), Midwest in panel (b), South in panel (c), and West in panel (d). See Section 3 for data sources.

Table A.1: OASI and OAA expenditure, by government and Census region

	(1) OASI	(2) OAA	(3) Fed. OAA	(4) State OAA
Panel A. Northeast				
Predicted Fully Insured	7065.23***	-2009.27	-2495.62***	588.17
	(786.10)	(1463.70)	(594.94)	(953.61)
N	126	126	126	126
R^2	1.00	0.93	0.91	0.87
Panel B. Midwest				
Predicted Fully Insured	7821.93***	-1509.66	-890.49*	-532.10
	(534.50)	(973.59)	(430.13)	(585.37)
N	168	168	168	168
R^2	0.99	0.65	0.68	0.79
Panel C. South				
Predicted Fully Insured	7179.20***	-4451.52***	-3257.02***	-1213.77*
	(674.41)	(1442.86)	(907.83)	(587.76)
N	224	224	224	224
R^2	0.98	0.83	0.82	0.86
Panel D. West				
Predicted Fully Insured	5766.54***	-435.76	-1159.71	1345.97
	(1106.41)	(2906.86)	(1907.81)	(1119.86)
N	154	154	154	154
R^2	0.99	0.86	0.82	0.89
State Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes

Notes: Panel A. shows the results from specification 2 where the sample is restricted to states in the Northeast Census region and outcomes are OASI expenditure in column (1), OAA expenditure in column (2), OAA expenditure from the federal government in column (3), and OAA expenditure from state government in column (4), all normalized by the population aged 65+ and in $2010s. Panel B presents the results for the Midwest, Panel C presents the results for the South, and Panel D presents the results for the West. See Section 3 for data sources.